4/28/2014 11:57 AM Last Updated

AGENDA

WILSONVILLE CITY COUNCIL MEETING
MAY 5, 2014
7:00 P.M.

CITY HALL
29799 SW TOWN CENTER LOOP
WILSONVILLE, OREGON

Mayor Tim Knapp

Council President Scott Starr
Councilor Susie Stevens
Councilor Richard Goddard
Councilor Julie Fitzgerald

CITY COUNCIL MISSION STATEMENT

To protect and enhance Wilsonville's livability by providing quality service to ensure a safe, attractive, economically vital community while preserving our natural environment and heritage.

Work Session is held in the Willamette River Room, City Hall, 2nd Floor

5:00 P.M. **REVIEW OF AGENDA** [5 min.]

5:20 P.M. **COUNCILORS' CONCERNS** [5 min.]

5:25 P.M. **PRE-COUNCIL WORK SESSION**

A. Tourism Task Force Recommendation (Fitzgerald / Ottenad) [20 min.]
B. TVWD Willamette River Water Supply Update (Kraushaar / Kerber) [15 min.]
C. Climate Smart Communities (Kraushaar) [20 min.]
Attachment A to Staff Report is separately bound.

6:50 P.M. **ADJOURN**

CITY COUNCIL MEETING

The following is a summary of the legislative and other matters to come before the Wilsonville City Council a regular session to be held, Monday, May 5, 2014 at City Hall. Legislative matters must have been filed in the office of the City Recorder by 10 a.m. on April 22, 2014. Remonstrances and other documents pertaining to any matters listed in said summary filed at or prior to the time of the meeting may be considered therewith except where a time limit for filing has been fixed.

7:00 P.M. **CALL TO ORDER**

A. Roll Call
B. Pledge of Allegiance

C. Motion to approve the following order of the agenda and to remove items from the consent agenda.

7:05 P.M. MAYOR'S BUSINESS

A. National Drinking Water Week Proclamation (Kerber)
B. Proclamation Declaring May as "Bike Month" (Jen Massa-Smith)
C. Upcoming Meetings

7:15 P.M. COMMUNICATIONS

A. Wilsonville Community Sharing Update (staff – Rodocker)

7:25 P.M. CITIZEN INPUT & COMMUNITY ANNOUNCEMENTS

This is an opportunity for visitors to address the City Council on items ***not*** on the agenda. It is also the time to address items that are on the agenda but not scheduled for a public hearing. Staff and the City Council will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter. Please limit your comments to three minutes.

7:30 P.M. COUNCILOR COMMENTS, LIAISON REPORTS & MEETING ANNOUNCEMENTS

A. Council President Starr – *(Park & Recreation Advisory Board Liaison)*
B. Councilor Goddard – *(Library Board Liaison)*
C. Councilor Fitzgerald – *(Development Review Panels A & B Liaison)*
D. Councilor Stevens – *(Planning Commission; CCI; Wilsonville Seniors Liaison)*

7:40 P.M. CONSENT AGENDA

A. **Resolution No. 2469**
A Resolution Of The City Of Wilsonville Acting As The Local Contract Review Board Approving The Bid Process; Accepting The Lowest Responsible Bid; Awarding A Construction Contract To Andy Medcalf Construction Co. The Lowest Responsible Bidder; And Verifying Fund Availability For The Project Commonly Referred To As Parks And Recreation Tenant Improvements Project. (staff – Brown)

B. Minutes of the March 17, 2014, and April 7, 2014 Council Meetings. (staff – King)

7:45 P.M. PUBLIC HEARING

A. **Ordinance No. 741** 1st reading
An Ordinance Of The City Of Wilsonville Approving A Zone Map Amendment From The Public Facility (PF) Zone To The Village (V) Zone On Approximately 42.76 Acres Comprising Tax Lots 2800 And 2890 Of Section 15, T3S, R1W, Clackamas County, Oregon, Polygon Northwest Company, Applicant. (staff – Edmonds)

B. **Ordinance No. 742** 1st reading
An Ordinance Of The City Of Wilsonville Adopting The Wilsonville Residential Land Study As An Amendment To And A Sub-Element Of The Comprehensive Plan. (staff – Mangle)

The draft Residential Land Study and Technical Reports are bound separately.

8:15 P.M. CONTINUING BUSINESS

A. **Ordinance No. 737** – 2nd reading
An Ordinance Amending Chapter 10 Of The Wilsonville Code By Adding Section 10.240 Control Of Dogs And Amending Section 10.430 Penalties. (staff – Kohlhoff)

8:20 P.M. NEW BUSINESS

A. **Resolution No. 2468**
A Resolution Of The Wilsonville City Council Adopting The Wilsonville Tourism Development Strategy, May 2014. (staff – Ottenad)

8:30 P.M. CITY MANAGER'S BUSINESS

8:40 P.M. LEGAL BUSINESS

8:45 P.M. ADJOURN

Time frames for agenda items are not time certain (i.e. Agenda items may be considered earlier than indicated. The Mayor will call for a majority vote of the Council before allotting more time than indicated for an agenda item.) Assistive Listening Devices (ALD) are available for persons with impaired hearing and can be scheduled for this meeting if required at least 48 hours prior to the meeting. The city will also endeavor to provide the following services, without cost, if requested at least 48 hours prior to the meeting:-Qualified sign language interpreters for persons with speech or hearing impairments. Qualified bilingual interpreters. To obtain services, please contact the City Recorder, (503)570-1506 or king@ci.wilsonville.or.us

'Wilsonville Tourism Development Strategy' Presentation on Resolution of Adoption — City Council, Mon, May 5, 7 pm

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PART 1: Councilor Julie Fitzgerald, Tourism Development Strategy Task Force Chair, Presents

Purposes of Tonight's Presentation

To present to the City Council for consideration adoption of the 'Wilsonville Tourism Development Strategy, May 2014' as recommended by the Tourism Development Strategy Task Force.

Review of Task Force meetings/events and work

- In 2013, the City Council asked the City Manager to create a Tourism Development Strategy that would be a component of the City's larger Economic Development Strategy.
- Over the summer of 2013, the City Manager recruited the diverse members of the Task Force.
    - Since most Task Force members are directly engaged in operating tourism businesses, they requested that the City Not start the tourism strategy effort until *after* the busy summer season.
    - Contacting and gaining commitments to participate took considerable time and effort with many call-backs.
- Also during this time, the City issued an RFP for tourism consulting services.
    - The contracted in a competitive process with the tourism consultant firm Total Destination Marketing based out of Tualatin.
    - While a local business, the consultants have worked with cities and destination marketing organizations throughout Oregon, the U.S. and globally.

- The process began in earnest starting immediately after the tourism season in October 2013.

Review of Task Force Composition

- A 17-member volunteer task force chaired by City Councilor Julie Fitzgerald in an ex-officio position
- Comprised of a wide-range of stakeholders, including representatives of:
    - local dining, lodging and entertainment establishments,
    - operators of agri-tourism, golf and sporting tournaments,
    - chamber of commerce and residents
    - officials with regional tourism agencies and city government.
- Complete list task force members listed on the inside front cover and p. 48 of the Tourism Development Strategy.

Review of Public Involvement Opportunities

- First, we had a large stakeholder advisory task force representing diverse interests.
- Public survey about tourism development opportunities occurred early in process and was open for public comment Oct 9 – Dec 4, 2013.
- Two community workshops held in evening during October.
- All meetings held were open to the public, often with a news reporter in attendance, and featured time set aside for public comment.
- *Wilsonville Spokesman* has run a number of announcements and articles about the Tourism Development Strategy Effort, including in November 2013 and April 2014.

- The City's December 2013 issue of the *Boones Ferry Messenger* newsletter had a full-page report on the tourism work.
- Email notices to over 50 members of the public of meetings, comment opportunities and document releases.
- Mailing of hard-copy prints of Fieldwork Research Report and Draft Strategy documents to City Council, Task Force members and key interested members of the public, such as principals of the chamber of commerce.
- Public comment period over the time of March 21-31 on Draft Strategy, plus an additional survey of the Task Force for their thoughts on the priority of recommendations. Appearance before City Council during April 7 work session to gain additional feedback.
- In totality, this has been a very open, public process.

Introduce Bill Baker

Now, I would to turn this over to tourism consultant Bill Baker, who is the Principal of Total Destination Marketing.

PART 2: Bill Baker Reviews Draft Strategy

- New Era of Tourism for Wilsonville; Opportunities and Challenges
- Target Markets
    - Priority Markets
        - Horse show participants and organizers
        - Meetings and conventions participants and organizers
        - Northwest getaways
        - Sports tournaments participants
        - I-5 motorists in transit

- Supplementary Markets
  - Business Visitors
  - Genealogy Research
  - Outdoor recreation (parks, water features, hiking)
  - Shopping: Group shopping tours
  - Weddings and Reunions
- Requires infrastructure development to be elevated to priority market status
  - Cycling *
  - Family Getaways *
  - Korean nationals, Korean-Americans, Veterans *
  - River recreation *

- Key Experience Themes
  - Horse shows and equestrian events
  - Meetings and conventions
  - Sports tournaments
  - Northwest getaways
- Primary Recommendations, including primary Actions for Success:

1. Leadership and Organization
   - Establish an Independent 501 (c) (6) Not-for-Profit DMO to be named Visit Wilsonville.
   - Board of Management
   - Increase the Allocation of the Hotel/Motel Transient Lodging Tax.

    - Project budget to launch Visit Wilsonville DMO.
    - Review Wilsonville Tourism Grants Program.

2. Branding and Positioning
    - Develop a destination branding strategy for Wilsonville.
3. Visitor Experiences
    - agri-tourism experiences; bike-friendly city; cycling events; event to celebrate the start of horse show season;
4. Infrastructure and Placemaking
    - feasibility study for the development entertainment precinct; hotel/meeting space feasibility study; trails development, wayfinding and branding; Bike-Ped-Emergency Bridge across the Willamette River; river access; public art program
5. Marketing Communications
    - tourism website; internet marketing campaign; social media and email marketing; photos and videos library; Wilsonville Visitors Guide; digital kiosks; visitor-satisfaction research

- Performance indicators to gauge success

PART 3 [if needed]: Mark Ottenad reviews modifications to Draft/Revised Draft Versions of Strategy

- Vision/Mission: The Task Force modified both the Vision and Mission Statements.
- Document Organization:
    - Added an Introduction section to more clearly set-out the goal and purpose of the Tourism Development Strategy.
    - Repositioned the Leadership and Organization section from section 5 to section 1 as the lead recommendation that sets the stage for following recommended actions.

- Added an appendix (#6) for "Tourism Strategy Performance Indicators" to show potential performance-measurement metrics.
- Added an appendix (#7) for Public Comments received, along with Consultants Review of the comments.

- Recommended Actions:
  - Fine-tuned priorities: A number of the recommendations have a commencement time, and then are carried forward into the future. These are shown in the Actions as "► Program Commencement" and "√ Continuation."
  - Timing Priorities were modified to show "Top," "Medium" and "Lower" Priorities, along with suggested timeframes.
  - A number of recommended actions were slightly modified by changing the priority level and/or amending the language.
  - Reworded many Actions in Section 4, Infrastructure, to "Support" to reflect the fact that Visit Wilsonville DMO will not be an initiator or developer of infrastructure, but will have a role to encourage and support development through other entities where appropriate.
  - Action 4.11, "Support the feasibility study of an indoor aquatic and recreation center," was removed since the feasibility study is now underway.
  - Modified the text of various Actions to show which Target Markets or Key Experience Themes are being emphasized.

From: Steve Gilmore [mailto:Steve@wilsonvillechamber.com]
Sent: Monday, May 05, 2014 11:11 AM
To: Fitzgerald, Julie
Cc: Cosgrove, Bryan; Ottenad, Mark; Darren Harmon (DarrenH@Fun-Center.com); Eric Postma (epostma@bittner-hahs.com)
Subject: Tourism Development Plan

Dear Councilor Fitzgerald,

Thank you very much for the changes that were made to the draft tourism development strategy plan that our President Darren Harmon asked for at the final tourism task force meeting. We are hopeful that the council will support the draft document in its current form tonight. The Chamber and its members are excited to work with the city on developing the top recommendation of the task force to create an independent DMO that is outside of the political process and help establish a board of directors that will direct the new organization to success. We are ready to assist in any way possible to make this exciting proposal a reality.

We appreciate all of your hard work and we look forward working with you in the future on this very important economic development initiative.

Steve Gilmore, IOM
CEO, Wilsonville Area Chamber of Commerce
8565 SW Salish Lane Suite 150
Wilsonville, OR 97070

Phone: (503) 682-0411
Cell: (971) 506-7771
http://www.wilsonvillechamber.com

Like Us On Facebook

Follow Us On Twitter

Our Vision:
To create and promote economic vitality for business in the south metro region

Our Mission:
Business is the priority

King, Sandy

From: Ottenad, Mark
Sent: Monday, May 05, 2014 11:21 AM
To: Fitzgerald, Julie; Bill Baker (billb@destinationbranding.com); Cosgrove, Bryan
Cc: Mayor Tim Knapp; Kohlhoff, Mike; Jacobson, Barbara
Subject: Tourism Strategy Tonight at Council
Attachments: Presentation Outline - May 5 City Council.docx

Good day Julie and Bill,

I am writing with some thoughts and suggestions regarding tonight's presentation of the Tourism Development Strategy for City Council.

WORK SESSION

Julie could lead-off with a discussion of the April 24 Task Force meeting and agreement of support from the TF. I will be able to give an overview/itemization of key changes made to the Draft and Revised Draft based on public comment, City Council feedback and TF direction.

MEETING – ADOPTION OF RESOLUTION

I propose that we utilize the three-person format similar to when we first presented to Council at work session in April (and City has used for other Councilor-chaired task forces):

1. As TF Chair, Julie would sit at the 'testimony table' and lead-off with similar presentation as in April, noting the wide representation of stakeholder interests by the task force, extensive public process and overall thrust of the tourism development effort.

2. Bill would give a re-cap of the key Target Markets (primary and secondary) and the Key Experience Themes; review the main Recommendations, including primary Actions for Success; and note addition of performance indicators.

3. Mark could provide a brief itemization of key changes made to the Draft and Revised Draft based on public comment, City Council feedback and TF direction if needed.

4. IF Task Force members are in attendance, we would invite them up to also sit around the testimony table and to offer their thoughts and perspectives on the Strategy.

After our initial presentation, Julie would then move from the testimony table to the Council dais, as Council discussion and any Q&A occurs among Council members and/or Bill/Mark. Mayor may invite anyone present who wishes to comment to do so. It may be that some comments may have occurred earlier in the evening under Citizen Input & Community Announcements.

At This Time, I have heard Only from Danielle Cowan that she intends to attend and speak in support of the Tourism Development Strategy and process. No other Task Force or member of the public has indicated to me an intention to attend or speak; Theonie Gilmore of WACC has submitted written letter of support for the Strategy. Notes of invitation to attend and speak/provide feedback were sent to TF and public on two occasions, on April 25 and May 1.

Julie/Bill/Bryan -- Does this format sound OK to you? Any suggestions for improvement?

A draft suggested script based on the above is attached for your convenience.

I was Not planning for a PowerPoint presentation; if one is needed, please let me know.

Thank you.

- Mark

Mark C. Ottenad
Public/Government Affairs Director
City of Wilsonville
29799 SW Town Center Loop East
Wilsonville, OR 97070
General: 503-682-1011
Direct: 503-570-1505
Fax: 503-682-1015
Email: ottenad@ci.wilsonville.or.us
Web: www.ci.wilsonville.or.us
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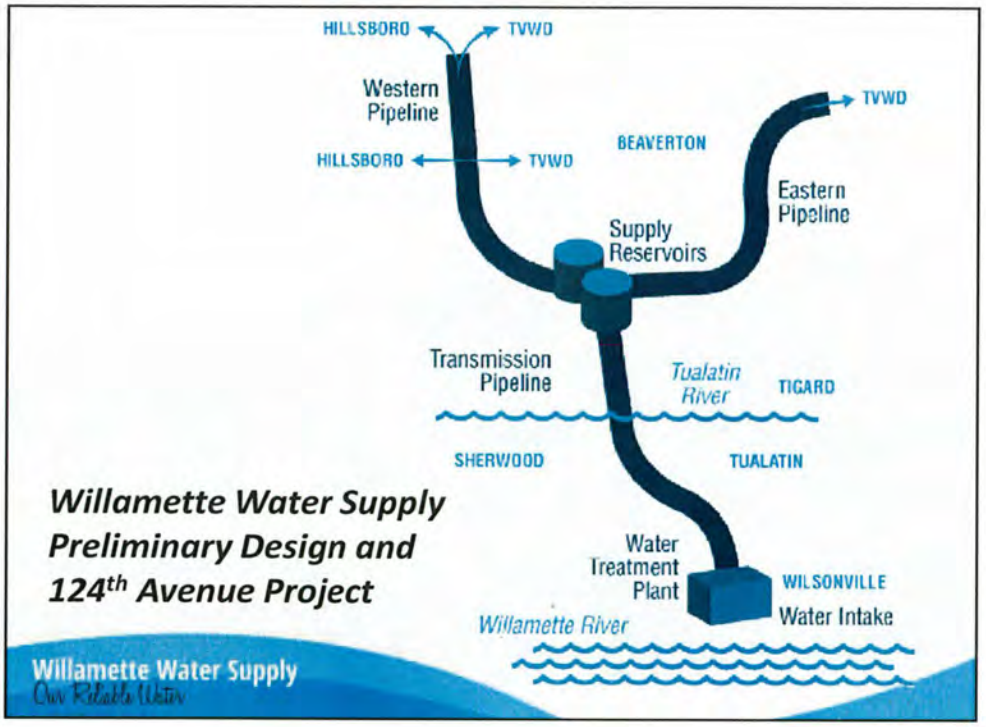
Willamette Water Supply
Our Reliable Water

Wilsonville City Council Work Session Briefing

May 5, 2014

Goal

- ✓ Review progress on project identified during the last briefing
  - ✓ Preliminary Design
  - ✓ 124th Avenue Transmission
- ✓ Update on new efforts
  - ✓ Public Outreach
  - ✓ Governance Facilitation
  - ✓ Willamette Water Supply Council
- ✓ Next Steps



Public Outreach - Our Objectives for Host Communities

- ✓ Inform and involve host communities in route selection and siting.
- ✓ Provide lasting benefits to property owners, site neighbors and host communities.
- ✓ Minimize construction impacts on neighbors / travelers and ensure safely.

Willamette Water Supply
Our Reliable Water
4

Community Engagement Calendar

City Council / Management Team updates	**Current / ongoing**
Wilsonville staff participating on Technical Advisory Committee (TAC) for Preliminary Design Study	**Current / ongoing**
Community member focus groups on route options	**Saturday, May 31**
Wilsonville's Community Relations Coordinator participate in periodic regional communications workshops	**Spring 2014 / ongoing**
Community open house Articles in *Boones Ferry Messenger* Stories in the *Wilsonville Spokesman* Website / Facebook / Twitter updates	**Fall 2014**
Wilsonville staff participating on TAC for expanded water treatment plant	**Late 2014-2015**

Future task: construction communications plan to be developed in collaboration with Wilsonville's staff, with input from pipeline route neighbors.

Willamette Water Supply
Our Reliable Water

5

Governance

- ✓ Facilitated Process
- ✓ Willamette Water Supply Council

Next Steps

- ✓ Continue work on preliminary design
- ✓ Begin to engage the community
- ✓ Begin to look at planning associated with expansion of the Willamette River Water Treatment Plant
- ✓ Continue work on governance

WA&C COUNCIL Wilsonville Arts & Culture Council

The Wilsonville Arts & Culture Council (WA&C) is a 'Presenting' and 'Arts Service' organization founded in 1996 as a 501(c)(3)tax exempt organization. This all volunteer arts organization produces www.WilsonvilleArts.org and an annual Wilsonville Festival Arts project the first weekend in June.

Wilsonville Arts and Culture Council (WACC)

Ten Reasons WACC Enhances the Wilsonville Community

The following are 10 reasons WACC activities enrich the livability of Wilsonville.

1. Promotes opportunities to learn about arts and culture.

2. Increases public awareness of the arts.

3. Provides opportunities for citizens to promote their talents in various fields of the arts.

4. Produces a 2 day *Festival of the Arts* which is open to the public free of charge.

5. Coordinates with other arts groups in the community including the Wilsonville Theater Company, the Wilsonville Arts Alliance and the Public Sculpture project; I-5 Music Group; Wilsonville Boones Ferry Historical Society.

6. Coordinates and supports activities throughout the public school system.

7. Connects with business groups and other organizations such as the Chamber of Commerce, the Wilsonville Public Library, the Community Center and the City of Wilsonville.

8. Promotes tourism through events such as the *Festival of the Arts* and the Public Sculpture project.

9. Works with other organizations to advocate for artistic and cultural representation and to research possible projects.

10. Finally, because *The Wilsonville Arts and Culture Council* believes that arts and culture are essential in the human experience, its main endeavor is to increase public awareness of the arts and to promote and celebrate this notion.

Wilsonville Arts & Culture Council
P.O. Box 861, Wilsonville, Oregon 97070
www.WilsonvilleArts.org

WA&C COUNCIL Wilsonville Arts & Culture Council

May 2, 2014

To: Mark Ottenad, Wilsonville Public/Government Affairs Director
From: Theonie Gilmore, Wilsonville Arts & Culture Council Director

The Wilsonville Arts & Culture Council supports the work of The Wilsonville Tourism Development Strategy Task Force.

Thank you to the city staff efforts; and to City Councilor Julie Fitzgerald for her leadership in citizen task force meetings. We appreciate the work by Total Destination Marketing, and volunteer time invested by our citizens in the months of meetings to get to this point.

In the Tourism Development Strategy we'd like to especially note Public Art and Art Festivals and Events as tourism/visitor draws.

Many sources have reported favorably from attending events such as performances by the:

* I-5 Music Group
* Wilsonville Theater Company plays
* Wilsonville Festival of Arts
* Arts & Culture Alliance of Wilsonville
  tours and coordination of public art sculpture.

A reminder note to the Wilsonville City Council:

The Wilsonville area facilities used by the community choral group, I-5, are too small. The Frogpond Grange used by the Wilsonville Theater Company is too small. Wilsonville needs a new facility to be used for local productions that would be big enough to enable tourist promotion.

Wilsonville Arts & Culture Council
P.O. Box 861, Wilsonville, Oregon 97070
www.WilsonvilleArts.org

City of
WILSONVILLE
OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject:** Climate Smart Communities: Shaping the Preferred Regional Approach to Reduce per capita Greenhouse Gas Emissions from Cars and Small Trucks by 2035 **Staff Members**: Nancy Kraushaar, Community Development Director; Stephan Lashbrook, Transit Director; Mark Ottenad, Public/Government Affairs Director **Departments:** Administration, Community Development, Transit
Action Required	**Advisory Board/Commission Recommendation**
☐ Motion ☐ Public Hearing Date: ☐ Ordinance 1st Reading Date: ☐ Ordinance 2nd Reading Date: ☐ Resolution Information or Direction ☒ Information Only ☐ Council Direction ☐ Consent Agenda	☐ Approval ☐ Denial ☐ None Forwarded ☒ Not Applicable **Comments:**
Staff Recommendations: Not applicable	
Recommended Language for Motion: Not applicable.	
PROJECT / ISSUE RELATES TO:	
☐ Council Goals/Priorities	☐ Adopted Master Plan(s) ☒ Not Applicable

ISSUE BEFORE COUNCIL

An update on Climate Smart Communities

EXECUTIVE SUMMARY

Metro has developed three scenarios for consideration by area policy makers in response to a state mandate to reduce per capita greenhouse gas emissions from cars and small trucks by 20% by the year 2035. Metro is now seeking public comment on the scenarios and has convened two joint meetings of JPACT (Joint Policy Advisory Committee on Transportation), which advises the Metro Council on transportation issues, and MPAC (Metro Policy Advisory Committee).

This subject was discussed briefly by the City Council on April 21, but not all of the attached information was available in time for that meeting.

The greater Portland Metro region, including Wilsonville, is subject to a 2009 legislative mandate to reduce per capita greenhouse gas emissions from cars and small trucks by 2035, based on a scenario process conducted by Metro. Metro has conducted modeling in conjunction with other agencies on various methods to reduce greenhouse gas emissions, and has developed three scenarios for consideration by area policy makers:

- Scenario A – "Recent Trends" – based on the implementation of all local land use and transportation plans throughout the region, to the extent possible with existing revenue levels;
- Scenario B – "Adopted Plans with Increased Revenue" – envisions the full implementation of local plans, plus the Regional Transportation Plan, with increased revenue; and
- Scenario C – "New Plans and Policies" – includes increased funding to achieve a greater reduction of GHGs.

Metro also identified six primary focus areas where increased public investments could help to achieve the various scenarios:

1. Transit
2. Technology
3. Travel Information Programs
4. Planned Active Transportation Network
5. Planned Street and Highway Network
6. Parking Management

On Friday, April 11, Metro conducted the first of two half-day retreats with members and alternates of JPACT and MPAC. Mayor Knapp participated in the retreat as the Clackamas County Cities JPACT alternate, along with Nancy Kraushaar and Stephan Lashbrook, who attended as observers.

At the April 11 retreat, Metro conducted a "straw poll" of participating JPACT and MPAC members and alternates to gauge initial reactions and thoughts on the three scenarios and six focus areas. Results of the poll indicate that, at this point, a majority of area leaders favor a strategy that is between Scenarios B and C. Focus areas of greatest emphasis favored by a large margin increased use of Technology and Transit, followed by Parking Management.

The second retreat is scheduled for May 30, at which time the financial implications of the various options will be discussed. Metro is seeking to conduct a formal vote by the members of JPACT and MPAC to select the preferred approach, including which scenario and focus areas to pursue.

The Climate Smart Communities program is still based on general information, with few specifics for local implementation. It is likely that the program will continue to be refined and will lead to direction from the Metro Council to local governments over the next few years. It will be important for the City of Wilsonville to remain actively involved as that refinement process unfolds in the future.

CURRENT YEAR BUDGET IMPACTS

None that can be determined at this time.

FINANCIAL REVIEW / COMMENTS:

Reviewed by: CAR Date: 4/24/14

LEGAL REVIEW / COMMENTS

Reviewed by: MEK Date: 4/25/2014

NA

CITY MANAGER COMMENT

ATTACHMENTS

A. *Shaping the Preferred Approach: A Discussion Guide for Policymakers of the Portland Metropolitan Region, April 2014,* Metro Climate Smart Communities Scenario Project

ATTACHMENT "A" IS SEPARATELY BOUND.

B. *Straw poll results from April 11 joint JPACT/MPAC meeting April 15, 2014,* Metro Climate Smart Communities Scenario Project

ATTACHMENT A

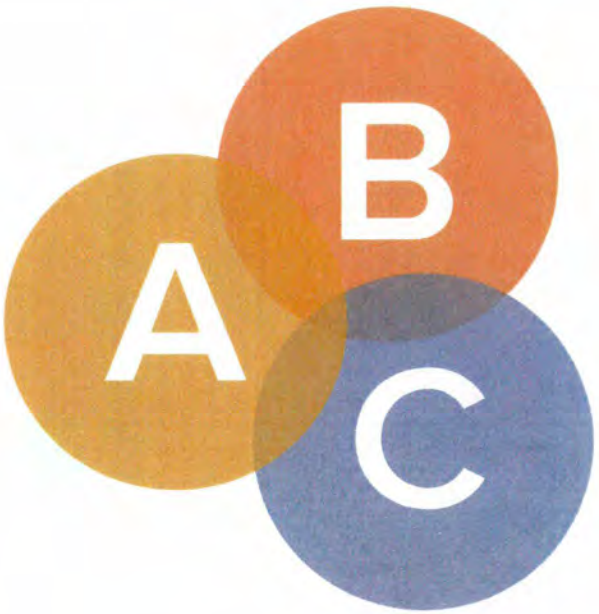
CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

Metro

SHAPING THE PREFERRED APPROACH

A DISCUSSION GUIDE FOR POLICYMAKERS

PORTLAND METROPOLITAN REGION APRIL 2014



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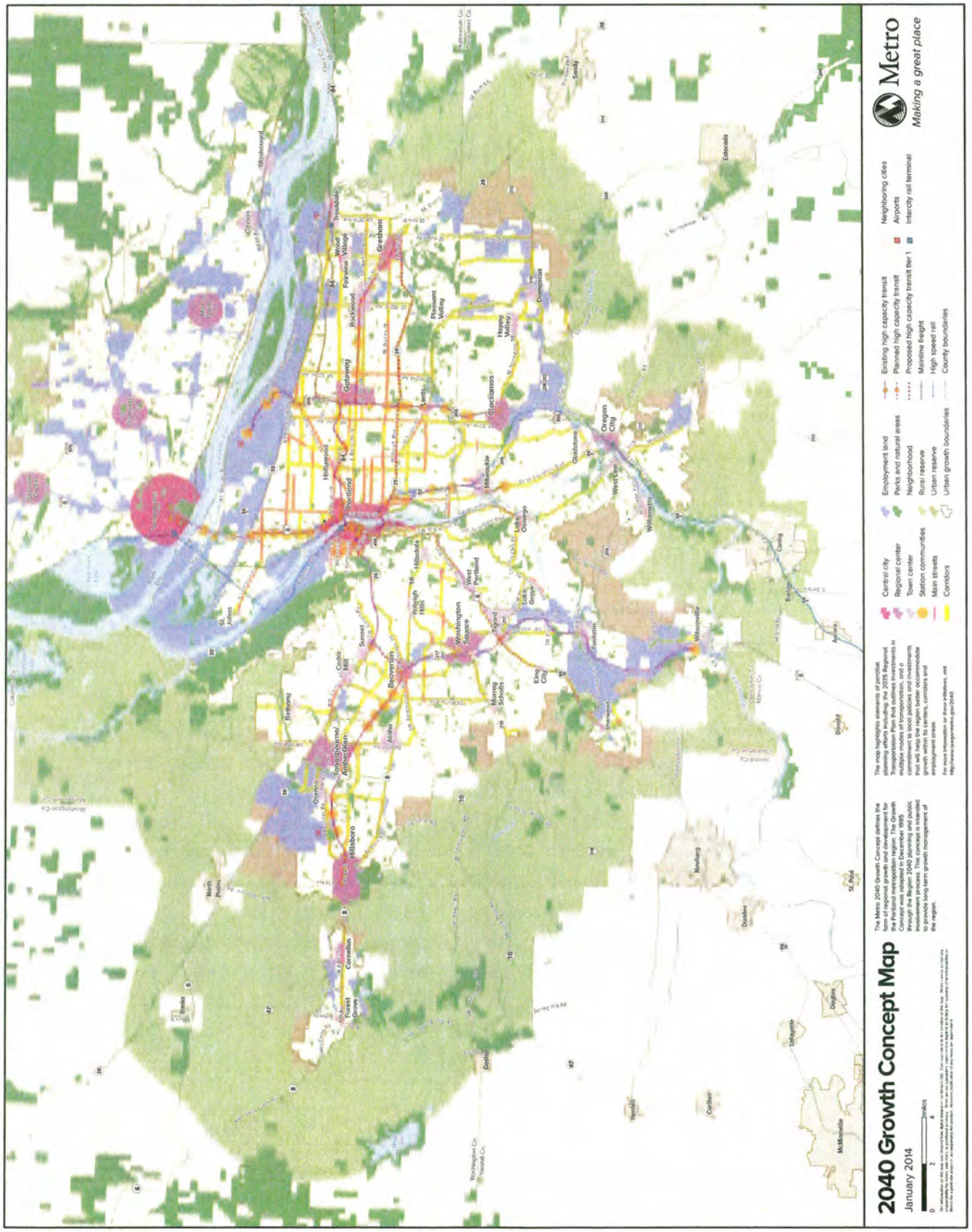
ATTACHMENT A

OUR SHARED VISION: THE 2040 GROWTH CONCEPT

An integrated land use and transportation vision for building healthy, equitable communities and a strong economy while reducing greenhouse gas emissions.



INTRODUCTION

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT
Metro

The Climate Smart Communities Scenarios Project was initiated in response to a state mandate to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.

The goal of the project is to engage community, business, public health and elected leaders in a discussion to shape a preferred approach that supports local plans for downtowns, main streets and employment areas; protects farms, forestland, and natural areas; creates healthy, livable neighborhoods; increases travel options; and grows the regional economy while reducing greenhouse gas emissions from cars and small trucks.

ABOUT THIS GUIDE

This discussion guide for policymakers is designed to help elected, business, and community leaders and residents better understand the challenges and choices facing the Portland metropolitan region. It will be used by members of the Metro Policy Advisory Committee (MPAC) and Joint Policy Advisory Committee on Transportation (JPACT) to help shape a preferred approach for the Metro Council to consider for adoption in December 2014.

This guide brings together the results of the analysis completed in late 2013 and background information on the choices facing policymakers as the Climate Smart Communities Scenarios Project moves forward to shape a preferred approach that supports the region's shared values and helps make local and regional plans a reality.

The desired outcome for this discussion guide is that together, cities, counties and regional partners will be prepared to decide which investments and actions from each scenario should be included in the preferred approach.

What the future might look like in 2035

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

The scenarios are tested for research purposes only and do not necessarily reflect current or future policy decisions of the Metro Council, MPAC or JPACT.

DESIRED REGIONAL OUTCOMES

ATTRIBUTES OF GREAT COMMUNITIES

The six desired outcomes for the region endorsed by the Metro Policy Advisory Committee and approved by the Metro Council:

Vibrant communities
People live and work in vibrant communities where their everyday needs are easily accessible.

Economic prosperity
Current and future residents benefit from the region's sustained economic competitiveness and prosperity.

Safe and reliable transportation
People have safe and reliable transportation choices that enhance their quality of life.

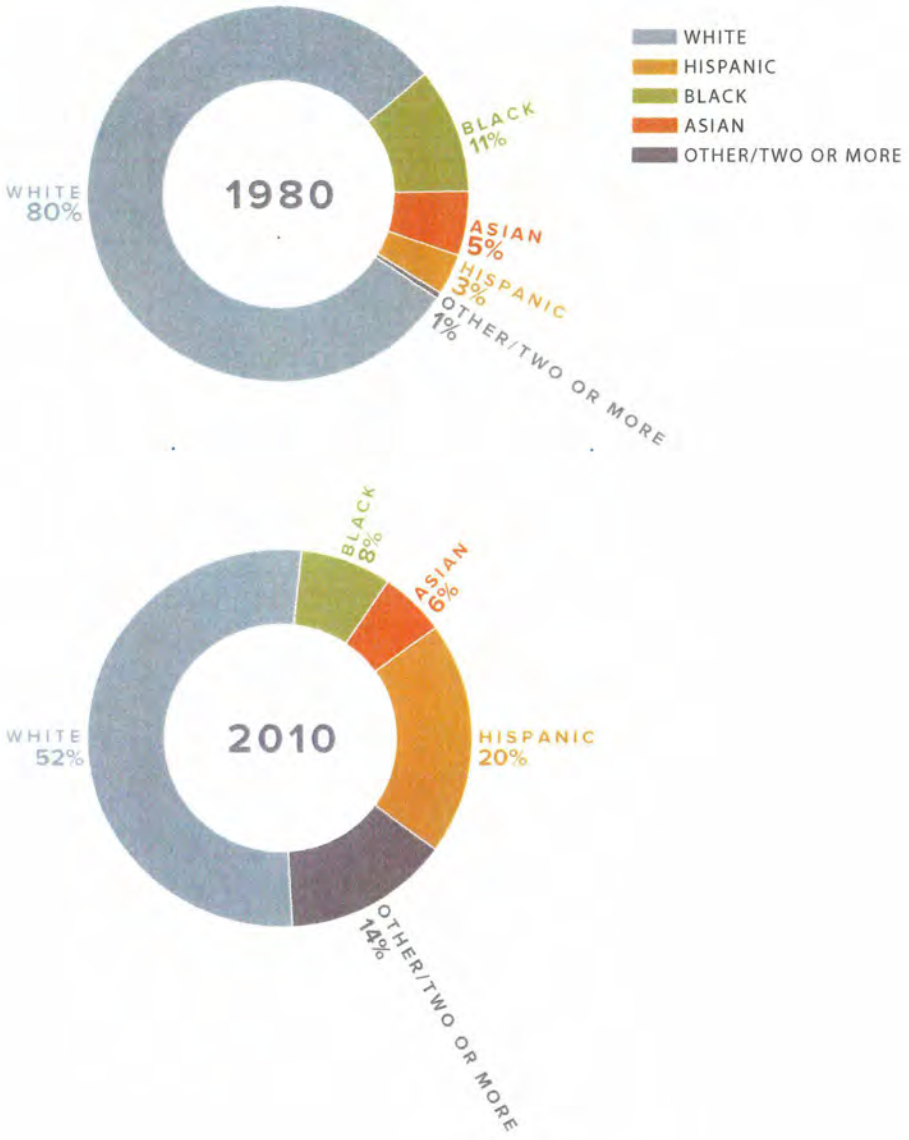
Leadership on climate change
The region is a leader in minimizing contributions to global warming.

Clean air and water
Current and future generations enjoy clean air, clean water, and healthy ecosystems.

Equity
The benefits and burdens of growth and change are distributed equitably.

People of color are an increasingly significant percentage of the Portland metropolitan region's population. Areas with high poverty rates and people of color are located in all three of the region's counties – often in neighborhoods with limited transit access to family wage jobs and gaps in walking and bicycling networks.

RACE AND ETHNICITY IN THE PORTLAND METROPOLITAN REGION



REGIONAL CONTEXT

OUR REGION IS CHANGING

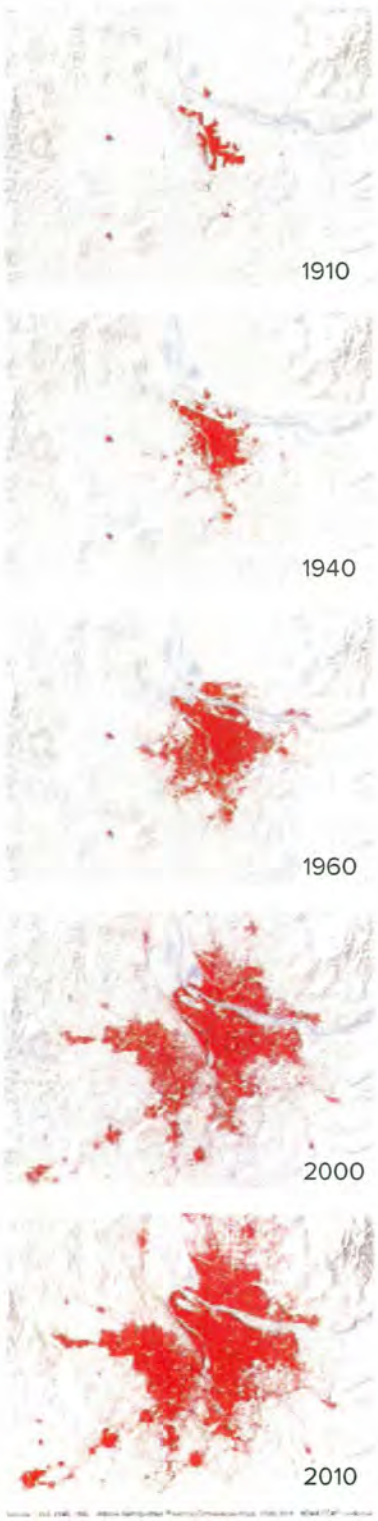
The Portland metropolitan region is an extraordinary place to call home. Our region has unique communities with inviting neighborhoods, a diverse economy and a world-class transit system. The region is surrounded by stunning natural landscapes and criss-crossed with a network of parks, trails and wild places within a walk, bike ride or transit stop from home. Over the years, the communities of the Portland metropolitan region have taken a collaborative approach to planning that has helped make our region one of the most livable in the country.

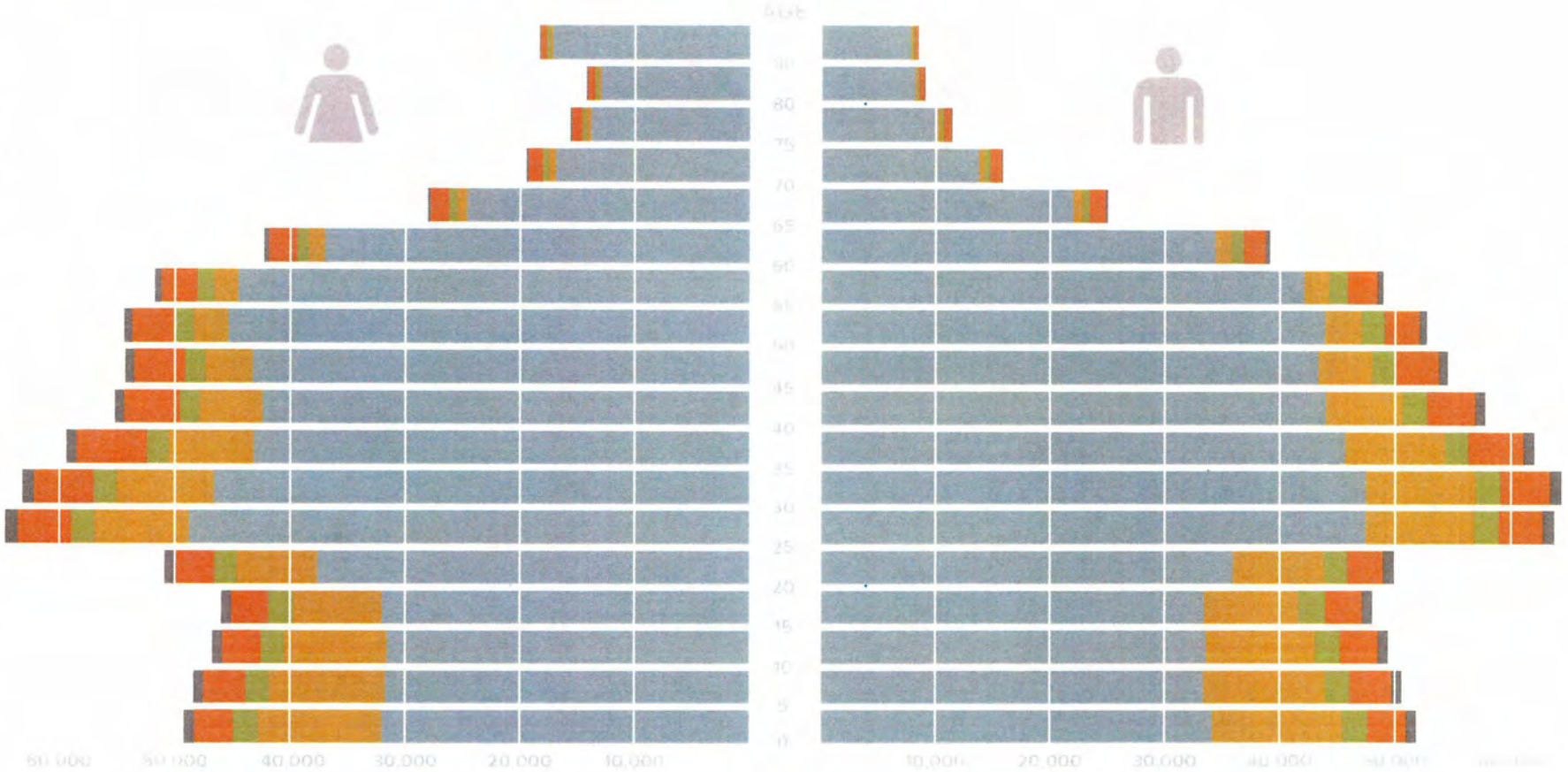
Because of our dedication to planning and working together to make local and regional plans a reality, we have set a wise course for managing growth – but times are challenging. With a growing and increasingly diverse population and an economy that is still in recovery, residents of the region along with the rest of the nation have reset expectations for financial and job security.

Aging infrastructure, rising energy costs, a changing climate, and global economic and political tensions demand new kinds of leadership, innovation and thoughtful deliberation and action to ensure our region remains a great place to live, work and play for everyone.

In collaboration with city, county, state, business and community leaders, Metro has researched how land use and transportation policies and investments can be leveraged to respond to these challenges.

The region expects to welcome nearly 500,000 new residents and more than 365,000 new jobs within the urban growth boundary by 2035.





2010 POPULATION: Age, gender and race/ethnicity
Share of 7-county households

ATTACHMENT A

INVESTING IN OUR COMMUNITIES

Oregon has been a leader among a handful of states in addressing climate change, with an ambitious goal to reduce greenhouse gas (GHG) emissions from all sources to 75 percent below 1990 levels by the year 2050. In 2009, the Oregon Legislature required the Portland metropolitan region to develop an approach to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.

Because our community visions focus development and investment where it makes sense – in downtowns, main streets and employment areas – and support transportation options for getting to work, school, and destinations across the region, we already drive 20 percent fewer miles every day than residents of other regions of similar size.

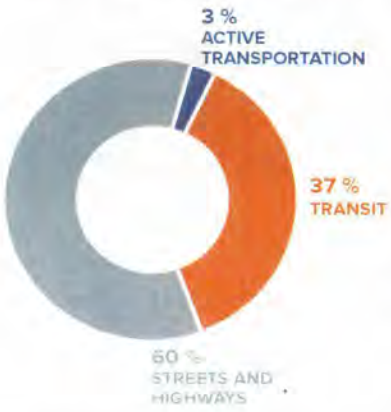
While our existing local and regional plans for growth can get us to the 2035 target, we still have work to do to make those plans a reality.

We know that investing in quality infrastructure is essential to a functioning, vibrant economy and healthy, livable communities. Investment in infrastructure is also needed to reduce greenhouse gas emissions. Past experience and analysis indicate that investments in centers, corridors and employment areas are an effective means of attracting growth to these areas, supporting community visions and values, and reducing greenhouse gas emissions.

Investments can take the form of expanding transit service; building new sidewalks, bikeways or street connections; using technology to actively manage the transportation system; managing parking; providing travel option programs; expanding existing roads; and other tools. Removing barriers to more efficient use of land and existing infrastructure can also help communities achieve their vision for the future while reducing greenhouse gas emissions as called for by the state.

The Oregon Legislature has required the Portland region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.

SHARE OF FEDERAL AND STATE CAPITAL INVESTMENTS IN THE PORTLAND METROPOLITAN REGION BY MODE (1995 – 2010)



AVERAGE ANNUAL AMOUNT OF STATE AND FEDERAL FUNDING SPENT ON CAPITAL INVESTMENTS IN THE PORTLAND METROPOLITAN REGION (1995 – 2010)

$10 million per year
active transportation

$141 million per year
transit

$225 million per year
streets and highway

Source: Metro 2010

PAYING FOR NEEDED INVESTMENTS

Our nation is investing less in infrastructure today than at any time in our history. The Portland metropolitan region is falling behind on making the investments needed to support our growing population and achieve community visions. Research in 2008 estimated the cost of building needed public and private infrastructure to be $27 to $41 billion by 2035. Traditional funding sources are expected to cover only half that amount.

Funding for transportation investments comes from many sources, including the U.S. Congress, the Federal Highway Administration, the Federal Transit Administration, the Oregon Legislature, ODOT, Metro, cities, counties, TriMet, South Metro Region Rapid Transit (SMART), the Port of Portland and developers.

Transportation funding has long been primarily a state and federal obligation, financed largely through gas taxes and other user fees. The purchasing power of federal and state gas tax revenues is declining as individuals drive less and fuel efficiency increases. The effectiveness of this revenue source is further eroded because the gas tax is not indexed to inflation. These monies are also largely dedicated to streets and highways – primarily maintenance and preservation – and to a limited extent, system expansion.

We also need to complete gaps in our region's transit, walking and biking networks to help expand affordable travel options, yet active transportation currently lacks a dedicated funding source. Expansion and operation of the transit system has relied heavily on payroll taxes for operations and competitive federal funding for high capacity transit. But the region's demand for frequent and reliable transit service exceeds the capacity of the payroll tax to support it.

Until the 2009 passage of the Jobs and Transportation Act (House Bill 2001) raised the state gas tax in 2011 by six cents, this revenue source had not increased since 1993. Similarly, the federal gas tax has not increased since 1993. This failure of fundraising to keep pace with infrastructure needs has been particularly acute in Oregon, as most states have turned to increased sales tax levies to cope with the decrease in purchasing power of federal transportation funding. Lacking a sales tax or other tools, Oregon has focused on bonding strategies based on future revenue at the state level and therefore has not developed a long-term strategy.

As the region's economy and its labor and housing markets continue to recover from the Great Recession, resources remain limited for making the investments needed to support our growing communities. Diminished resources mean reduced ability to maintain, improve and expand existing transportation infrastructure.

As a result, the existing transportation system is incomplete, overburdened and underfunded. Because federal and state funding is not keeping pace with infrastructure operation and maintenance needs, a substantial share of funding for future regional transportation investments has shifted to local revenue sources. Local governments in the Portland metropolitan region (like others in Oregon) have turned to increased tax levies, road maintenance fees, system development charges and traffic impact fees in attempt to keep pace, although some communities have been more successful than others.

The adopted Regional Transportation Plan calls for stabilizing existing transportation revenue sources while securing new and innovative long-term sources of funding adequate to build, operate and maintain the regional transportation system for all modes of travel.

At a time when local, state and federal resources needed to address our aging infrastructure are limited, we have a unique opportunity to find a better way to support our communities, attract new business, and grow the economy.

The Climate Smart Communities Scenarios Project has shown that the same kinds of investments that can help address these infrastructure needs can also help achieve our greenhouse gas emissions reduction goals. These kinds of investments will also help communities grow in ways that will support local economies for decades to come. Working together, we can develop the local, regional, state and federal partnerships needed to invest in our communities and realize our plans.

TODAY'S CHOICES SHAPE THE FUTURE

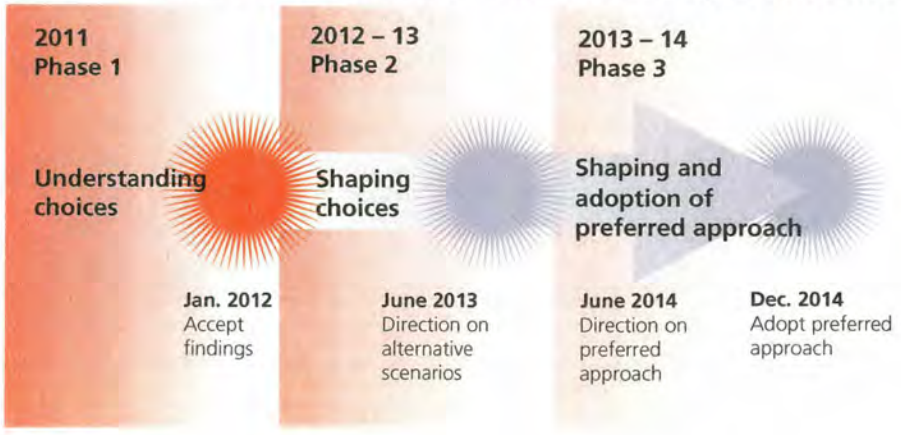
The region's charge from the state is to identify and adopt a preferred approach for meeting the target by December 2014. The choices we make today about how we live, work and get around will shape the future of the region for generations to come. The project is being completed in three phases – and has entered the third and final phase.

The first phase began in 2011 and concluded in early 2012. This phase consisted of testing strategies on a regional level to understand which strategies can most effectively help the region meet the state greenhouse gas emissions reduction mandate.

Most of the investments and actions under consideration are already being implemented to varying degrees across the region to realize community visions and other important economic, social and environmental goals.

As part of the first phase, Metro staff researched strategies used to reduce emissions in communities across the region, nation and around the world. This work resulted in a toolbox describing the range of potential strategies, their effectiveness at reducing emissions and other benefits they could bring to the region, if implemented.

Climate Smart Communities Scenarios Project timeline



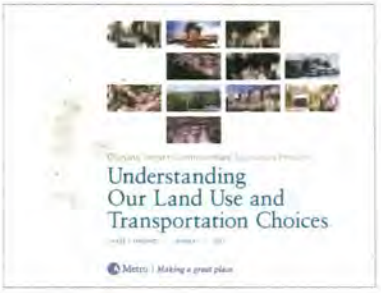
We found there are many ways to reduce emissions while creating healthy, more equitable communities and a vibrant regional economy, but no single solution will enable the region to meet the state's target.

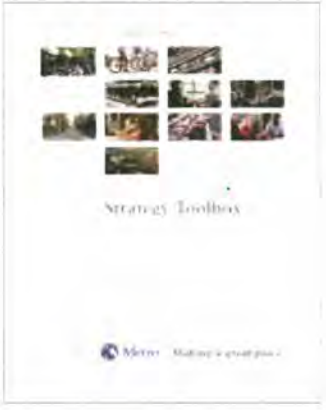
Investing in communities in ways that support local visions for the future will be key to reducing greenhouse gas emissions. Providing schools, services and shopping near where people live, improving bus and rail transit service, building new street connections, using technology to manage traffic flow, encouraging electric cars and providing safer routes for walking and biking all can help.

The second phase began in 2012 and concluded in October 2013. In this phase, Metro worked with community leaders to shape three approaches – or scenarios – and the criteria to be used to evaluate them. In the summer, 2013, Metro analyzed the three approaches to investing in locally adopted land use and transportation plans and policies.

The purpose of the analysis was to better understand the impact of those investments to inform the development of a preferred approach in 2014. Each scenario reflects choices about how and where the region invests to implement locally adopted plans and visions. They illustrate how different levels of leadership and investment could impact how the region grows over the next 25 years and how those investments might affect different aspects of livability for the region.

The results of the analysis were released in fall 2013.





Three approaches that we evaluated in 2013

SCENARIO **A**

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

SCENARIO **B**

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan which relies on increased revenue.

SCENARIO **C**

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

WHAT WE'VE LEARNED SO FAR

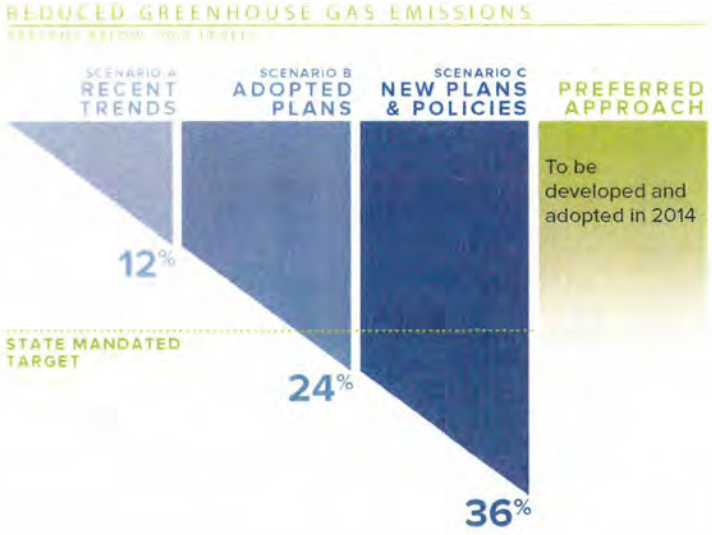
WE FOUND GOOD NEWS

Our Phase 2 analysis indicates that adopted local and regional plans can meet the state target for reducing greenhouse gas emissions – if we make the investments and take the actions needed to implement those plans and make them a reality.

The analysis also identified potentially significant benefits that can be realized by implementing adopted plans (Scenario B) and new policies and plans (Scenario C), including cleaner air, improved public health and safety, reduced congestion and delay, and travel cost savings that come from driving shorter distances and using more fuel efficient vehicles.

The analysis showed that if we continue investing at our current levels (Scenario A) we will fall short of what has been asked of our region, as well as other outcomes we are working to achieve – healthy communities, clean air and water, reliable travel options, and a strong regional economy.

More results are provided in the "Supplemental Materials" section of this guide.



The reduction target is from 2005 emissions levels after reductions expected from cleaner fuels and more fuel-efficient vehicles.

BUT THERE IS MORE WORK TO BE DONE

We're all in this together Local, regional, state and federal partnerships are needed to make the investments and take the actions needed to implement adopted local and regional plans and meet the state target. Our findings can help the region make the case for the increased investment and new partnerships that will be needed to implement the preferred approach the Metro Council considers for adoption in December 2014.

Implementation goes hand in hand with community engagement and participation We must continue working with community leaders to build capacity of organizations and their members to participate in ongoing local and regional planning and implementation efforts. This will help ensure meaningful opportunities for participation of public health, social equity and environmental justice leaders and the communities they represent as we move forward to eliminate disparities.

A transition to cleaner fuels and more fuel-efficient vehicles is essential Oregon cannot achieve its greenhouse gas emissions reduction goals without the significant advancements in fleet and technology committed to by the state. It is critical for the Oregon Legislature and state commissions to prioritize investments and actions that will catalyze this transition to ensure assumptions used to set our region's emissions reduction target are realized.

Prioritizing investments that achieve multiple goals in combination with more funding will help us get there The greatest barrier to implementation is the lack of sufficient funding to make the investments needed for our local and regional plans to become a reality. More state funding is needed to leverage local and regional funding and assist future planning and implementation. With limited funding, it is even more important to prioritize investments that support healthy, equitable communities and a strong economy, while reducing greenhouse gas emissions to create the future we want for the region.

But first, the Metro Council is asking cities, counties, regional partners and the public to weigh in on which investments and actions from each of the three scenarios should go forward into a preferred approach and how we should pay for the needed investments.

A one-size-fits-all approach won't meet the needs of our diverse communities. A combination of all of the investments and actions under consideration is needed to help us realize our shared vision for making this region a great place for generations to come.

The Portland metropolitan region pioneered approaches to land use and transportation planning that make it uniquely positioned to address the state climate goals, due to the solid, well-integrated transportation and land-use systems in place and a history of working together to address complex challenges at a regional scale.

MOVING FORWARD

In the 1990s, regional policy discussions centered on how and where the region should grow to protect the things that make this region a great place to live, work and play. Those discussions led to the adoption of the region's long-range strategy, the 2040 Growth Concept. This strategy reflects shared community values and desired outcomes that continue to resonate today.

The preferred approach will not replace the 2040 Growth Concept nor be a stand-alone plan. Instead, it will be a set of recommended policies and actions for how the region moves forward to integrate reducing greenhouse gas emissions with ongoing efforts to create the future we want for our region.

THROUGH MAY 2014
Policymakers weigh in on which investments and actions should be included in the region's preferred approach

JUNE 2014
The Metro Council is asked to provide direction to staff on the draft preferred approach

SUMMER 2014
Evaluation of the preferred approach and development of a near-term implementation plan

SEPTEMBER 2014
Final public review of the preferred approach

DECEMBER 2014
Metro Council considers adoption of the preferred approach

JANUARY 2015
Submit adopted approach to Land Conservation and Development Commission for approval

WHAT IS THE PREFERRED APPROACH?

The preferred approach will be a set of recommended policies and actions for how the region moves forward to integrate reducing greenhouse gas emissions with ongoing efforts to create the future we want for our region.

LEGISLATION The Metro Council will consider adoption of legislation signaling the region's commitment to the preferred approach through the ongoing implementation of the 2040 Growth Concept. The legislation will include:

POLICIES Regional Framework Plan (RFP) amendments

- Changes to refine existing RFP policies and/or add new policies to achieve the preferred approach.

ACTIONS Recommended actions

- Menu of investments and other tools needed to achieve the preferred approach that can be tailored by each community to implement local visions.
- Near-term actions needed to implement and achieve the preferred approach. This could include:
  - state and federal legislative agendas that request funding, policy changes or other tools needed to achieve preferred approach
  - identification of potential/likely funding mechanisms for key actions
  - direction to the 2018 Regional Transportation Plan update
  - direction to future growth management decisions
  - direction for functional plan amendments that guide local implementation, if needed.
- Monitoring and reporting system that builds on existing performance monitoring requirements per ORS 197.301 and updates to the Regional Transportation Plan.

Through this collaborative effort, we can identify how the region should work together to develop new kinds of leadership and the local, regional, state and federal partnerships needed to invest in communities to make local and regional plans a reality.

POLICY QUESTIONS FOR 2014

WHAT CHOICES HAVE BEEN MADE?

In February, the Metro Policy Advisory Committee and Joint Policy Advisory Committee on Transportation approved a path for moving forward with an eight-step process to shape and adopt a preferred approach in 2014. As recommended by MPAC and JPACT, the preferred approach will start with the plans cities, counties and the region have already adopted – from local zoning, capital improvement, comprehensive, and transportation system plans to the 2040 Growth Concept and regional transportation plan – to create great communities and build a vibrant economy.

This includes managing the urban growth boundary through regular growth management cycles (currently every six years). In addition, MPAC and JPACT agreed to include assumptions for cleaner fuels and more fuel-efficient vehicles as defined by state agencies during the 2011 target-setting process. A third component they recommended be included in the preferred approach is the Statewide Transportation Strategy assumption for vehicle insurance paid by the miles driven.

WHAT CHOICES HAVE BEEN MADE?

In January and February of 2014, MPAC, JPACT and the Metro Council agreed these elements should be included in the draft preferred approach as a starting point:

- ☑ **Implement adopted regional and local plans**
  Implement the 2040 Growth Concept and local zoning, comprehensive and transportation plans and manage the urban growth boundary through regular growth management cycles.
- ☑ **Transition to cleaner fuels and fuel-efficient vehicles**
  Rely on state fleet and technology assumptions used when setting our region's target.
- ☑ **Support vehicle insurance paid by the miles driven**
  Use state assumptions for pay-as-you-drive insurance.

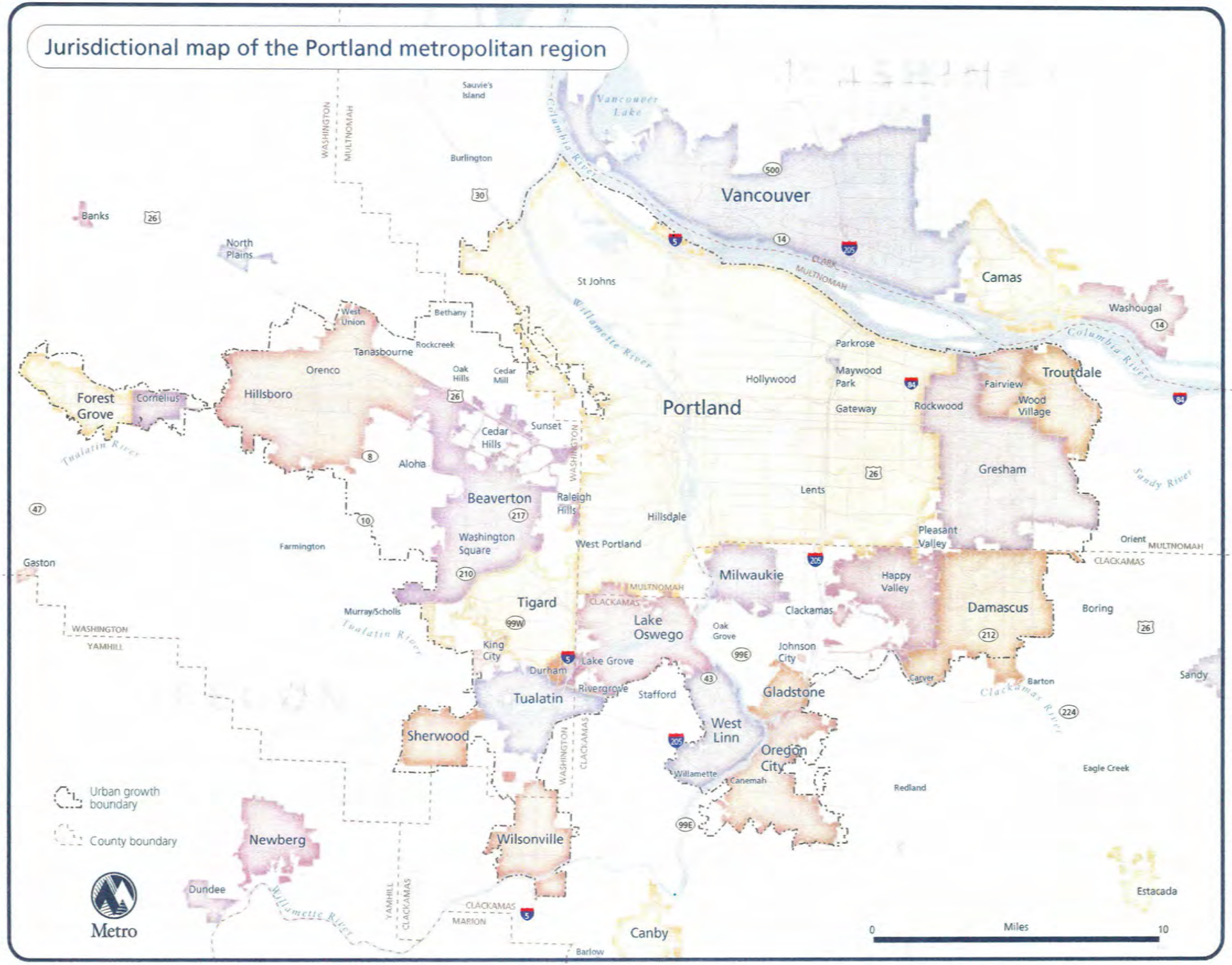
WHAT CHOICES DO WE STILL NEED TO MAKE?

Since January 2014, the Metro Council has engaged community and business leaders, local governments and the public on what mix of investments and actions best support their community's vision for healthy and equitable communities and a strong economy while reducing greenhouse gas emissions.

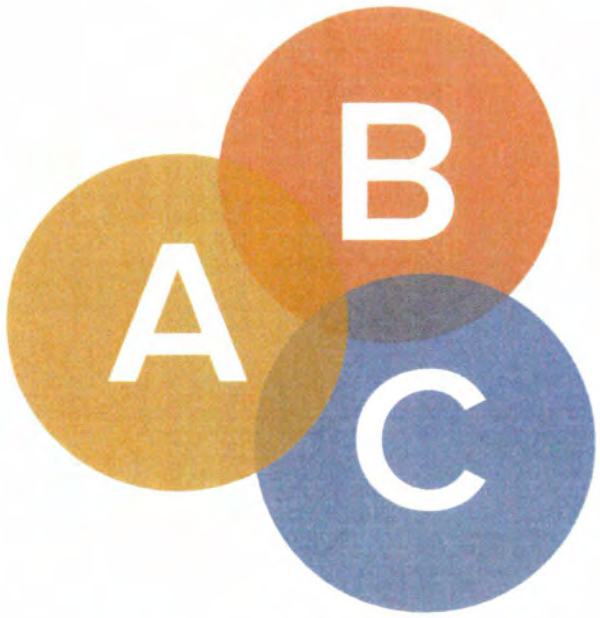
Through May 2014, policymakers will consider the results of the engagement activities and scenarios evaluation as they weigh in on these policy questions:

- ☐ **How much transit should we provide by 2035?**
- ☐ **How much should we use technology to actively manage the transportation system by 2035?**
- ☐ **How much should we expand the reach of travel information programs by 2035?**
- ☐ **How much of the planned active transportation network should we complete by 2035?**
- ☐ **How much of the planned street and highway network should we complete by 2035?**
- ☐ **How should local communities manage parking by 2035?**
- ☐ **How should we pay for our investment choices by 2035?**

Jurisdictional map of the Portland metropolitan region



POLICY AREAS



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OVERVIEW OF POLICY AREAS

This section provides background information on the seven policy areas being considered by the region's policymakers:

- Make transit more convenient, frequent, accessible and affordable
- Use technology to actively manage the transportation system
- Provide information and incentives to expand the use of travel options
- Make biking and walking more safe and convenient
- Make streets and highways more safe, reliable and connected
- Manage parking to make efficient use of parking resources
- Identify potential ways to pay for our investment choices

The first three pages include a description of the policy, its potential climate benefit, cost, implementation benefits and challenges, and a summary of the how the policy is implemented for each scenario. The last page of each description summarizes emerging themes and specific comments provided during project public engagement activities.

EXPLANATION OF THE CLIMATE BENEFIT RATINGS

In Phase 1 of the project, staff conducted a sensitivity analysis to better understand the greenhouse gas emissions reduction potential of individual policies. The information derived from the sensitivity analysis was used to develop a five-star rating system for communicating the relative climate benefits of different policies. The ratings represent the potential effects of individual policy areas in isolation and do not capture variations that may occur from synergies between multiple policies.

Estimated reductions assumed in climate benefits ratings	
less than 1%	★ ☆ ☆ ☆ ☆
1 – 2%	★ ★ ☆ ☆ ☆
3 – 6%	★ ★ ★ ☆ ☆
7 – 15%	★ ★ ★ ★ ☆
16 – 20%	★ ★ ★ ★ ★

Source Memo to TPAC and interested parties on Climate Smart Communities: Phase 1 Metropolitan GreenSTEP scenarios sensitivity analysis (June 21, 2012)

EXPLANATION OF THE RELATIVE COST RATINGS

Like the relative climate benefit ratings, the cost ratings provide a quick reference for comparing the relative cost of investments between policy areas. The estimated cost of each policy area for each scenarios is provided below.

The relative climate benefit and cost ratings are provided to simplify information presented for purposes of discussion.

ESTIMATED COSTS FOR EACH SCENARIO BY POLICY AREA (2014$)

	SCENARIO A	SCENARIO B	SCENARIO C
Transit capital	$590 million	$1.9 billion	$5.1 billion
Transit operations	$4.8 billion	$5.3 billion	$9.5 billion
Technology	$113 million	$135 million	$193 million
Information	$99 million	$124 million	$234 million
Active transportation	$57 million	$948 million	$3.9 billion
Streets and highways capital[1]	$162 million	$8.8 billion	$11.8 billion
Parking	n/a	n/a	n/a
Total costs[1]	**$6 billion**	**$17 billion**	**$31 billion**

[1] Table note does not include road-related operations, maintenance and preservation costs.

RELATIVE CLIMATE BENEFIT

★ ★ ★ ★ ★

RELATIVE COST

$ $ $

Make transit more convenient, frequent, accessible and affordable

There are four key ways to make transit service more convenient, frequent, accessible and affordable. The effectiveness of each will vary depending on the mix of nearby land uses, the number of people living and working in the area, and the extent to which travel information, marketing and technology are used.

Frequency Increasing the frequency of transit service in combination with transit signal priority and bus lanes makes transit faster and more convenient.

System expansion Providing new community and regional transit connections improves access to jobs and community services and makes it easier to complete some trips without multiple transfers.

Transit access Building safe and direct walking and biking routes and crossings that connect to stops makes transit more accessible and convenient.

Fares Providing reduced fares makes transit more affordable; effectiveness depends on the design of the fare system and the cost.

Transit is provided in the region by TriMet and South Metro Area Rapid Transit (SMART) in partnership with Metro, cities, counties, employers, business associations and non-profit organizations.

BENEFITS

- improves access to jobs, the workforce, and goods and services, boosting business revenues
- creates jobs and saves consumers and employers money
- stimulates development, generating local and state revenue
- provides drivers an alternative to congested roadways and supports freight movements by taking cars off the road
- increases physical activity
- reduces air pollution and air toxics
- reduces risk of traffic fatalities and injuries

CHALLENGES

- transit demand outpacing funding
- enhancing existing service while expanding coverage and frequency to growing areas
- reduced revenue and federal funding, leading to increased fares and service cuts
- preserving affordable housing options near transit
- ensuring safe and comfortable access to transit for pedestrians, cyclists and drivers
- transit-dependent populations locating in parts of the region that are harder to serve with transit

How much transit should we provide by 2035?

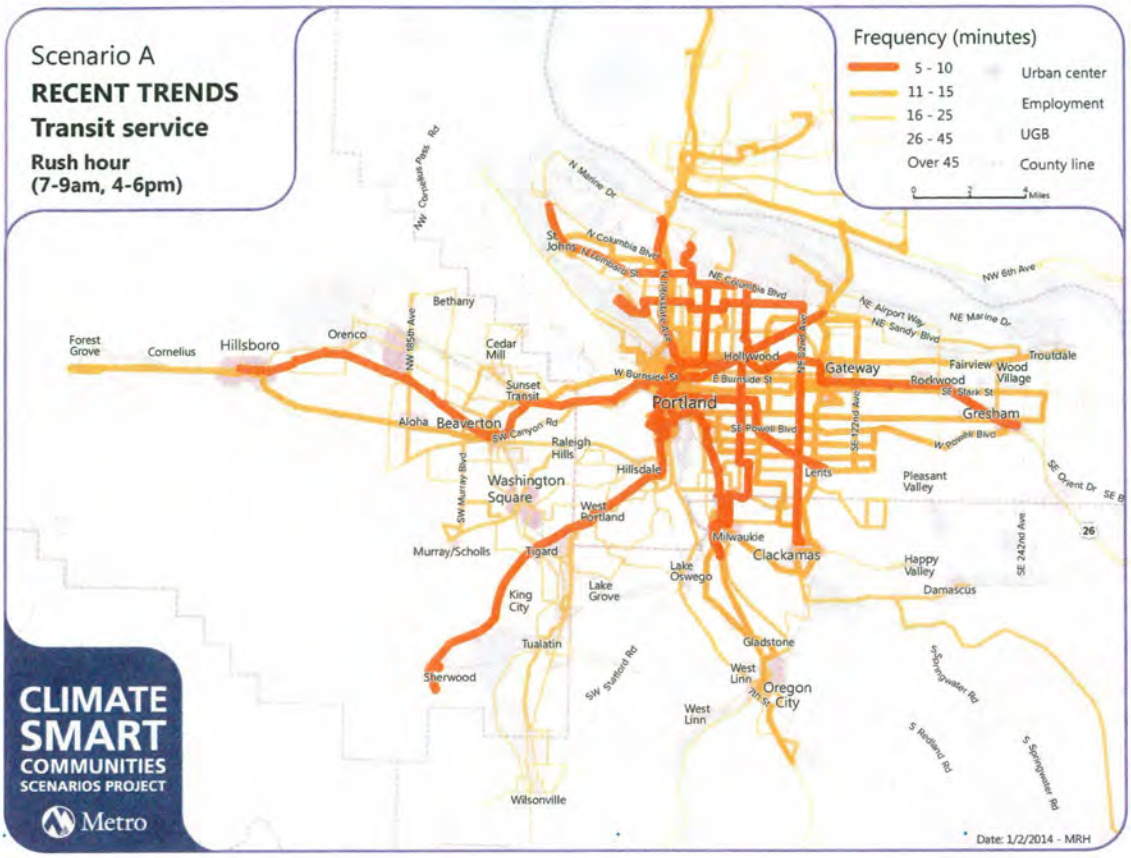
TRANSIT AT A GLANCE

	SCENARIO A	SCENARIO B	SCENARIO C
Daily revenue hours	5,600	6,200	11,200
Service expansion *(increase from 2010 level)*	14% increase	27% increase	129% increase
Rush hour frequency	10-minute service on 10 routes	10-minute service on 13 routes	10-minute service on 37 routes
Off-peak frequency	30-minute service on most routes	20-minute service on most routes	15 or 20-minute service on most routes
New high capacity transit connections	None	Planned connections completed, such as the extension to Vancouver, WA	All regional centers and more town centers served Priority high capacity transit system plan and Southwest Corridor completed
Other service enhancements	Westside Express Service (WES) and Portland streetcar operate at 2010 frequencies	Same as Scenario A, plus more planned Portland streetcar connections completed	WES operates all day with 15-minute service Locally-developed Service Enhancement Plans (SEPs) and the planned Portland Streetcar System Plan mostly completed
Public and private shuttles	Existing private shuttles continue to operate between large work sites and major transit stops	Additional major employers and some community-based organizations work with TriMet to operate shuttles	More major employers and some community-based organizations work with TriMet to operate shuttles
Fares	Reduced fares provided to youth, older adults and disabled persons	Same as Scenario A	Same as Scenario A, plus reduced fares provided to low-income families
Estimated capital cost* (2014$)	**$590 million**	**$1.9 billion**	**$5.1 billion**
Estimated service operating costs (2014$)**	**$4.8 billion ($187 million per year)**	**$5.3 billion ($207 million per year)**	**$9.5 billion ($374 million per year)**

* Capital costs reflect HCT capital costs plus fleet replacement and expansion costs.

** Operating costs for TriMet service were calculated by annualizing the daily revenue hours proposed for each scenario and applying TriMet's average operating cost per revenue hour, with cost by mode weighted by the proportion of service provided on each mode. SMART operating costs were calculated by assuming SMART's FY 11-12 annual operating costs are maintained through 2035.

(See Supplemental materials section, Phase 2: Transit Access at a Glance.)



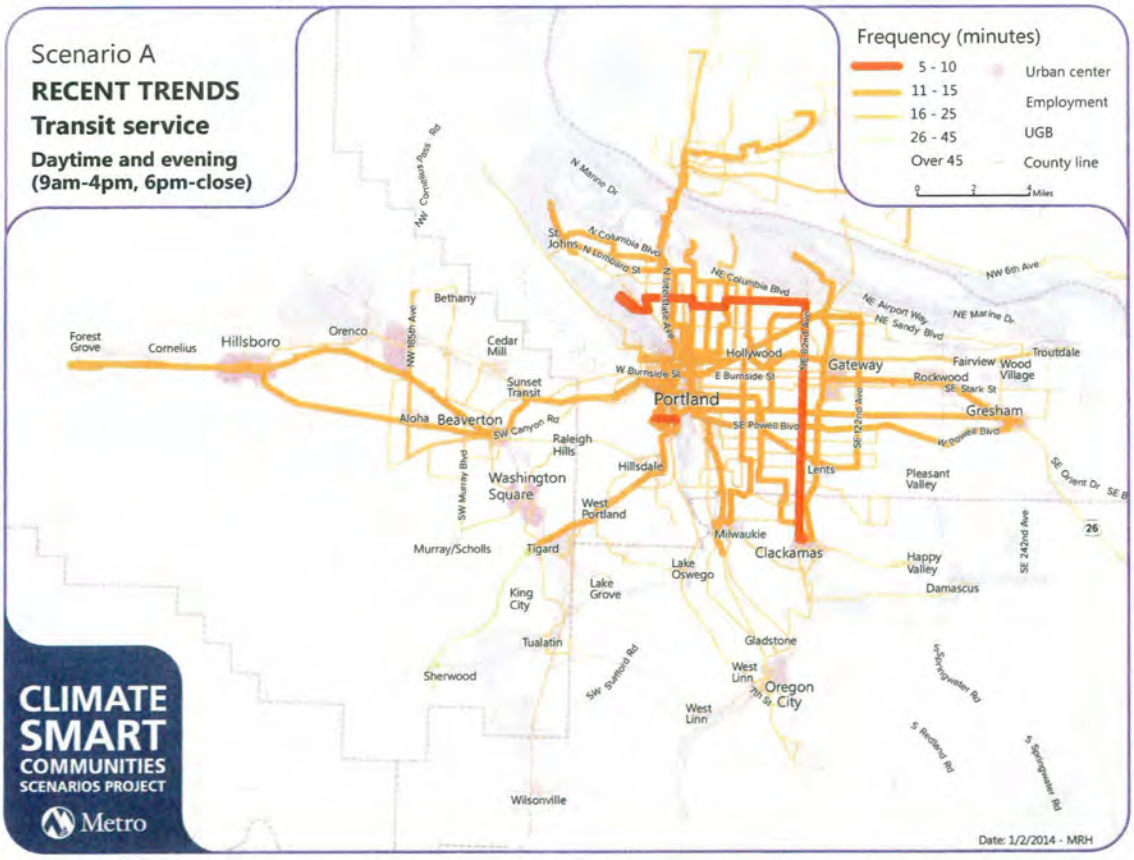
SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

31% jobs
24% households
31% low-income households

Estimated jobs and households within ¼-mile of 10-minute or better service by 2035



6% jobs
4% households
5% low-income households

Estimated jobs and households within ¼-mile of 10-minute or better service by 2035

Note These maps are for research purposes only and do not reflect current or future policy decisions of the Metro Council, MPAC or JPACT.

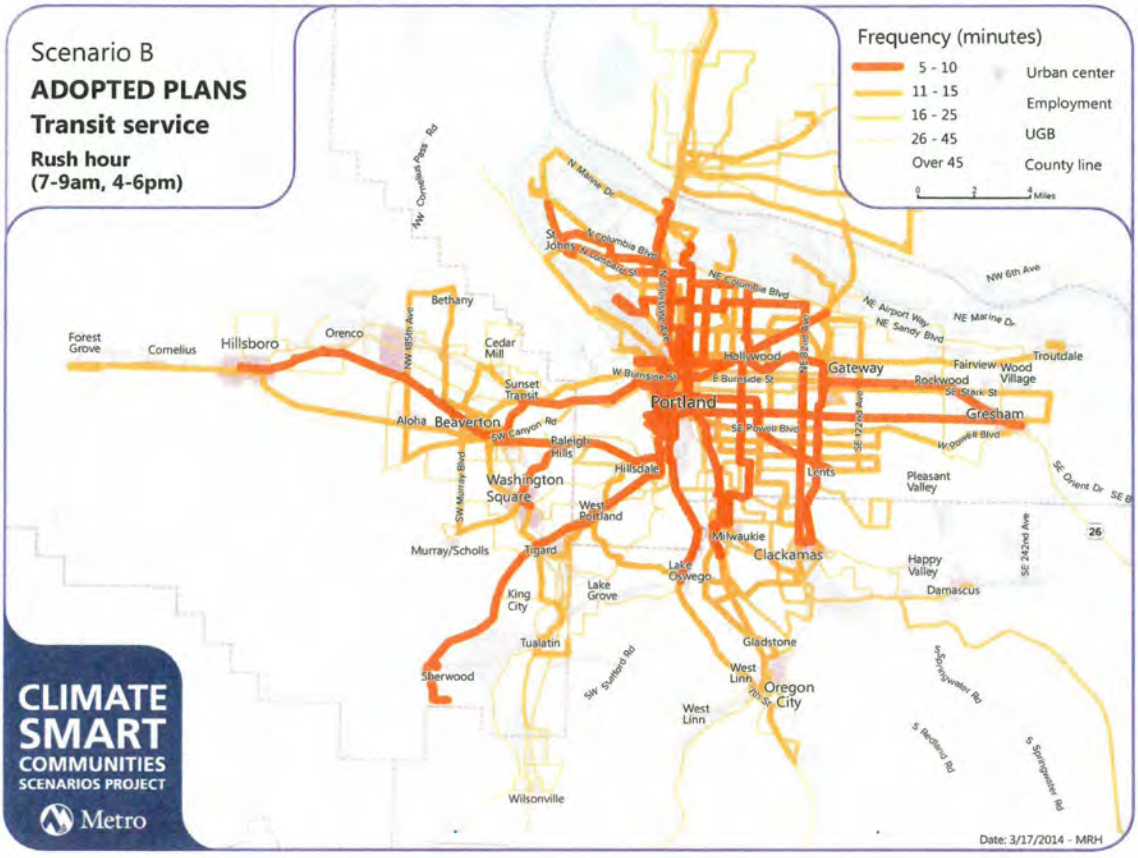
SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

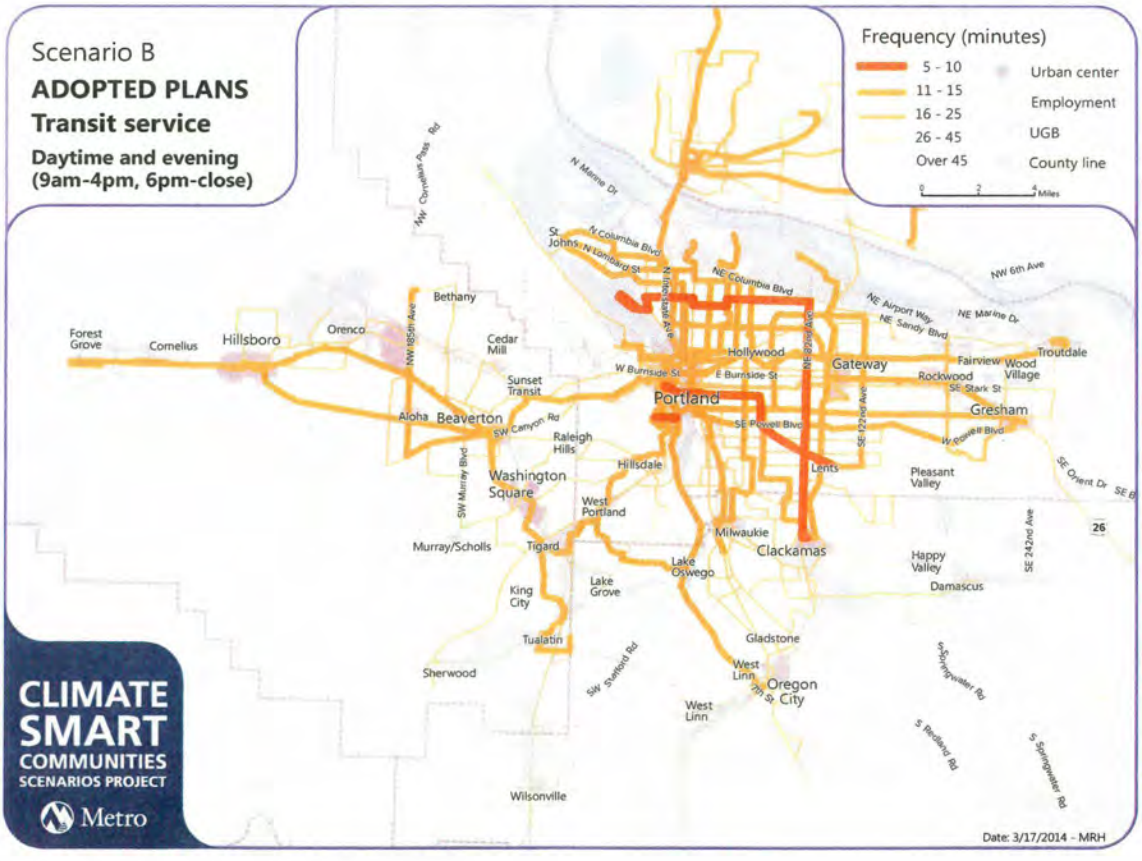
33% jobs
27% households
34% low-income households

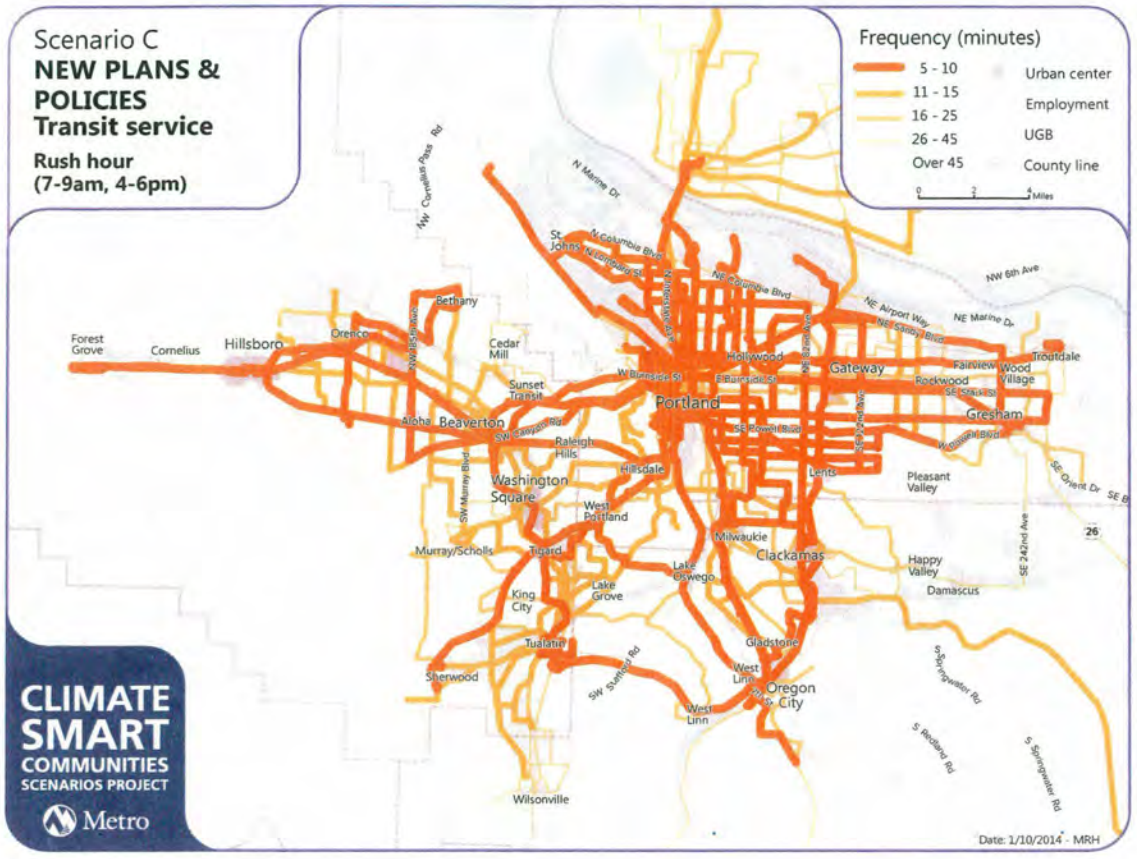
Estimated jobs and households within ¼-mile of 10-minute or better service by



6% jobs
4% households
6% low-income households

Estimated jobs and households within ¼-mile of 10-minute or better service by 2035





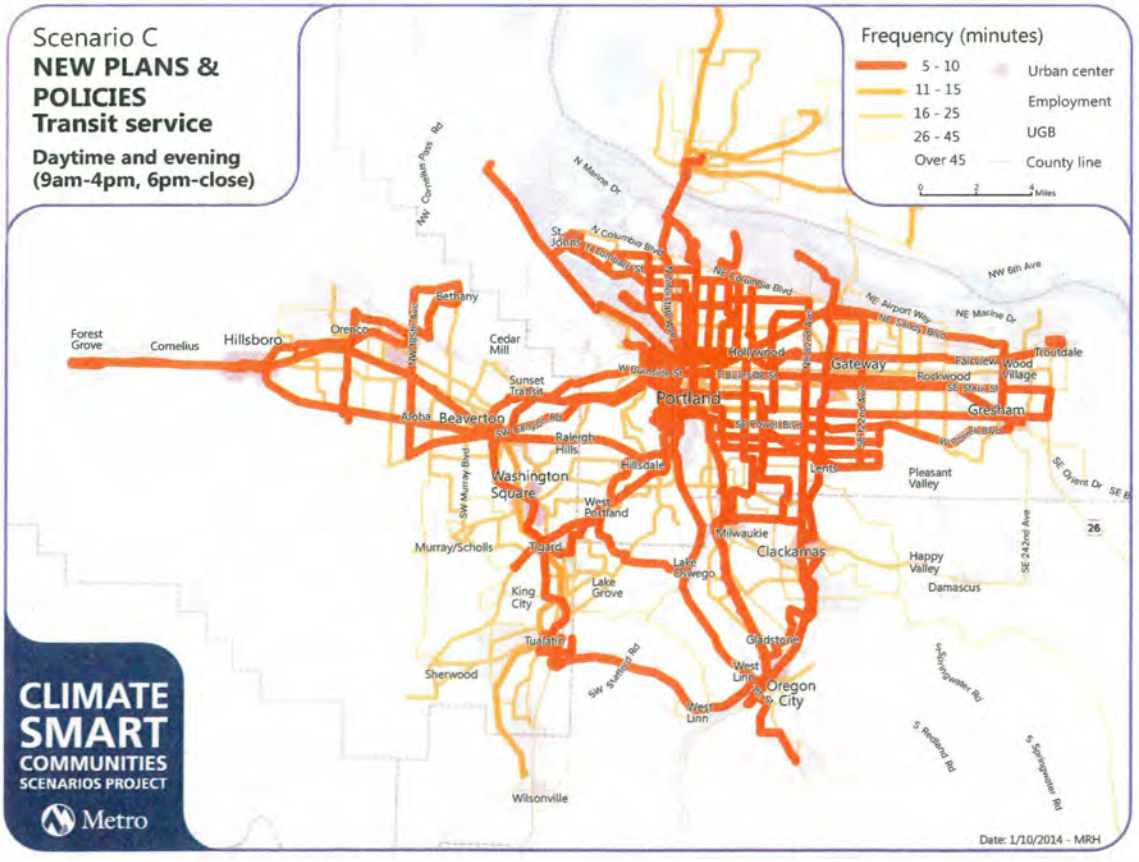
SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

42% jobs
32% households
40% low-income households

Estimated jobs and households within ¼-mile of 10-minute or better service by 2035



23% jobs
20% households
26% low-income households

Estimated jobs and households within ¼-mile of 10-minute or better service by 2035

What people are saying

Transit needs to be more frequent, affordable and connected to more places people want to go.

To increase the accessibility and affordability of public transit is paramount.

I think we would have great results if we added more to the bus system...because the bus system is very efficient.

Emerging themes

- Transit was universally seen as the highest priority investment area because of its high potential to reduce emissions while improving access to jobs and services and supporting other community goals.
- The cost of transit must be kept affordable, particularly for people with disabilities, youth, older adults and those with limited incomes.
- Integration with land use, active transportation, information, technology and a well-connected street system will help transit be more convenient and accessible for more people.
- Important to seek creative local transit service options and partnerships that fit the needs of smaller communities, including shuttles to support crucial last-mile connections.
- Prioritize low-income communities for bus service improvements and ensure that affordable housing and transportation options remain after major transit investments are made in a community.
- More funding for transit is needed.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

★★☆☆☆

RELATIVE COST

$ $ $

Use technology to actively manage the transportation system

Using technology to actively manage the Portland metropolitan region's transportation system means using intelligent transportation systems (ITS) and services to reduce vehicle idling associated with delay, making walking and biking more safe and convenient, and helping improve the speed and reliability of transit. Nearly half of all congestion is caused by incidents and other factors that can be addressed using these strategies.

Local, regional and state agencies work together to implement transportation system technologies. Agreements between agencies guide sharing of data and technology, operating procedures for managing traffic, and the ongoing maintenance and enhancement of technology, data collection and monitoring systems.

Arterial corridor management includes advanced technology at each intersection to actively manage traffic flow. This may include coordinated or adaptive signal timing; advanced signal operations such as cameras, flashing yellow arrows, bike signals and pedestrian count down signs; and communication to a local traffic operations center and the centralized traffic signal system.

Freeway corridor management includes advanced technology to manage access to the freeways, detect traffic levels and weather conditions, provide information with variable message signs and variable speed limit signs, and deploying incident response patrols that quickly clear breakdowns, crashes and debris. These tools connect to a regional traffic operations center.

Traveler information includes using variable message and speed signs and 511 internet and phone services to provide travelers with up-to-date information regarding traffic and weather conditions, incidents, travel times, alternate routes, construction, or special events.

BENEFITS

- provides near-term benefits
- reduces congestion and delay
- makes traveler experience more reliable
- saves public agencies, consumers and businesses time and money
- reduces air pollution and air toxics
- reduces risk of traffic fatalities and injuries

CHALLENGES

- requires ongoing funding to maintain operations and monitoring systems
- requires significant cross-jurisdictional coordination
- workforce training gaps

How much should we use technology to actively manage the transportation system by 2035?

TECHNOLOGY AT A GLANCE

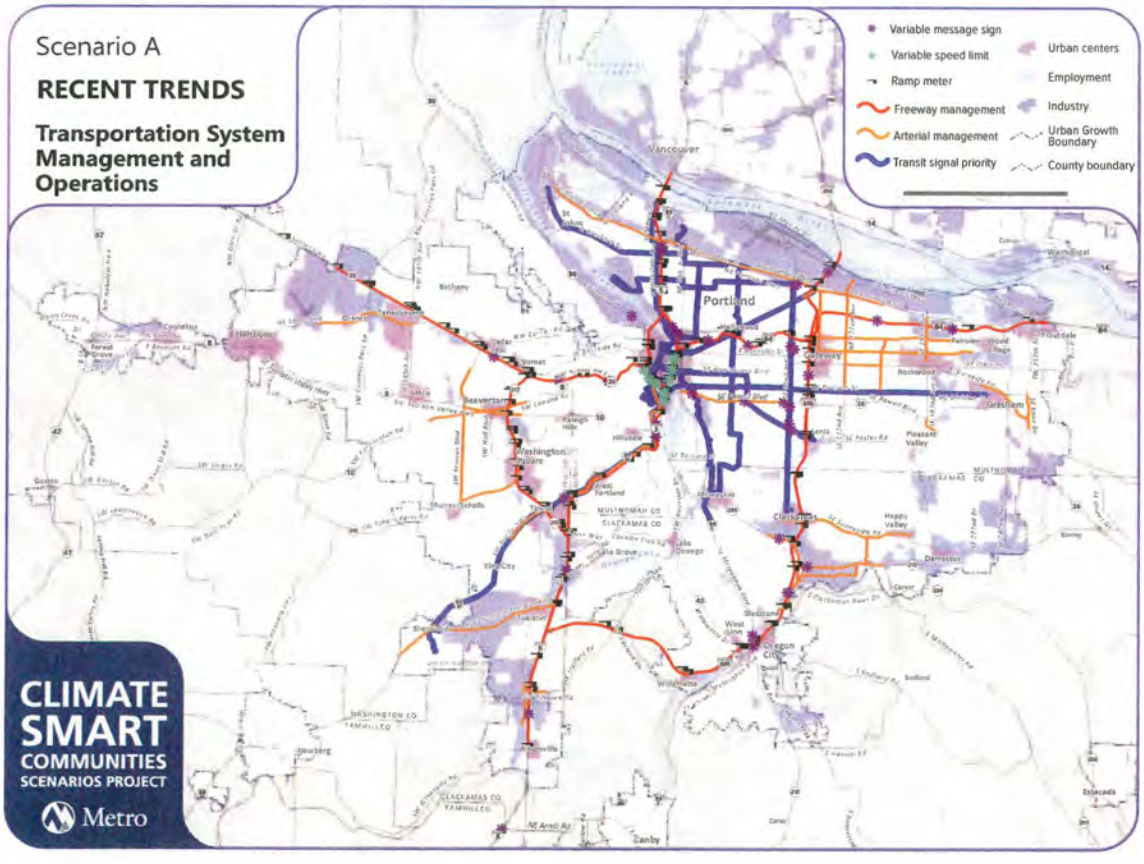
	SCENARIO A	SCENARIO B	SCENARIO C
Advanced traffic signal operations	Traffic signals on some major arterials	Traffic signals on many major arterials	All traffic signals are connected to a centralized system
Transit signal priority	Some bus routes with 10-minute service	All bus routes with 10-minute service	All bus routes with 10-minute service
Freeway ramp meters	Most urban interchanges	Same as Scenario A	All urban interchanges
Freeway variable speed signs	None	Deployed in most high incident locations	Deployed in all high incident locations
Incident response patrols	Some incident response patrols are deployed on area freeways	More incident response patrols are deployed on area freeways	Incident response patrols are deployed on area freeways and major arterials adjacent to freeways
Estimated cost (2014$)	**$113 million**	**$135 million**	**$193 million**

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

10% on arterials and freeways
Estimated delay reduction by 2035



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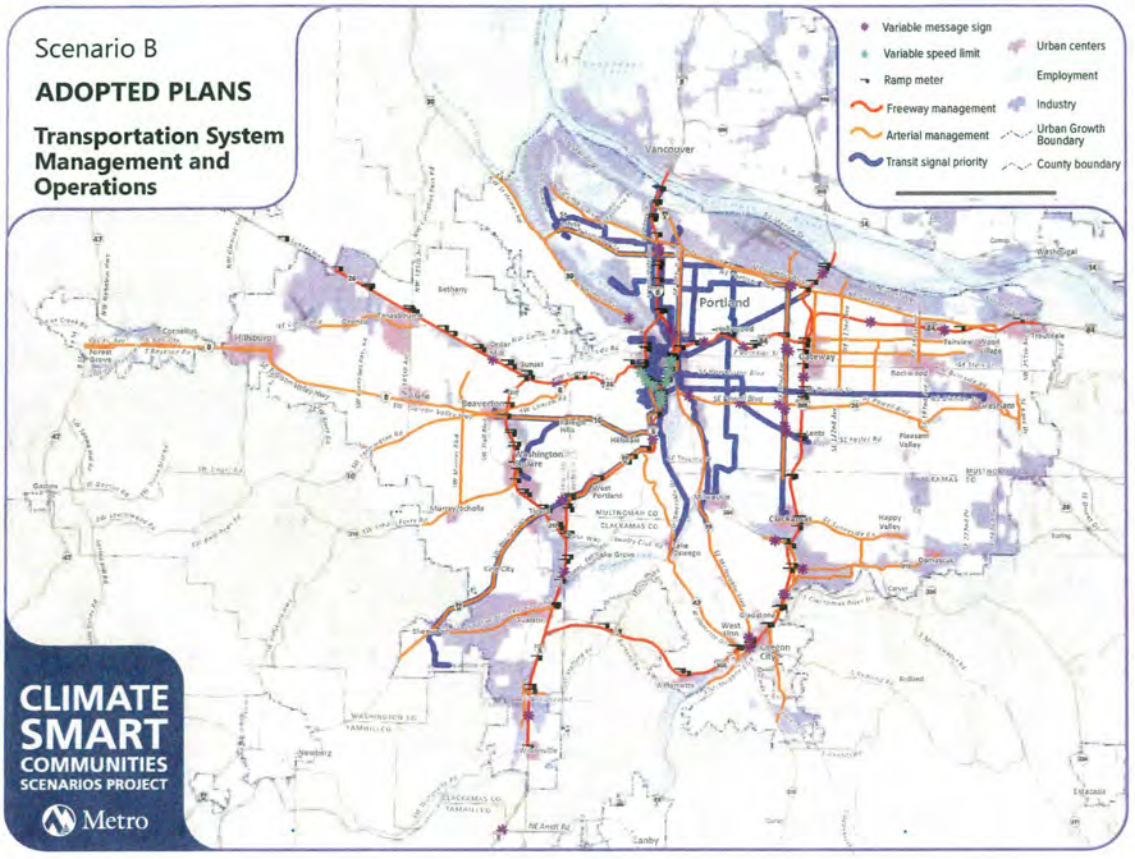
ATTACHMENT A

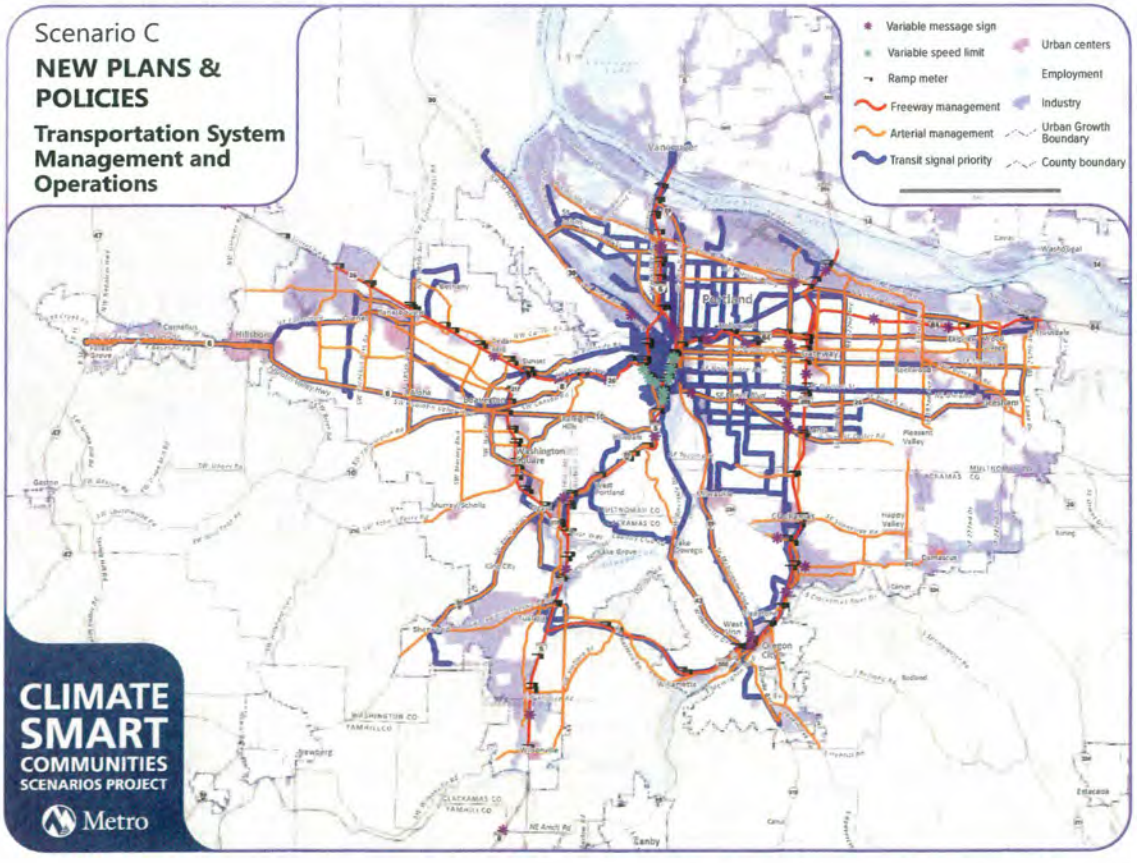


SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

20% on arterials and freeways
Estimated delay reduction by 2035



SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

35% on arterials and freeways
Estimated delay reduction by 2035

What people are saying

Do as much as you can with technology before widening or building new roads to help save money.

Intelligent transportation systems help freight move more efficiently and reliably.

Drivers need to get the info about delays before they begin their trip.

Emerging themes

- This is a low-cost strategy with immediate benefits that support other capital investments and should be moved forward.
- When compared to traditional capital investments, such as new transit service, roads or additional lanes, these kinds of solutions offer high returns for a comparatively low cost, and can delay or remove the need for additional capital-intensive infrastructure.
- Reducing delay and increasing reliability of the freight network is critical for the health our regional economy.
- Provide comprehensive real-time traveler information to people and businesses before they begin their trip.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

★★★★★

RELATIVE COST

$$$

Provide information and incentives to expand the use of travel options

Public awareness, education and travel options support tools are cost-effective ways to improve the efficiency of the existing transportation system through increased use of travel options such as walking, biking, carsharing, carpooling and taking transit. Local, regional and state agencies work together with businesses and non-profit organizations to implement programs in coordination with other capital investments. Metro coordinates partners' efforts, sets strategic direction, evaluates outcomes, and manages grant funding.

Public awareness strategies include promoting information about travel choices and teaching the public about eco-driving: maintaining vehicles to operate more efficiently and practicing driving habits that can help save time and money while reducing greenhouse emissions.

Commuter programs are employer-based outreach efforts that include (1) financial incentives, such as transit pass programs and offering cash instead of parking subsidies; (2) facilities and services, such as carpooling programs, bicycle parking, emergency rides home, and work-place competitions; and (3) flexible scheduling such as working from home or compressed work weeks.

Individualized Marketing (IM) is an outreach method that encourages individuals, families or employees interested in making changes in their travel choices to participate in a program. A combination of information and incentives is tailored to each person's or family's specific travel needs. IM can be part of a comprehensive commuter program.

Travel options support tools reduce barriers to travel options and support continued use with tools such as the *Drive Less. Connect.* online carpool matching; trip planning tools; wayfinding signage; bike racks; and carsharing.

BENEFITS

- increases cost-effectiveness of capital investments in transportation
- saves public agencies, consumers and businesses time and money
- preserves road capacity
- reduces congestion and delay
- increases physical activity and reduces health care costs
- reduces air pollution and air toxics

CHALLENGES

- program partners need ongoing tools and resources to increase outcomes
- factors such as families with children, long transit times, night and weekend work shifts not served by transit
- major gaps exist in walking and biking routes across the region
- consistent data collection to support performance measurement

How much should we expand the reach of travel information programs by 2035?

TRAVEL INFORMATION PROGRAMS AT A GLANCE

	SCENARIO A	SCENARIO B	SCENARIO C
Individualized marketing participation	30% of households	Same as Scenario A	60% of households participate Same as Scenario B, plus the addition of Safe Routes to school and equity-based campaigns
Commuter program participation	20% of employees reached (same as 2010) Oregon Employee Commute Options (ECO) rules require work sites with more than 100 employees to have work-place programs	Same as Scenario A	40% of employees reached ECO rules now include work sites with more than 50 employees
Public awareness marketing campaign	50% of public reached Existing ongoing and short-term campaigns lead to more awareness of *DriveLess. Connect.*	Same as Scenario A, plus added resources promote new travel tools, regional efforts and safety education	60% of public reached Scenario B, plus regionally specific campaigns dedicated to safety and underserved communities
Eco-driving participation	0% of households reached (same as 2010) Statewide program is newly launched	30% of households reached	60% of households reached
Provisions of travel options support tools	2010 program funding levels allow for completion of several new wayfinding signage and bike rack projects	Same as Scenario A, plus public-private partnerships to create new online, print and on-street travel tools	Same as Scenario B, plus better public-private data integration and more resources for more support tools
Estimated cost (2014$)	**$99 million**	**$124 million**	**$234 million**

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

SCENARIO B

Adopted Plans

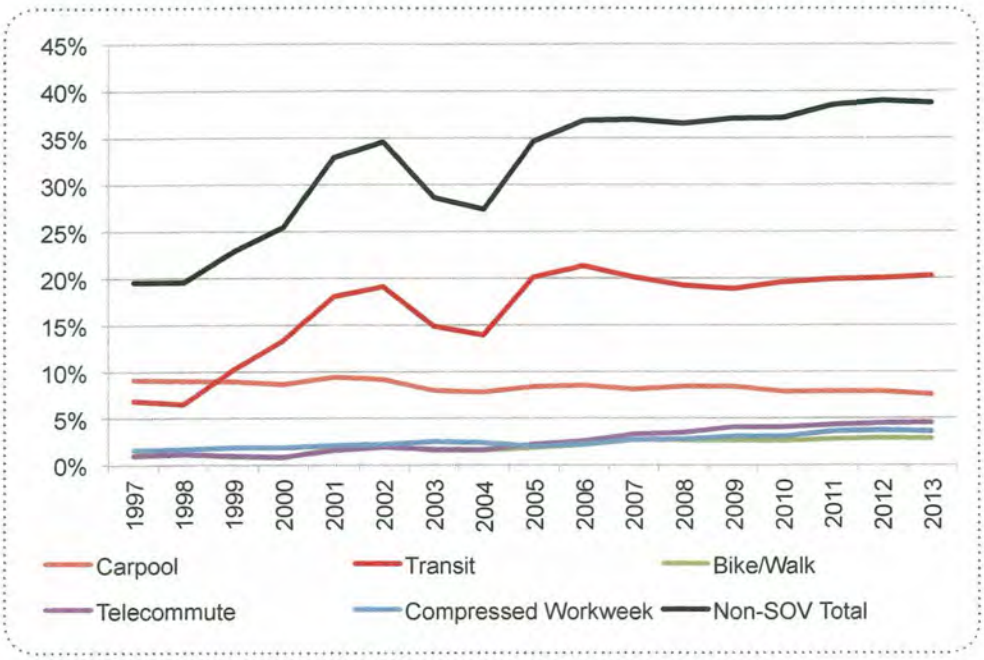
This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

ATTACHMENT A



EFFECTIVENESS OF EMPLOYER COMMUTER PROGRAMS (1997 – 2013)

The TriMet, Wilsonville SMART and TMA employer outreach programs have made significant progress with reducing drive-alone trips. Since 1996, employee commute trips that used non-drive-alone modes (transit, bicycling, walking, carpooling/vanpooling and telecommuting) rose from 20% to over 39% among participating employers.

EFFECTIVENESS OF COMMUNITY AND NEIGHBORHOOD PROGRAMS

Community outreach programs such as Portland Sunday Parkways and Wilsonville Sunday Streets encourage residents to use travel options by exploring their neighborhoods on foot and bike without motorized traffic. Sunday Parkways events have attracted 400,000 attendees since 2008 and the Wilsonville Sunday Streets event attracted more than 5,000 participants in 2012.

Other examples of valuable community outreach and educational programs include the Community Cycling Center's program to reduce barriers to biking and Metro's Vámonos program, both of which provide communities across the region with the skills and resources to become more active by walking, biking, and using transit for their transportation needs.

In 2004, the City of Portland launched the Interstate TravelSmart individualized marketing project in conjunction with the opening of the MAX Yellow Line. Households that received individualized marketing made nearly twice as many transit trips compared to a similar group of households that did not participate in the marketing campaign. In addition, transit use increased nearly 15 percent during the SmartTrips project along the MAX Green Line in 2010. Follow-up surveys show that household travel behavior is sustained for at least two years after a project has been completed.

What people are saying

Tailored and personalized marketing campaigns can be more individualized – making them more effective.

Success depends on the availability of transit and other options.

Work trips are only 30% of all trips – so we need to focus beyond work place campaigns.

Emerging themes

- Incentives need to be marketed through employers.
- Travel information needs to be leveraged electronically to take advantage of how many people prefer to access and receive information, such as smart phone apps, the internet and social media.
- Information and marketing campaigns should be culturally relevant, sensitive to different languages and cultures and respond to changing demographics in the region.
- Incentives and investment in end-of-trip facilities are important to encourage greater use of commute options among employees, such as secure bike parking, showers and changing rooms for employees.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

★★★★★

RELATIVE COST

$$$

Make biking and walking more safe and convenient

Active transportation is human-powered travel that engages people in healthy physical activity while they go from place to place. Examples include walking, biking, pushing strollers, using wheelchairs or other mobility devices, skateboarding, and rollerblading. Active transportation is an essential component of public transportation because most of these trips begin and end with walking or biking.

Today, about 50 percent of the regional active transportation network is complete. Nearly 18 percent of all trips in the region are made by walking and biking, a higher share than many other places. Approximately 45 percent of all trips made by car in the region are less than three miles and 15 percent are less than one mile. With a complete active transportation network supported by education and incentives, many of the short trips made by car could be replaced by walking and biking. (See separate summary on providing information and incentives to expand use of travel options.)

For active travel, transitioning between modes is easy when sidewalks and bicycle routes are connected and complete, wayfinding is coordinated, and transit stops are connected by sidewalks and have shelters and places to sit. Biking to work and other places is supported when bicycles are accommodated on transit vehicles, safe and secure bicycle parking is available at transit shelters and community destinations, and adequate room is provided for walkers and bicyclists on shared pathways. Regional trails and transit function better when they are integrated with on-street walking and biking routes.

BENEFITS

- increases access to jobs and services
- provides low-cost travel options
- supports economic development, local businesses and tourism
- increases physical activity and reduces health care costs
- reduces air pollution and air toxics
- reduces risk of traffic fatalities and injuries

CHALLENGES

- major gaps exist in walking and biking routes across the region
- gaps in the active transportation network affect safety, convenience and access to transit
- many would like to walk or bike but feel unsafe
- many lack access to walking and biking routes
- limited dedicated funding is declining

How much of the planned active transportation network should we complete by 2035?

ACTIVE TRANSPORTATION AT A GLANCE

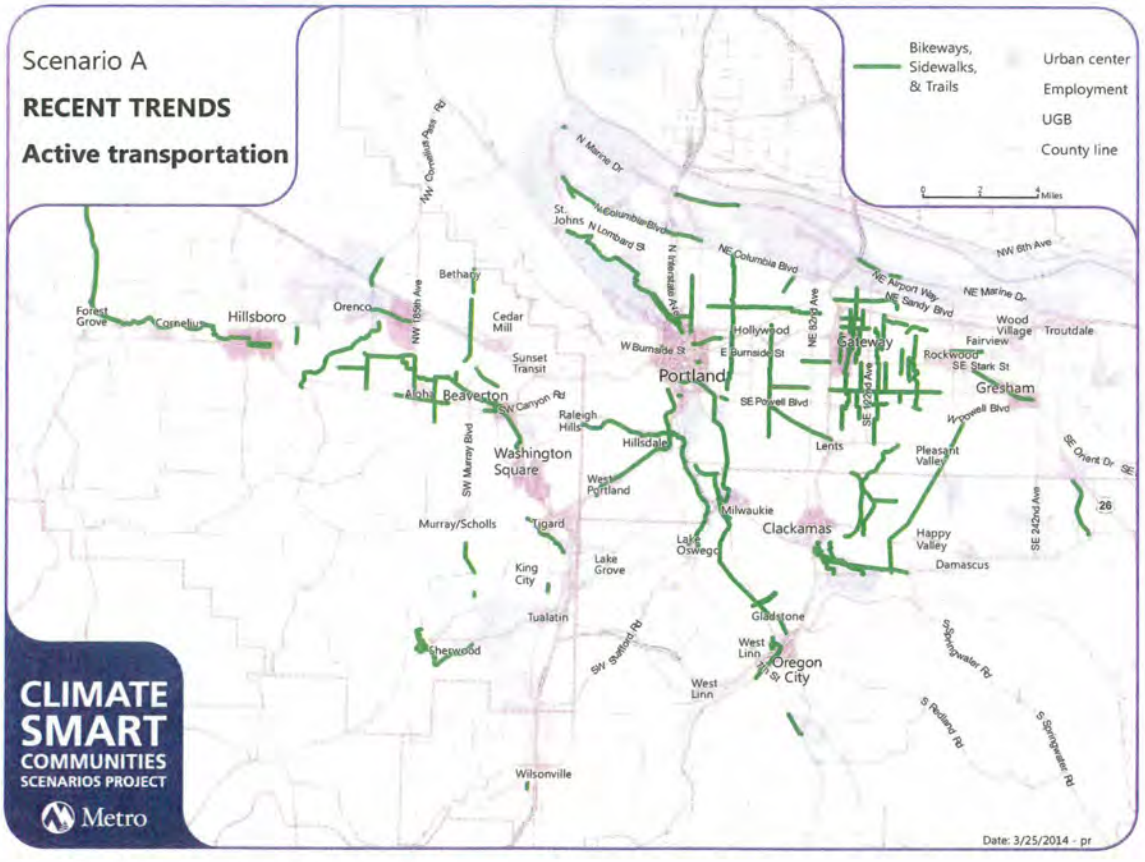
	SCENARIO A	SCENARIO B	SCENARIO C
Completion of regional active transportation network	Federally funded planning and capital projects reflecting existing funding are largely dedicated to transit and road investments	Same as Scenario A, plus planned off-street trails and on-street sidewalk and bikeway projects, such as bicycle lanes, cycle tracks, bicycle boulevards, sidewalks and crossing improvements included in financially constrained RTP	Same as Scenario B, plus full build-out of planned off-street trails, on-street sidewalk and bikeway projects, and improvements to existing facilities
Trails	38% completed	79% completed	100% completed
Bikeways	63% completed	84% completed	100% completed
Sidewalks	54% completed	62% completed	100% completed
Estimated cost (2014$)	**$57 million**	**$948 million**	**$3.9 billion**

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

58
Estimated lives saved annually from increased physical activity by 2035



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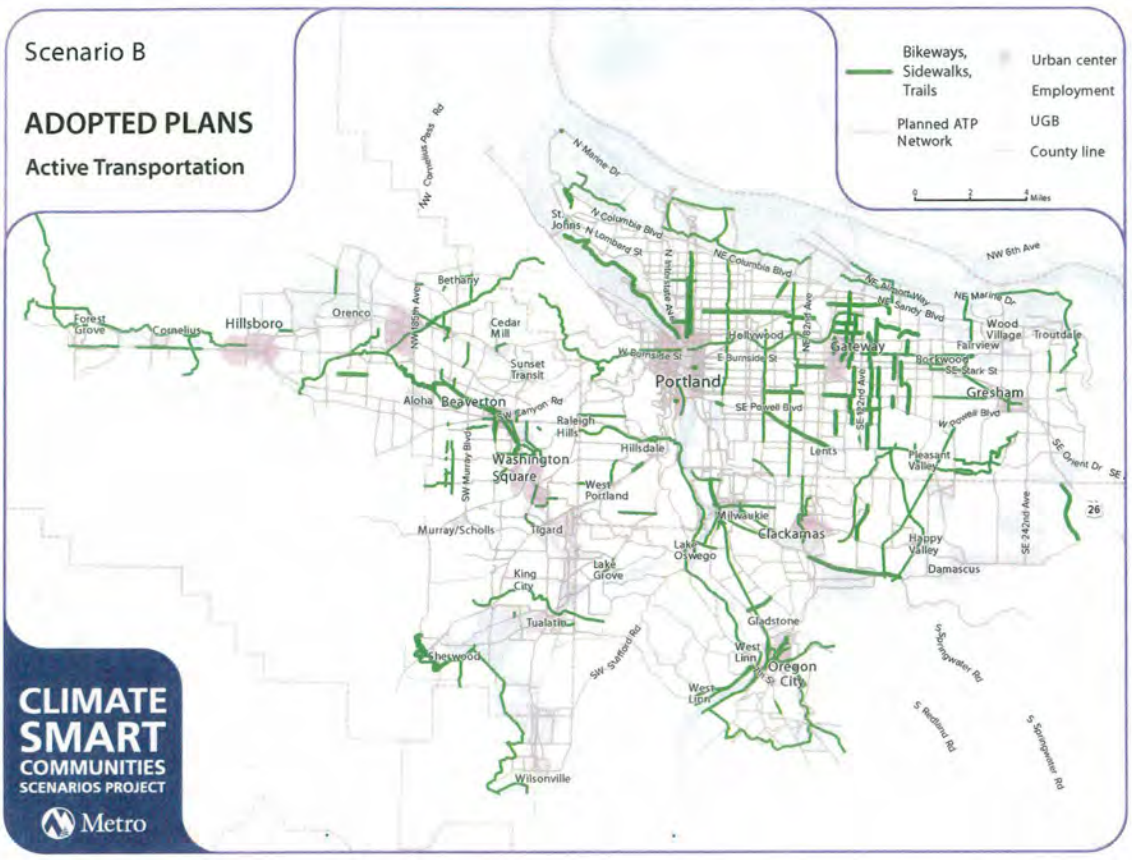


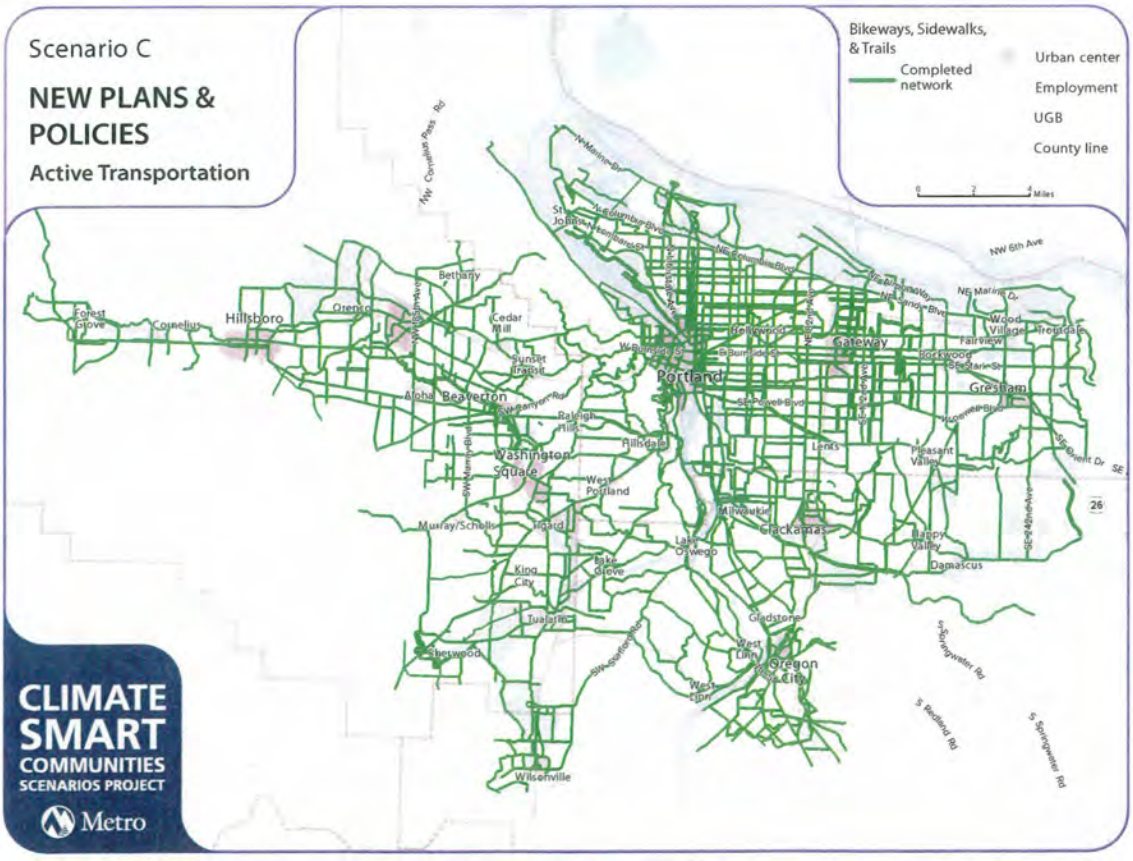
SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

89

Estimated lives saved annually from increased physical activity by 2035



SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

116

Estimated lives saved annually from increased physical activity by 2035

What people are saying

Bike improvements should be strategic and provide convenient, efficient access to places people want to go.

Make the healthy choice, the easy choice.

Create integrated networks and complete streets to leverage existing funding.

Emerging themes

- A high priority for nearly all communities and interest groups because it provides many benefits, particularly improved public health and access.
- Investments should focus on completing gaps and making street crossings more safe.
- More dedicated, separate paths for biking are needed because some people will never feel safe biking in vehicle traffic.
- "Complete streets" should include green designs, such as bioswales and street trees, as part of street design and a broader climate adaptation strategy.
- Demographics are changing – as youth and older adults choose to drive less, it is important to invest more in active transportation options that connect to transit and link neighborhoods to services.
- A dedicated, stable funding source is needed.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

★ ★ ★ ★ ★

RELATIVE COST

$ $ $

Make streets and highways more safe, reliable and connected

Today, nearly 45 percent of all trips in the region made by car are less than three miles, and 15 percent are less than one mile. When road networks lack multiple routes serving the same destinations, short trips must use major travel corridors designed for freight and regional traffic, adding to congestion.

There are three key ways to make streets and highways more safe, reliable and connected to serve longer trips across the region on highways, shorter trips on arterial streets, and the shortest trips on local streets.

Maintenance and efficient operation of the existing road system Keeping the road system in good repair and using information and technology to manage travel demand and traffic flow help improve safety, and boost efficiency of the existing system. With limited funding, more effort is being made to maximize system operations prior to building new capacity in the region. (See separate summaries describing the use of technology and information.)

Street connectivity Building a well-connected network of complete streets including new local and major street connections shortens trips, improves access to community and regional destinations, and helps preserve the capacity and function of highways in the region for freight and longer trips. These connections include designs that support walking and biking, and, in some areas, provide critical freight access between industrial areas, intermodal facilities and the interstate highway system.

Network expansion Adding lane miles to relieve congestion is an expensive approach, and will not solve congestion on its own. Targeted widening of streets and highways along with other strategies helps connect goods to market and support travel across the region.

BENEFITS

- improves access to jobs, goods and services, boosting business revenue
- creates jobs and stimulates development, boosting the economy
- reduces delay, saving businesses time and money
- reduces risk of traffic fatalities and injuries
- reduces emergency response time

CHALLENGES

- declining purchasing power of existing funding sources, growing maintenance backlog, and rising construction costs
- may induce more traffic
- potential community impacts, such as displacement and noise
- concentration of air pollutants and air toxics in major travel corridors

How much of the planned street and highway network should we complete by 2035?

STREET AND HIGHWAYS AT A GLANCE

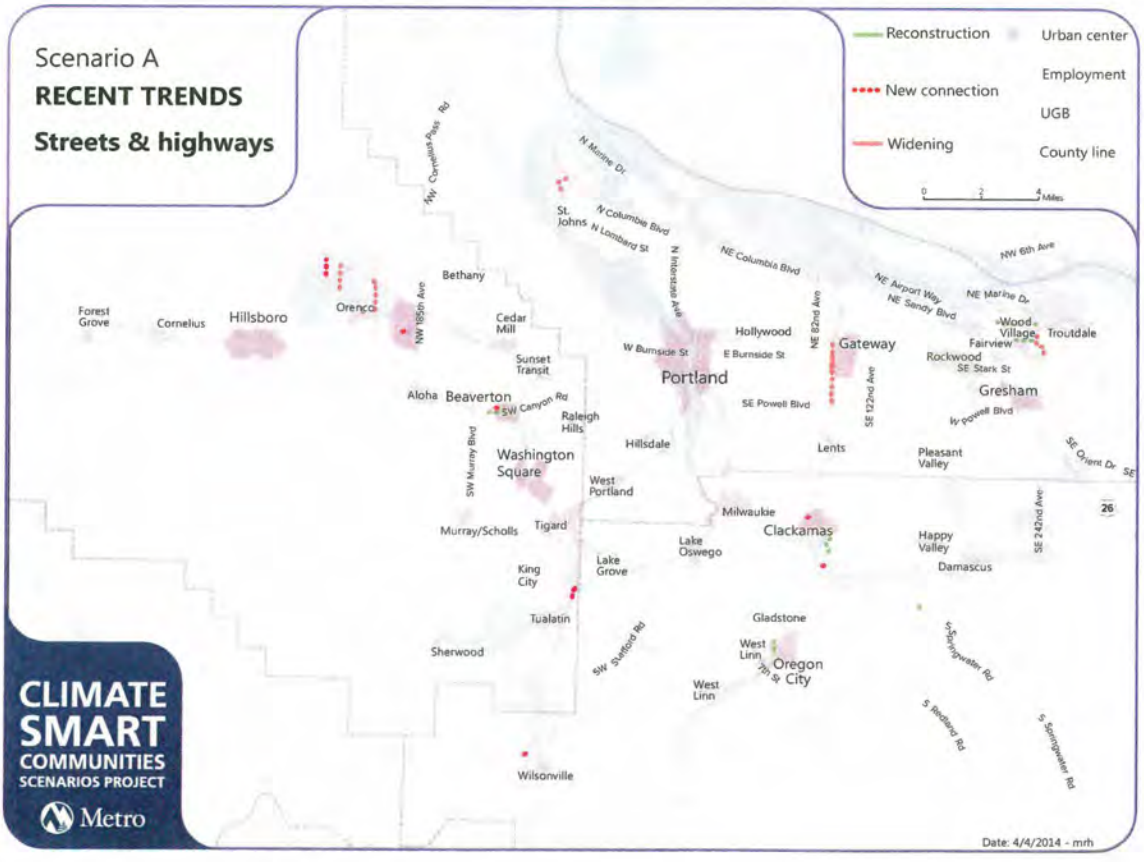
	SCENARIO A	SCENARIO B	SCENARIO C
Arterials and freeways	Maintain the existing system and complete committed projects	Same as Scenario A, plus complete financially constrained RTP projects such as • planned connections to further build out the regional street grid and improve access to industrial areas and freight facilities • widening some major streets and freeways to address bottlenecks	Same as Scenario B, plus additional projects in the RTP On-going regional traffic operations center monitoring and incident response patrols are deployed on area freeways and major arterials adjacent to freeways
Maintenance	Some maintenance backlogs grow	Fully meet maintenance and preservation needs	Same as Scenario B
Estimated capital cost (2014$)	**$162 million**	**$8.8 billion**	**$11.8 billion**

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

9
Lane miles added by 2035



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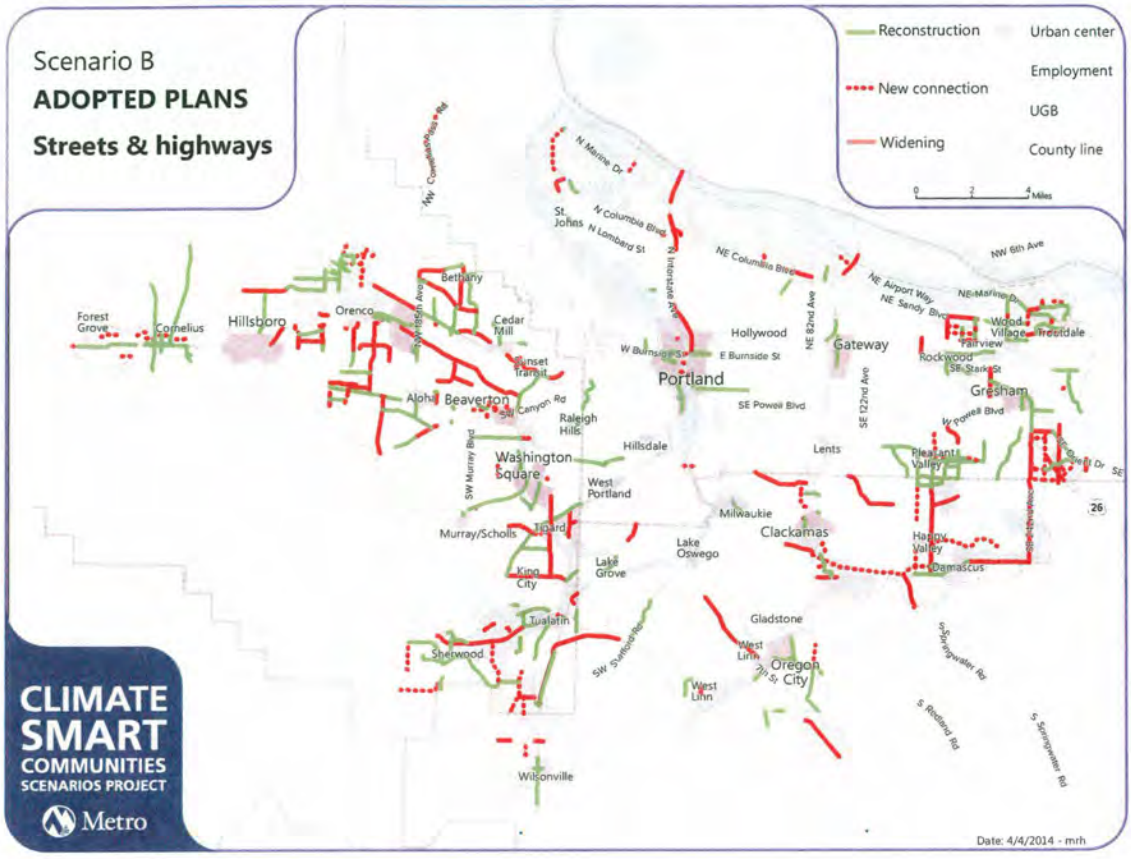
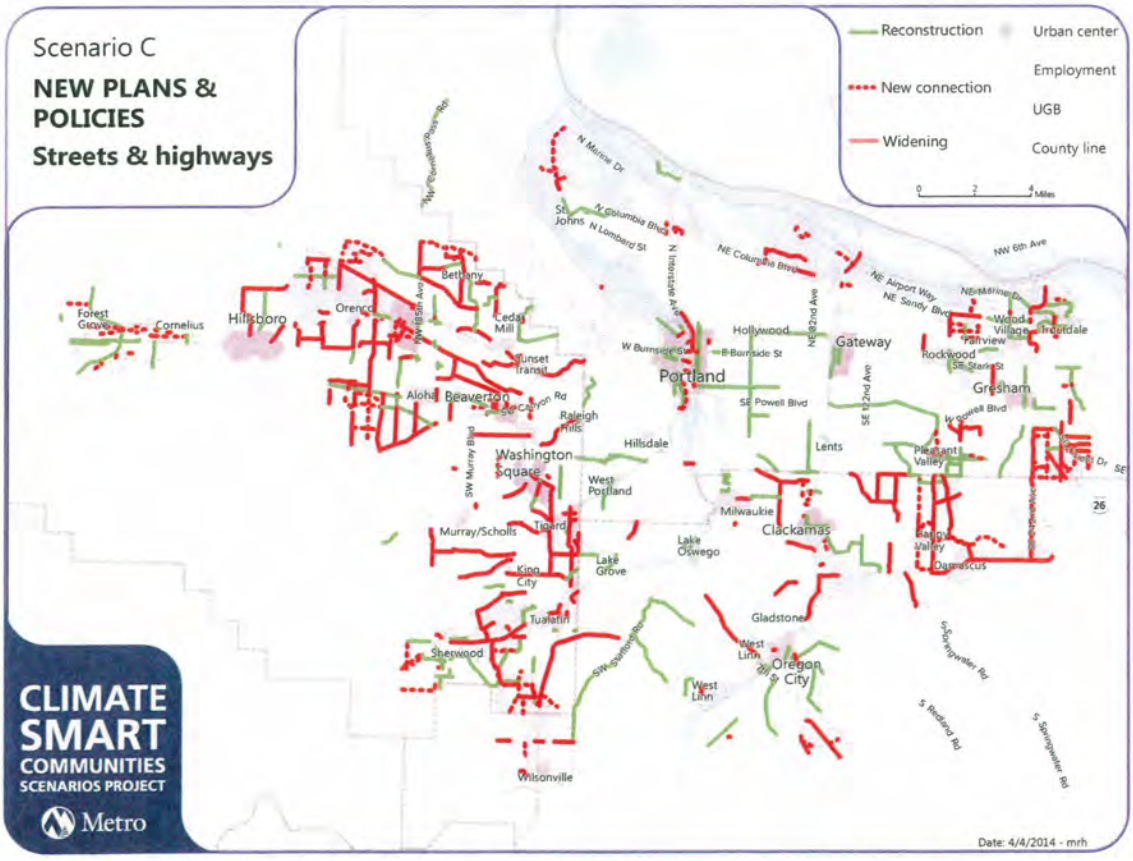


SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

81
Lane miles added by 2035



SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

105
Lane miles added by 2035

What people are saying

Street and highway improvements are needed to help move freight more efficiently to make the region more economically competitive.

Make road investments that improve access and efficiency for all users – bike, pedestrian, auto, transit and freight.

Investments in transit, walking and biking can help freight move more efficiently because they help reduce the need to drive for some trips.

Emerging themes

- Keeping existing roads and highways in good condition is a higher priority than adding capacity or building new roads.
- Improved connectivity is a priority for suburban communities.
- Build a well-connected network of complete streets that prioritize safe and convenient pedestrian and bicycle access; respecting existing communities and the natural environment.
- Maximize system operations by implementing management strategies prior to building new motor vehicle capacity, where appropriate.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

★★★★★

RELATIVE COST

$ $ $

Manage parking to make efficient use of parking resources

Parking management refers to various policies and programs that result in more efficient use of parking resources. Parking management is implemented through city and county development codes. Managing parking works best when used in a complementary fashion with other strategies; it is less effective in areas where transit or bicycle and pedestrian infrastructure is lacking.

Planning approaches include conducting assessments of the parking supply to better understand needs. A typical urban parking space has an annualized cost of $600 to $1,200 to maintain, while structured parking construction costs averages $15,000 per space.

On-street parking approaches include spaces that are timed, metered, designated for certain uses or have no restriction. Examples of these different approaches include charging long-term or short-term fees, limiting the length of time a vehicle can park, and designating on-street spaces for preferential parking for electric vehicles, carshare vehicles, carpools, vanpools, bikes, public use (events or café "Street Seats") and freight truck loading/unloading areas.

Off-street parking approaches include providing spaces in designated areas, unbundling parking, preferential parking (for vehicles listed above), shared parking between land uses (for example, movie theater and business center), park-and-ride lots for transit and carpools/vanpools, and parking garages in downtowns and other mixed-use areas that allow surface lots to be developed for other uses.

BENEFITS

- allows more land to be available for development, generating local and state revenue
- reduces costs to governments, businesses, developers and consumers
- fosters public-private partnerships that can result in improved streetscape for retail and visitors
- generates revenues where parking is priced
- reduces air pollution and air toxics

CHALLENGES

- inadequate information for motorists on parking and availability
- inefficient use of existing parking resources
- parking spaces that are inconvenient to nearby residents and businesses
- scarce freight loading and unloading areas
- low parking turnover rate
- lack of sufficient parking
- parking oversupply, ongoing costs and the need to free up parking for customers

How should local communities manage parking by 2035?

PARKING MANAGEMENT AT A GLANCE

	SCENARIO A	SCENARIO B	SCENARIO C
Parking management	Existing locally-adopted development codes remain the same as 2010 Large employers offer preferential parking Free parking is available in most areas	Same as Scenario A, plus communities expand the flexibility of development codes and develop parking plans for all downtown and centers served by high capacity transit as assumed in adopted RTP Parking facilities are sized and managed so spaces are frequently occupied, travelers have information on parking and travel options, and some businesses share parking Free and timed parking is available in many areas	Same as Scenario B, plus communities expand the flexibility of development codes to support public-private partnerships in areas served by 10-minute transit service Medium-size employers offer preferential parking Local codes allow for unbundled parking Free and timed parking is available in some areas

SCENARIO A

Recent Trends

This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

13% work trips
8% other trips
Estimated share of trips to areas with actively managed parking

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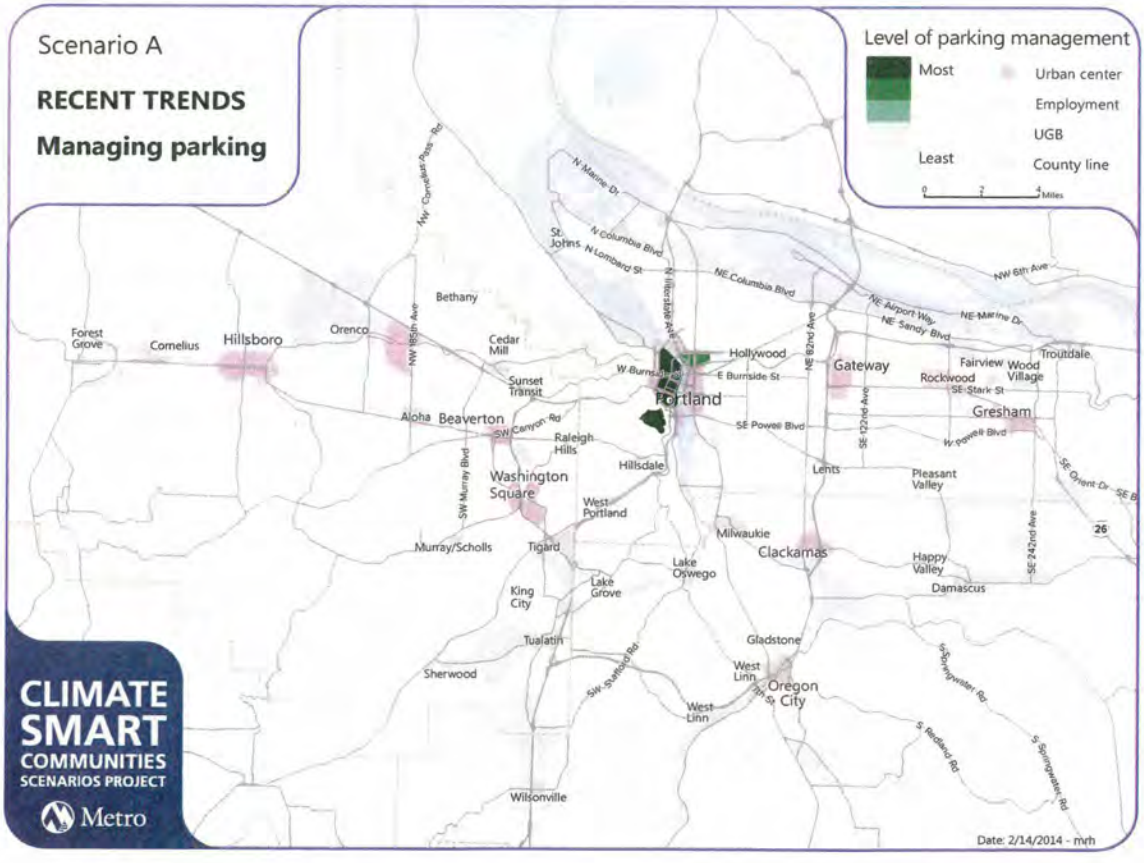
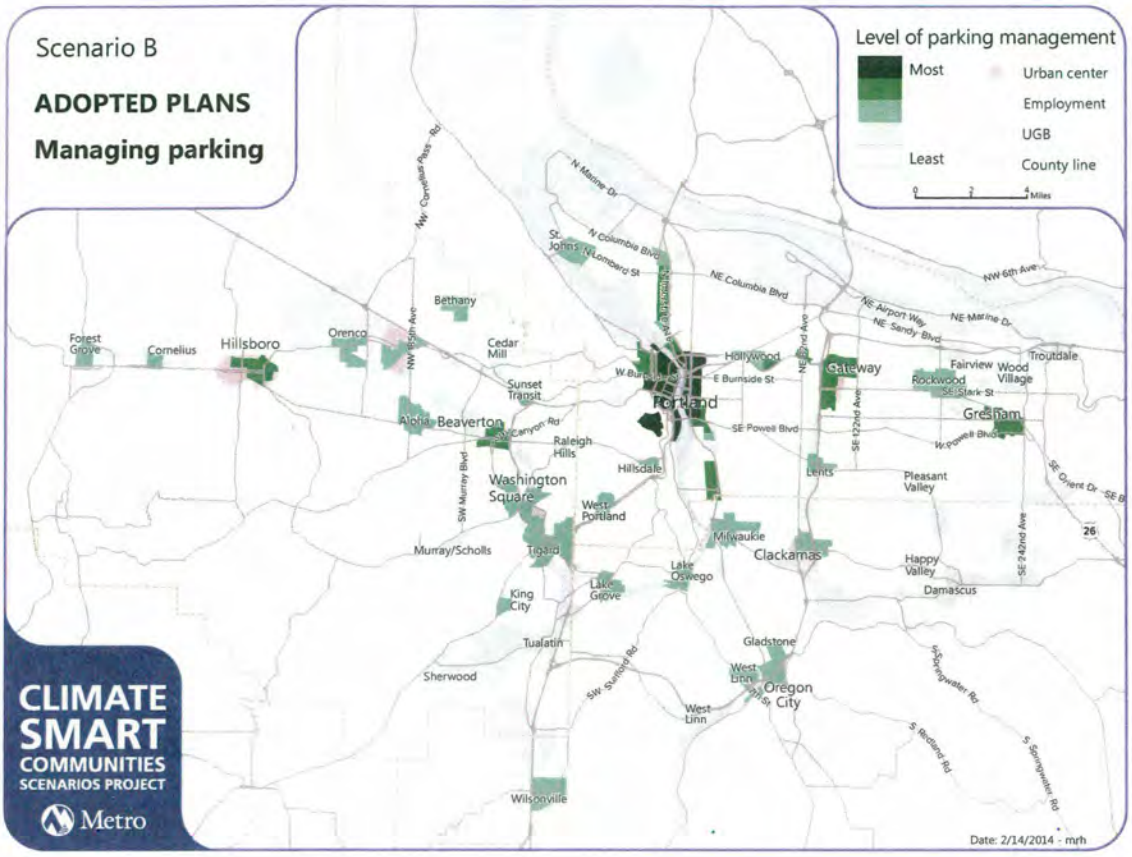


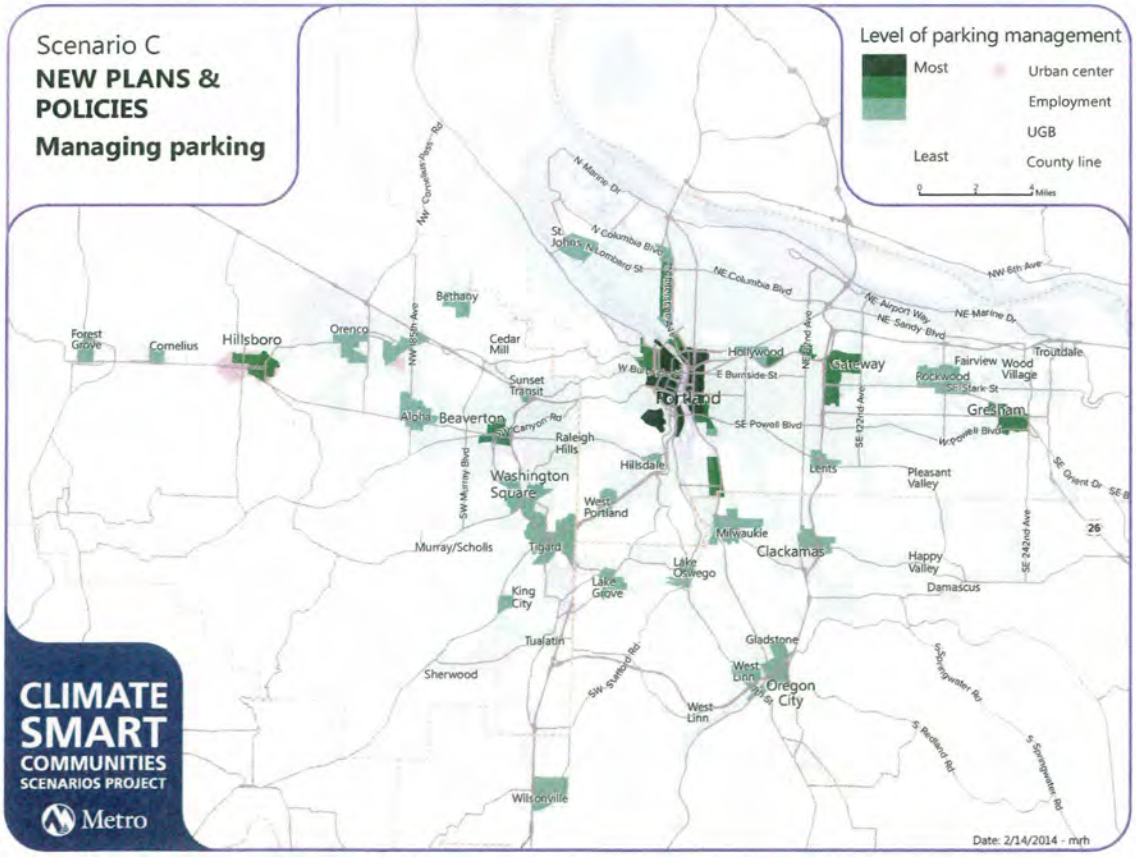


SCENARIO B

Adopted Plans

This scenario shows the results of successfully implementing adopted plans and achieving the current Regional Transportation Plan, which relies on increased revenue.

30% work trips
30% other trips
Estimated share of trips to areas with actively managed parking



SCENARIO C

New Plans and Policies

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

50% work trips
50% other trips
Estimated share of trips to areas with actively managed parking

What people are saying

"Free parking" is never free – it's just a question of how it is being subsidized and by whom.

Parking fees can have a disproportionate impact on drivers with limited incomes.

Businesses need to be part of the parking conversation.

Emerging themes

- Parking management is the most controversial and lowest priority for most interest groups and residents.
- Many people agree that parking management solutions should be flexible and tailored by each community to fit local needs.
- Parking management needs to begin with data about what the needs are, what might work, and available travel options in the area.
- Implementation of parking management may require broadening how parking problems and solutions are addressed and activities to improve enforcement and addressing potential spillover impacts.
- If paid parking is implemented, there needs to be a corresponding investment in transit and other travel options so that people have choices.

Key takeaways to share with others

RELATIVE CLIMATE BENEFIT

N/A

RELATIVE COST

N/A

Identify potential ways to pay for our investment choices

Transportation funding has long been primarily a federal and state responsibility, financed largely through gas taxes and other user fees. However, the purchasing power of federal and state gas tax revenues is declining as individuals drive less and fuel efficiency increases. The effectiveness of this revenue source is further eroded as the gas tax is not indexed to inflation.

Diminished resources mean reduced ability to expand, improve and maintain existing transportation infrastructure. Federal and state funding is not keeping pace with infrastructure operation and maintenance needs, so a substantial share of funding for future RTP investments has shifted to local revenue sources.

Local governments in Oregon have increasingly turned to tax levies, road maintenance fees, system development charges and traffic impact fees in attempt to keep pace, although some communities have been more successful than others. Expansion and operation of the transit system has relied heavily on payroll taxes and competitive federal funding for high capacity transit capital projects. But the region's demand for frequent and reliable transit service exceeds the capacity of the payroll tax to support it.

The adopted Regional Transportation Plan calls for stabilizing existing transportation revenue sources while securing new and innovative long-term sources of funding adequate to build, operate and maintain the regional transportation system for all modes of travel.

BENEFITS

- transforms community visions into reality
- improves access to jobs, goods and services, boosting business revenues
- creates jobs and stimulates development, boosting the regional economy
- reduces delay, saving businesses time and money
- reduces air pollution and air toxics
- reduces risk of traffic fatalities and injuries

CHALLENGES

- declining purchasing power of existing funding sources due to inflation and improvement in fuel efficiency
- potential disproportionate impact of higher taxes and fees on drivers with limited travel options
- limited public support for higher fees and taxes
- patchwork of funding sources
- statutory or constitutional limitations on how different funding sources can be raised or used

ATTACHMENT A

How should we pay for our investment choices by 2035?

FUNDING MECHANISMS AT A GLANCE

	SCENARIO A Recent Trends	SCENARIO B Adopted Plans	SCENARIO C New Plans and Policies
Overview of revenue sources	Revenues from existing sources at 2012 levels	Same as Scenario A, plus additional federal, state and local revenues as assumed in the financially constrained RTP	Same as Scenario B, plus additional federal, state and local revenues assumed in the full RTP, plus new user-based fees
Gas tax	Federal and state gas taxes are 18 cents and 30 cents per gallon, respectively Multnomah and Washington counties levy a per gallon gas tax and share revenue with the cities within their boundaries[1] Four cities – Tigard, Milwaukie, Happy Valley and Cornelius – implement a gas tax that is predominately used for maintenance[1]	Same as Scenario A, plus the state gas tax increases by $0.01 per year to cover growing operations, maintenance and preservation (OMP) costs at the state, regional and local level	Same as Scenario A, but state gas tax is replaced by a fee based on miles driven
Mileage-based road use fee	None	None	$0.03 per mile (the equivalent of the Scenario B state gas tax assumption)
Carbon fee	None	None	$50 per ton
Potential revenues generated (2014$) from gas tax, road use fee and carbon fee	$5.6 billion	$6.5 billion	$15.2 billion
Other potential revenues from RTP sources (capital only)	Existing federal, state and local revenues at 2012 levels	$15 billion Scenario A, plus additional federal, state and local revenues at financially constrained RTP levels	$22 billion Scenario B, plus additional federal, state and local revenues at full RTP levels

[1]Not accounted for in potential revenues generated, but included in the Regional Transportation Plan financial assumptions for local road-related operations, maintenance and preservation.

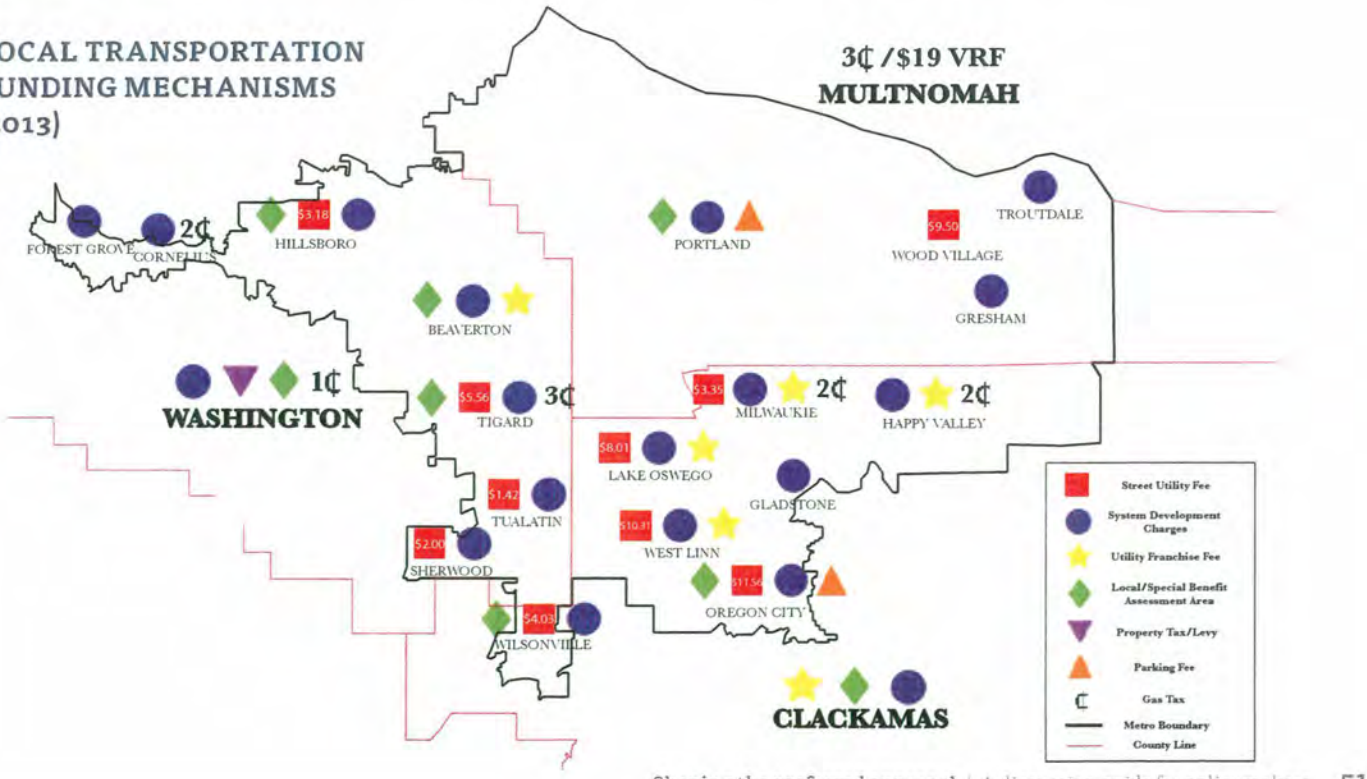
ATTACHMENT A

FUNDING MECHANISMS ASSUMED IN 2014 REGIONAL TRANSPORTATION PLAN AND POTENTIAL NEW FUNDING MECHANISMS FOR CONSIDERATION

EXISTING FUNDING MECHANISM	SOURCE		
	Federal	State	Local
Federal Highway Trust Fund[1]	●		
Federal Transit Fund	●		
Gas tax	●	●	●
Vehicle fees (e.g. registration, licensing fees)		●	●
Heavy truck weight-mile fee		●	
Local portion of State Highway Trust Fund[2]			●
Development-based fees[3]			●
Payroll tax			●
Transit passenger fares			●
Special funds and levies[4]			●
Tolls (I-5 Columbia River Crossing)		●	
POTENTIAL NEW FUNDING MECHANISM			
Carbon fee	●	●	
Mileage-based road user fee	●	●	

[1]The Federal Highway Trust Fund includes federal gas tax receipts and other revenue.
[2]The State Highway Trust Fund includes state gas tax receipts, vehicle fees and heavy truck weight-mile fees.
[3]Development-based fees include system development charges, traffic impact fees, urban renewal districts and developer contributions.
[4]Special funds and levies include tax levies (e.g. Washington County MSTIP), local improvement districts, vehicle parking fees, transportation utility fees and maintenance districts (e.g. Washington County Urban Road Maintenance District).

LOCAL TRANSPORTATION FUNDING MECHANISMS (2013)



What people are saying

The gas tax is not a sustainable funding mechanism – alternatives are needed.

The greatest barrier to implementation is the lack of sufficient funding.

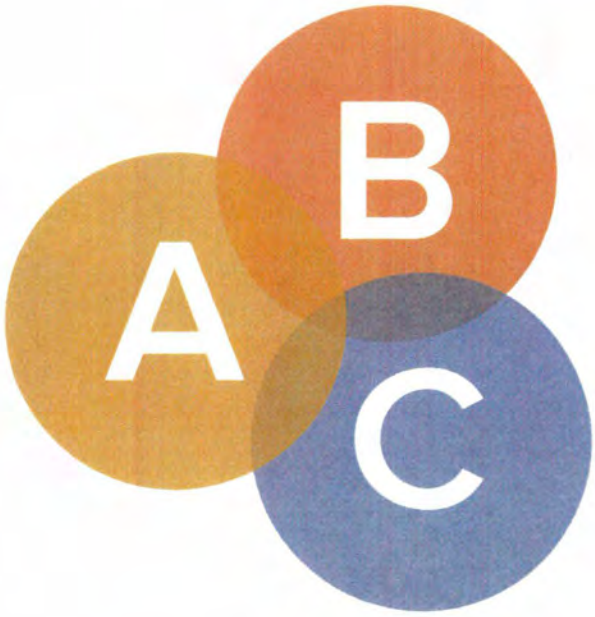
We should focus investments on how we want people to travel in 50 years.

Emerging themes

- User-based funding mechanisms had more support so the fees are directly connected to the service received.
- Prioritize limited funding on investments that achieve multiple goals.
- More state funding is needed to leverage local and regional funding.
- Implementation of fees should take into account the ability of people with limited incomes to pay and the other options available.
- More funding should be dedicated to low carbon travel options; current statutes limit how some funding sources can be used.

Key takeaways to share with others

SUPPLEMENTAL INFORMATION



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PHASE 2: SELECTED RESULTS AT A GLANCE

The scenarios tested are for research purposes only and do not necessarily reflect current or future policy decisions of the Metro Council, MPAC or JPACT.

WHAT WE LEARNED ABOUT TRAVEL AND MOBILITY

DAILY VEHICLE MILES TRAVELED

PER PERSON

TIME SPENT IN TRAFFIC

% OF LIGHT VEHICLE TRAVEL TIME SPENT IN TRAFFIC

Discussion points:

- Adopted plans help reduce how far people drive and time spent in traffic.
- Adopted plans provide opportunities for more people living and working in centers and corridors; a more connected road system; using technology such as traffic signal timing; clearing incidents more quickly; more transit and walking and biking all help the transportations system operate more efficiently which in turn helps save time spent in traffic.
- Adopted plans reduce the amount of time spent in traffic by 20 percent over recent trends.
- Reduced delay is expected to support goods movement, job creation and the region's economy.

Discussion points:

- All scenarios improve health outcomes by improving air quality and increasing physical activity.
- Improving air quality and increasing the number of people who regularly exercise by choosing to bike and walk to community destinations can reduce chronic diseases and premature deaths, and lower health care costs.
- Adopted plans increase the level of physical activity over recent trends, saving nearly 90 lives annually by 2035.
- Adopted plans reduce air pollutants by at least 10 metric tons per day over recent trends; an important health benefit of greenhouse gas reduction.
- Reductions in per capita vehicle miles traveled improve traffic safety in all scenarios.
- Further investment can significantly improve these outcomes.

WHAT WE LEARNED ABOUT PUBLIC HEALTH AND SAFETY

AIR POLLUTANTS

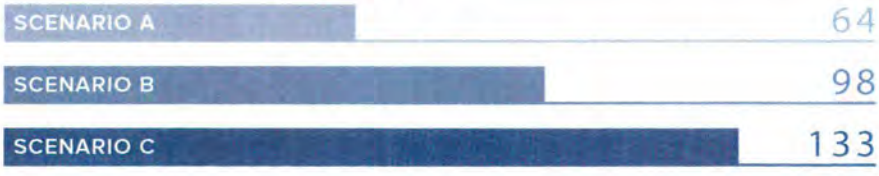
METRIC TONS PER DAY

PHYSICAL ACTIVITY IMPROVES HEALTH

PER PERSON PER YEAR

LESS AIR POLLUTION, MORE PHYSICAL ACTIVITY & IMPROVED SAFETY HELP SAVE LIVES

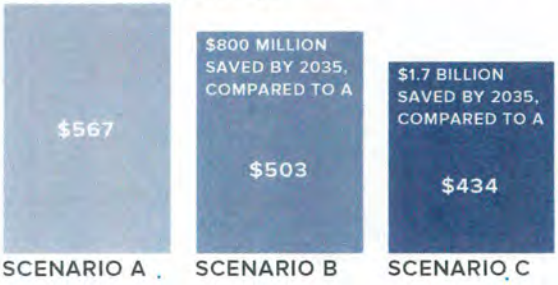
LIVES SAVED EACH YEAR BY 2035



WHAT WE LEARNED ABOUT THE ECONOMY

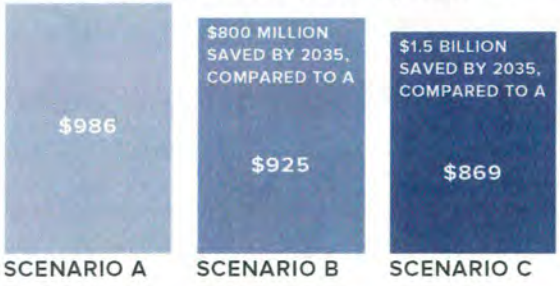
OUR ECONOMY BENEFITS FROM REDUCED EMISSIONS

ANNUAL ENVIRONMENTAL COSTS IN 2035 (MILLIONS, 2005$)



BUSINESSES AND OUR ECONOMY BENEFIT FROM REDUCED DELAY

ANNUAL FREIGHT TRUCK COSTS DUE TO DELAY IN 2035 (MILLIONS, 2005$)



Discussion points:

- Adopted plans reduce the environmental costs associated with air pollution, vehicle fluids and severe storms, and flooding and drought expected from climate change.
- Adopted plans reduce the amount of time freight trucks spend in traffic over recent trends.
- Freight truck travel cost savings can be passed on to businesses and consumers.
- Further investment can increase these savings from reduced emissions and delay.

Discussion points:

- Adopted plans can reduce the average annual vehicle ownership and operating costs over recent trends.
- Vehicle ownership costs decrease as households drive less and own fewer vehicles.
- Scenario C results in the lowest vehicle costs, which helps reduce the share of household income spent on vehicle travel for all households, including households with limited incomes.

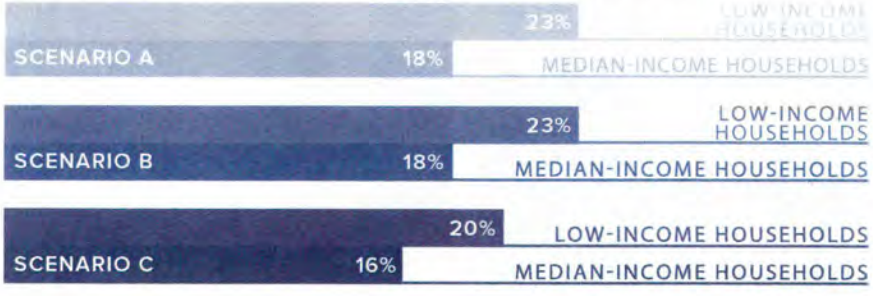
WHAT WE LEARNED ABOUT HOUSEHOLD COSTS

OVERALL VEHICLE-RELATED TRAVEL COSTS DECREASE DUE TO LOWER OWNERSHIP COSTS

AVERAGE ANNUAL HOUSEHOLD VEHICLE OWNERSHIP & OPERATING COSTS

LOWER VEHICLE COSTS HELP HOUSEHOLD BUDGETS

SHARE OF ANNUAL HOUSEHOLD INCOME SPENT ON VEHICLE TRAVEL



PHASE 2: TRANSIT ACCESS AT A GLANCE

HOUSEHOLD ACCESS TO TRANSIT AT A GLANCE

Share of total households within ¼-mile of transit

SERVICE FREQUENCY	SCENARIO A		SCENARIO B		SCENARIO C	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes	24%	4%	27%	4%	32%	20%
11 – 15 minute service	20%	29%	21%	32%	17%	18%
16 – 25 minute service	9%	5%	8%	4%	9%	7%
More than 26 minute service	18%	28%	17%	28%	16%	26%
No fixed-route service	29%	34%	27%	32%	26%	29%

LOW-INCOME HOUSEHOLD ACCESS TO TRANSIT AT A GLANCE

Share of low-income households* within ¼-mile of transit

SERVICE FREQUENCY	SCENARIO A		SCENARIO B		SCENARIO C	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes	31%	5%	34%	5%	40%	26%
11 – 15 minute service	26%	39%	26%	42%	22%	23%
16 – 25 minute service	8%	6%	7%	5%	7%	7%
More than 26 minute service	16%	28%	15%	27%	14%	24%
No fixed-route service	19%	22%	18%	21%	17%	20%

* $24,999 per year or less

JOB ACCESS TO TRANSIT AT A GLANCE

Share of jobs within ¼-mile of transit

SERVICE FREQUENCY	SCENARIO A		SCENARIO B		SCENARIO C	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes	31%	6%	33%	6%	42%	23%
11 – 15 minute service	19%	35%	22%	38%	17%	25%
16 – 25 minute service	12%	4%	9%	3%	9%	7%
More than 26 minute service	22%	33%	20%	32%	17%	26%
No fixed-route service	16%	22%	16%	21%	15%	19%

PHASE 2: ASSUMPTIONS AT A GLANCE

March 30, 2014

Phase 2: 2010 base year and alternative scenario inputs

The inputs are for research purposes only and do not represent current or future policy decisions of the Metro Council.

Strategy		2010	2035		
		Base Year Reflects existing conditions	**Scenario A** Recent trends	**Scenario B** Adopted plans	**Scenario C** New plans and policies
Community design	Households in mixed use areas (percent)	26%	36%	37%	37%
	Urban growth boundary expansion (acres)	2010 UGB	28,000 acres	12,000 acres	12,000 acres
	Drive alone trips under 10 miles that shift to bike (percent)	9%	10%	15%	20%
	Transit service (daily revenue hours)	4,900	5,600	6,200 (RTP Financially Constrained)	11,200 (RTP State + more transit)
	Work/non-work trips in areas with parking management (percent)	13% / 8%	13% / 8%	30% / 30%	50% / 50%
Pricing	Pay-as-you-drive insurance (percent of households participating)	0%	20%	40%	100%
	Gas tax (cost per gallon 2005$)	$0.42	$0.48	$0.73	$0.18
	Road user fee (cost per mile)	$0	$0	$0	$0.03
	Carbon emissions fee (cost per ton)	$0	$0	$0	$50

March 30, 2014

The inputs are for research purposes only and do not represent current or future policy decisions of the Metro Council.

	Strategy	2010	2035		
		Base Year Reflects existing conditions	**Scenario A** Recent trends	**Scenario B** Adopted plans	**Scenario C** New plans and policies
Marketing and incentives	Households participating in eco-driving (percent)	0%	0%	30%	60%
	Households participating in individualized marketing programs (percent)	9%	30%	30%	60%
	Workers participating in employer-based commuter programs (percent)	20%	20%	20%	40%
	Carsharing in high density areas (participation rate)	One carshare per 5000 vehicles	Twice the number of carshare vehicles available	Same as Scenario A	Four times the number of carshare vehicles available
	Carsharing in medium density areas (participation rate)	One carshare per 5000 vehicles	Same as today	Twice the number of carshare vehicles	Same as Scenario B
Roads	Freeway and arterial expansion (lane miles added)	N/A	9 miles	81 miles (RTP Financially Constrained)	105 miles (RTP State)
	Delay reduced by traffic management strategies (percent)	10%	10%	20%	35%
Fleet	Fleet mix (percent)	auto: 57% light truck: 43%	auto: 71% light truck: 29%		
	Fleet turnover rate	10 years	8 years		
Technology	Fuel economy (miles per gallon)	auto: 29.2 mpg light truck: 20.9 mpg	auto: 68.5 mpg light truck: 47.7 mpg		
	Carbon intensity of fuels	90 g CO_2e/megajoule	72 g CO_2e/megajoule		
	Plug-in hybrid electric/all electric vehicles (percent)	auto: 0% / 1% light truck: 0% / 1%	auto: 8% / 26% light truck: 2% / 26%		

GLOSSARY

Carsharing A model similar to a car rental where a member user rents cars for short periods of time, often by the hour. Such programs are attractive to customers who make only occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day. The organization renting the cars may be a commercial business or the users may be organized as a company, public agency, cooperative, or peer-to-peer. Zipcar and car2go are local examples.

Eco-driving A combination of public education, in-vehicle technology and driving practices that result in more efficient vehicle operation and reduced fuel consumption and emissions. Examples of eco-driving practices include avoiding rapid starts and stops, matching driving speeds to synchronized traffic signals, and avoiding idling. Program are targeted to those without travel options and traveling longer distances.

Employer-based commute programs Work-based travel demand management programs that can include transportation coordinators, employer-subsidized transit pass programs, ride-matching, carpool and vanpool programs, telecommuting, compressed or flexible work weeks and bicycle parking and showers for bicycle commuters.

Fleet mix The percentage of vehicles classified as automobiles compared to the percentage classified as light trucks (weighing less than 10,000 lbs.); light trucks make up 43 percent of the light-duty fleet today.

Fleet turnover The rate of vehicle replacement or the turnover of older vehicles to newer vehicles; the current turnover rate in Oregon is 10 years.

Greenhouse gas emissions According to the Environmental Protection Agency, gases that trap heat in the atmosphere are called greenhouse gases emissions. Greenhouse gases that are created and emitted through human activities include carbon dioxide (emitted through the burning of fossil fuels), methane, nitrous oxide and fluorinated gases. For more information see ***www.epa.gov/climatechange.***

GreenSTEP GreenSTEP is a new model developed to estimate GHG emissions at the individual household level. It estimates greenhouse gas emissions associated with vehicle ownership, vehicle travel, and fuel consumption, and is designed to operate in a way that allows it to show the potential effects of different policies and other factors on vehicle travel and emissions. Metropolitan GreenSTEP travel behavior estimates are made irrespective of housing choice or supply; the model only considers the demand forecast components – household size, income and age – and the policy areas considered in this analysis.

House Bill 2001 (Oregon Jobs and Transportation Act) Passed by the Legislature in 2009, this legislation provided specific directions to the Portland metropolitan area to undertake scenario planning and develop two or more land use and transportation scenarios by 2012 that accommodate planned population and employment growth while achieving the GHG emissions reduction targets approved by LCDC in May 2011. Metro, after public review and consultation with local governments, is to adopt a preferred scenario. Following adoption of a preferred scenario, the local governments within the Metro jurisdiction are to amend their comprehensive plans and land use regulations as necessary to be consistent with the preferred scenario. For more information go to: *http://www.oregonlegislature.gov/bills_laws/lawsstatutes/2009orLaw0865.html*

Individualized marketing Travel demand management programs focused on individual households. IM programs involve individualized outreach to households that identify household travel needs and ways to meet those needs with less vehicle travel.

Light vehicles Vehicles weighing 10,000 pounds or less, and include cars, light trucks, sport utility vehicles, motorcycles and small delivery trucks.

Low Carbon Fuel Standard In 2009, the Oregon legislature authorized the Environmental Quality Commission to develop low carbon fuel standards (LCFS) for Oregon. Each type of transportation fuel (gasoline, diesel, natural gas, etc.) contains carbon in various amounts. When the fuel is burned, that carbon turns into carbon dioxide (CO_2), which is a greenhouse gas. The goal is to reduce the average carbon intensity of Oregon's transportation fuels by 10 percent below 2010 levels by 2022 and applies to the entire mix of fuel available in Oregon. Carbon intensity refers to the emissions per unit of fuel; it is not a cap on total emissions or a limit on the amount of fuel that can be burned. The lower the carbon content of a fuel, the fewer greenhouse gas emissions it produces.

Pay-as-you-drive insurance (PAYD) This pricing strategy converts a portion of liability and collision insurance from dollars-per-year to cents-per-mile to charge insurance premiums based on the total amount of miles driven per vehicle on an annual basis and other important rating factors, such as the driver's safety record. If a vehicle is driven more, the crash risk consequently increases. PAYD insurance charges policyholders according to their crash risk.

Oregon Sustainable Transportation Initiative (OSTI) An integrated statewide effort to reduce GHG emissions from the transportation sector by integrating land use and transportation. Guided by stakeholder input, the initiative has built collaborative partnerships among local governments and the state's six Metropolitan Planning Organizations to help meet Oregon's goals to reduce GHG emissions. The effort includes five main areas: Statewide Transportation Strategy development, GHG emission reduction targets for metropolitan areas, land use and transportation scenario planning guidelines, tools that support MPOs and local governments and public outreach. For more information, go to *www.oregon.gov/odot/td/osti*

Scenario A term used to describe a possible future, representing a hypothetical set of strategies or sequence of events.

Scenario planning A process that tests different actions and policies to see their affect on GHG emissions reduction and other quality of life indicators.

Statewide Transportation Strategy The strategy, as part of OSTI, will define a vision for Oregon to reduce its GHG emissions from transportation systems, vehicle and fuel technologies and urban form by 2050. Upon completion, the strategy will be adopted by the Oregon Transportation Commission. For more information go to: *http://www.oregon.gov/ODOT/TD/OSTI/STS.shtml.*

System efficiency Strategies that optimize the use of the existing transportation system, including traffic management, employer-based commute programs, individualized marketing and carsharing.

Traffic incident management A coordinated process to detect, respond to, and remove traffic incidents from the roadway as safely and quickly as possible, reducing non-recurring roadway congestion.

Traffic management Strategies that improve transportation system operations and efficiency, including ramp metering, active traffic management, traffic signal coordination and real-time traveler information regarding traffic conditions, incidents, delays, travel times, alternate routes, weather conditions, construction, or special events.

ATTACHMENT A

Metro Policy Advisory Committee (MPAC)
Jody Carson, City of West Linn, MPAC Chair
Pete Truax, City of Forest Grove, First Vice-Chair
Tim Clark, City of Troutdale, Second Vice-Chair
Loretta Smith, Multnomah County
Jerry Hinton, City of Gresham
Charlie Hales, City of Portland
Martha Shrader, Clackamas County
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Jerry Willey, City of Hillsboro
Andy Duyck, Washington County
Marilyn McWilliams, Tualatin Valley Water District
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Sam Chase, Metro Council
Kathryn Harrington, Metro Council
Bob Stacey, Metro Council
Ruth Adkins, Portland Public Schools
Doug Neeley, City of Oregon City
Denny Doyle, City of Beaverton
Tom Imeson, Port of Portland
Charlynn Newton, City of North Plains

In Memoriam, William Wild, Oak Lodge Water District

Joint Policy Advisory Committee on Transportation (JPACT)
Craig Dirksen, Metro Council, JPACT Chair
Shirley Craddick, Metro Council, JPACT Vice-Chair
Carlotta Collette, Metro Council
Paul Savas, Clackamas County
Diane McKeel, Multnomah County
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Bill Wyatt, Port of Portland
Jack Burkman, City of Vancouver
Steve Stuart, Clark County

This report contains information that is intended for research purposes only and does not necessarily reflect current or future policy decisions of the Metro Council, MPAC or JPACT.

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Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

Metro Council President
Tom Hughes

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CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

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Climate Smart Communities Scenarios Project

Straw poll results from April 11 joint JPACT/MPAC meeting

April 15, 2014

Metro | *Making a great place*

1

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

Where we've been & where we are headed

PHASES 1 & 2		PHASE 3	
Understand Choices 2011-2012	Shape Choices Jan.-Oct. 2013	Shape Preferred Nov. 2013-June 2014	Adopt Preferred Sept.-Dec. 2014

WE ARE HERE

Straw poll results from April 11 joint JPACT/MPAC meeting

2

What the future might look like in 2035

A — RECENT TRENDS
This scenario shows the results of implementing adopted land use and transportation plans to the extent possible with existing revenue.

B — ADOPTED PLANS
This scenario shows the results of successfully implementing adopted land use and transportation plans and achieving the current RTP, which relies on increased revenue.

C — NEW PLANS & POLICIES
This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

Scenarios approved for testing by Metro advisory committees and the Metro Council in May and June 2013

- Straw poll results from April 11 joint JPACT/MPAC meeting

Choices to make on May 30...

To realize our shared vision for healthy and equitable communities and a strong economy while reducing greenhouse gas emissions...

- ❑ How much **transit** should we provide by 2035?
- ❑ How much should we use **technology** to manage the system by 2035?
- ❑ How much should we expand the reach **of travel information** by 2035?

Straw poll results from April 11 joint JPACT/MPAC meeting

...Choices to make on May 30

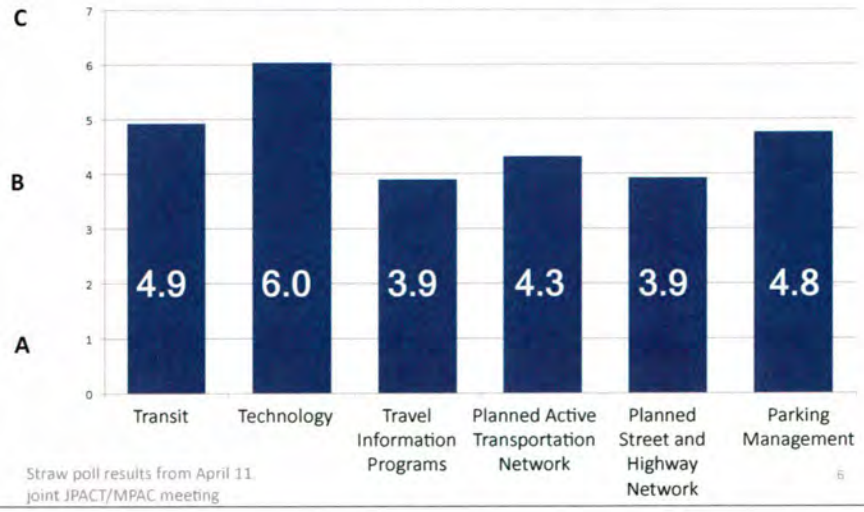
- How much of the planned **active transportation** network should we complete by 2035?
- How much of the planned **street and highway** network should we complete by 2035?
- How should local communities manage **parking** by 2035?

Straw poll results from April 11 joint JPACT/MPAC meeting

5

Preferences for Scenarios A, B, C And In-Between Scenarios

Averages of all respondents (mean):

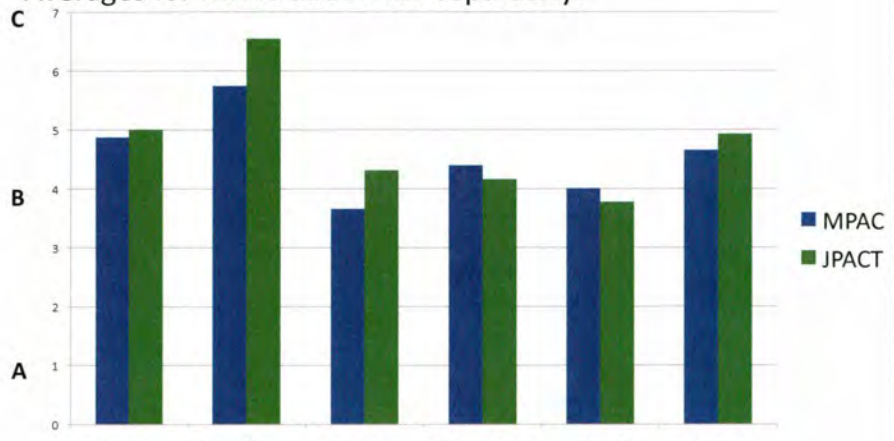


Straw poll results from April 11 joint JPACT/MPAC meeting

6

Preferences for Scenarios A, B, C And In-Between Scenarios

Averages for MPAC and JPACT separately:



Straw poll results from April 11 joint JPACT/MPAC meeting

7

Preferences for Scenarios A, B, C And In-Between Scenarios

Ranges of Responses for Each Component

Number of participants who voted for each scenario:

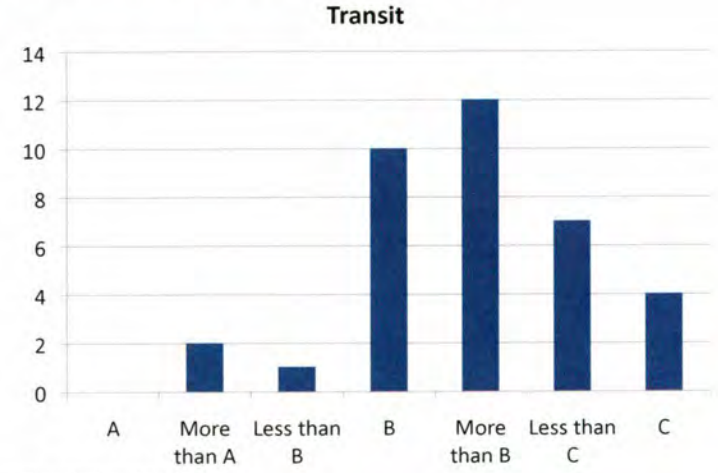
	Transit	Technology	Travel Information Programs	Planned Active Transportation Network	Planned Street and Highway Network	Parking Management
C	4	21	5	2	3	9
Less than C	7	3	2	3	0	4
More than B	12	8	5	10	6	5
B	10	2	9	14	14	12
Less than B	1	1	7	3	9	2
More than A	2	0	3	4	3	1
A	0	1	5	0	1	3
Total Participants	**36**	**36**	**36**	**36**	**36**	**36**

Straw poll results from April 11 joint JPACT/MPAC meeting

8

TRANSIT

Number of participants who voted for each scenario:

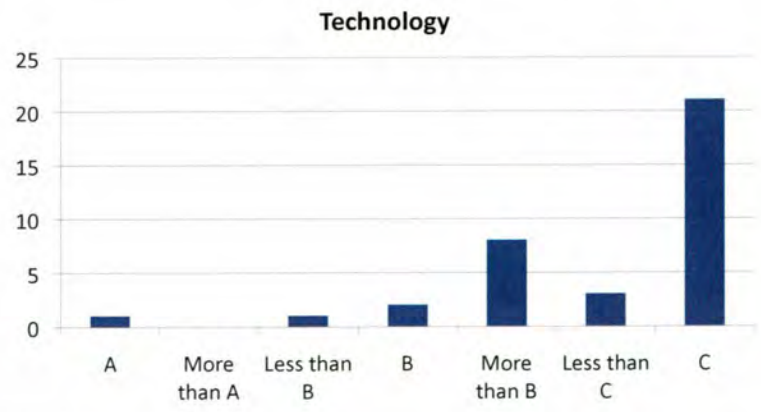


Straw poll results from April 11 joint JPACT/MPAC meeting

9

TECHNOLOGY

Number of participants who voted for each scenario:

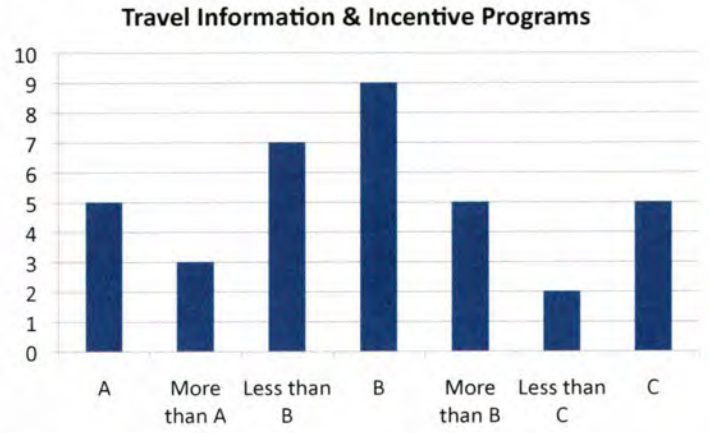


Straw poll results from April 11 joint JPACT/MPAC meeting

10

TRAVEL INFORMATION & INCENTIVE PROGRAMS

Number of participants who voted for each scenario:

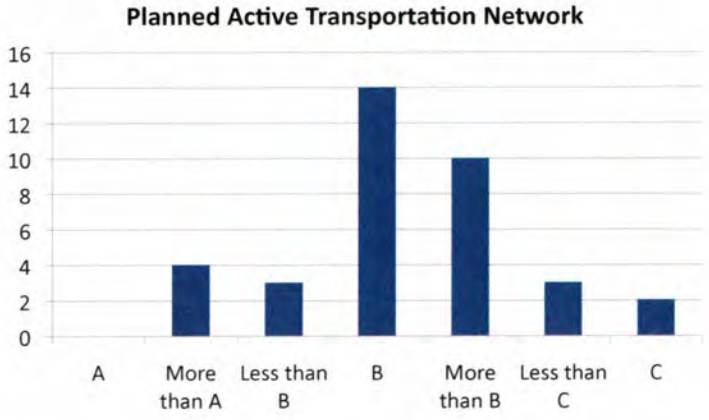


Straw poll results from April 11 joint JPACT/MPAC meeting

11

PLANNED ACTIVE TRANSPORTATION NEWORK

Number of participants who voted for each scenario:

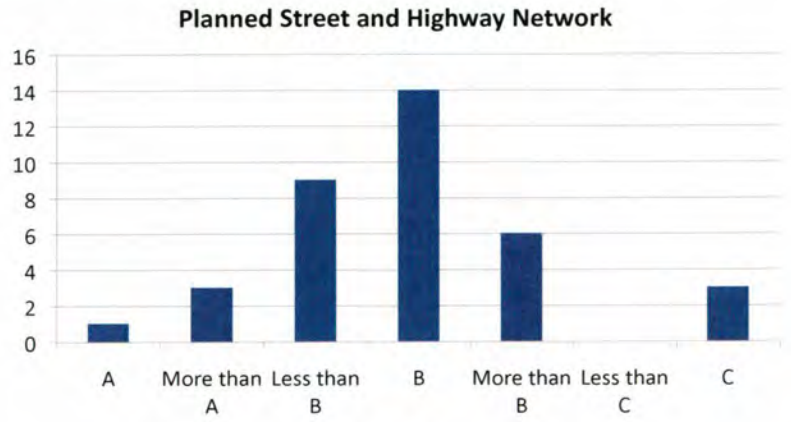


Straw poll results from April 11 joint JPACT/MPAC meeting

12

PLANNED STREET AND HIGHWAY NETWORK

Number of participants who voted for each scenario:



Straw poll results from April 11 joint JPACT/MPAC meeting

13

PARKING MANAGEMENT

Number of participants who voted for each scenario:

Straw poll results from April 11 joint JPACT/MPAC meeting

14

Immediate next steps

WEEK OF APRIL 14	Report results of meeting
MAY 1-5	Members report to county coordinating committees
MAY	TPAC and MTAC shape draft option for consideration on May 30
MAY 30	JPACT and MPAC rec'd on draft preferred approach and begin funding discussion
JUNE 19	Council direction on draft preferred approach

Straw poll results from April 11 joint JPACT/MPAC meeting

Final steps in 2014

JUNE – AUGUST	Staff evaluates draft preferred & develops implementation rec'ds with TPAC and MTAC
SEPTEMBER	Report back results and begin 45-day public comment period
SEPT. – DEC.	Public review of draft preferred approach & final adoption

Straw poll results from April 11 joint JPACT/MPAC meeting

CLIMATE SMART COMMUNITIES PROJECT
SHAPING THE PREFERRED APPROACH

Wilsonville City Council
Work Session
May 5, 2014

Background – Schedule

PHASES 1 and 2
- 2011-12 – Greenhouse gas analysis; modeling
- Jan-Oct 2013 – Shape choices to achieve state target

PHASE 3
- Nov 2013-June 2014 – Shape preferred approach
- Sept-Dec 2014 – Adopt preferred approach

Wilsonville City Council briefings, WCCC and C4 Metro Subcommittee briefings

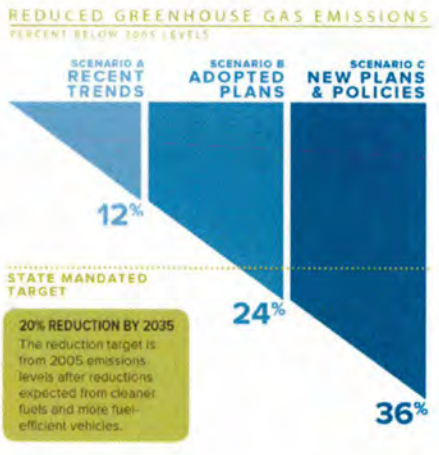
April-May 2014	Policymakers weigh in on which investments and actions should be included in the region's preferred approach
June 2014	Metro Council provide direction to staff
Summer 2014	Evaluation of preferred approach and development of near-term implementation plan
September 2014	Final public review of preferred approach
December 2014	Metro Council considers adoption
January 2015	Adopted approach to Land Conservation and Development Commission for approval

What is Being Asked of Policy Makers?

- Climate Smart Communities Scenarios Project → range of approaches
- 2009 legislative mandate: Reduce per capita greenhouse gas emissions from cars and small trucks by 2035 (20% of 2005 levels)
- Per legislation, Metro to adopt "Preferred Approach" in December 2014
- Seeking high level policy input from JPACT and MPAC – May 30 joint meeting
- Their members seeking guidance from local jurisdictions
- How does Wilsonville City Council want to weigh in?
  - Discussion tonight
  - Questions and specific concerns regarding what is in Preferred Approach
  - May 19 Work Session and/or Council meeting
- Use Discussion Guide as tool?

Scenarios A, B, and C

- Adopted local and regional plans meet state target
- Scenario A - Current investment levels – falls short
- Greater investment needed to achieve Scenario B
- Scenario C - Increased investment and greater reductions
- Will succeed in other outcomes:
  - Cleaner air and water
  - Improved public health
  - Improved safety
  - Reduced congestion and delay
  - Reliable travel options
  - Strong regional economy



Each Scenario – Seven Policy Areas

- Make transit more convenient, frequent, accessible, and affordable
- Use technology to actively manage the transportation system
- Provide information and incentives to expand use of travel options
- Make biking and walking more convenient
- Make streets and highways more safe, reliable, and connected
- Manage parking to make efficient use of parking resources
- Identify potential ways to pay for our investment choices

What is Preferred Approach?

- How to meet State target for GHG reductions for light-duty vehicles as we grow
- How much of each policy area is included
- Mix of investments and actions for communities
- Metro legislation to include:
  - Refined or new RTP policies
  - Recommended actions:
    - ✓ Menu of investments and tools tailored by each community to implement local visions
    - ✓ Near-term actions
      - ✓ State and federal legislative agendas requesting funding, policy changes, or tools
      - ✓ Identify potential funding mechanisms for key actions
      - ✓ Direction for 2018 RTP
      - ✓ Direction to future growth management decisions
      - ✓ Direction for functional plan amendments that guide local implementation
    - ✓ Monitoring and reporting system per ORS 197.301

How Much – by 2035?

The Preferred Approach will answer "how much?"

- Transit convenience and frequency
- Use of technology to manage system
- Expansion of travel information programs
- Built active transportation network
- Built street and highway network
- Parking management
- To pay (and how) for investment choices

Discussion Guide for Policy Makers

- Section 2 – Policy Areas
- Five-star climate benefits rating system
  - Less than 1%, 1 to 2%, 3 to 6%, 7 to 15%, 16-20% reductions
- Relative cost ratings ($, $$, $$$)
- Details for each policy area – benefits and challenges
- Comparison framework for Scenario A, B, and C characteristics
- "What people are saying"
- Emerging themes
- Key takeaways to share with others

Straw Poll Results

- April 11 joint JPACT/MPAC meeting
- Preferences for Scenarios A, B, and C and in-Between Scenarios
- Summary of discussion groups and responses
- Agenda addressed six of seven policy areas
- Investment discussion to follow
- May 30 joint JPACT/MPAC meeting – how much of each policy area should be included in the Draft Preferred Approach?

Next Meeting

2014
Drinking Water Week

WHEREAS, human health is dependent upon an abundant supply of pure, clean drinking water, and

WHEREAS, safety, quality and abundance of water can only be safeguarded by sound environmental protection, appropriate treatment, and properly maintained distribution systems, and

WHEREAS, we are all stewards of the water infrastructure which future generations depend upon, and

WHEREAS, each citizen of our community is called upon to help protect our source waters from pollution, to practice water conservation, and to get involved in local water issues, and

WHEREAS, federal, state, and local governments as well as concerned organizations, are cognizant and supportive of measures which promote safe, clean, and abundant water, and responsible wastewater management, and

WHEREAS, one such measure involves heightening public awareness of the value of our drinking water resources, and encouraging the public to promote this awareness.

NOW, THEREFORE, be it resolved that by virtue of the authority vested in me as Mayor of our City, I do hereby proclaim May 4-10, 2014 as Drinking Water Week in the City of Wilsonville.

_____

Tim Knapp, Mayor
May 5, 2014

CITY OF WILSONVILLE

PROCLAMATION DECLARING MAY AS BIKE MONTH

Whereas, for more than a century, the bicycle has been an important part of the lives of most Americans; and

Whereas, today millions of Americans engage in bicycling because it is a viable and environmentally-sound form of transportation, an excellent form of fitness and provides quality family recreation; and

Whereas, the education of cyclists and motorists as to the proper and safe operation of bicycles is important to ensure the safety and comfort of all users; and

Whereas, the League of American Bicyclists and independent cyclists throughout Oregon are promoting greater public awareness of bicycle operation and safety education in an effort to reduce accidents, injuries and fatalities for all.

Now, therefore, I Tim Knapp, Mayor of the City of Wilsonville do hereby proclaim May 2014 as

BIKE MONTH

Throughout the City and encourage all Wilsonville residents to recognize the importance of bicycle safety and be more aware of cyclists on our streets and roadways.

_____

Tim Knapp, Mayor

Signed: May 5, 2014

CITY COUNCIL ROLLING SCHEDULE
Board and Commission Meetings 2014-15

May

DATE	DAY	TIME	MEETING	LOCATION
5/1	Thursday	6 pm	Budget Committee Meeting	Council Chambers
5/5	Monday	7 pm	City Council Meeting	Council Chambers
5/8	Thursday	6 pm	Budget Committee Meeting	Council Chambers
5/12	Monday	6:30 pm	DRB Panel A	Council Chambers
5/13	*Tuesday*	*6 pm*	*Budget Committee Meeting If necessary*	*Council Chambers*
5/14	Wednesday	6 pm	Planning Commission	Council Chambers
5/17	*Saturday*	*9 am – 3 pm*	*"Spring Training" joint meeting of City Boards and Commissions*	*Willamette River Rooms I&II*
5/19	Monday	7 pm	City Council Meeting	Council Chambers
5/26	Monday		Memorial Day Holiday City Offices Closed	
5/28	Wednesday	6:30 pm	Library Board	Library
5/29	Thursday	6:30 pm	DRB Panel B	Council Chambers

COMMUNITY EVENTS

R.V. Short Fir State Heritage Tree Dedication
Date: 5/9/2014 1:00 PM - 2:00 PM
Location: Park at Merryfield

W.E.R.K. Day
Date: 5/10/2014 8:00 AM - 1:00 PM
Location: Meet at the Community Center
7965 SW Wilsonville Road
Wilsonville, Oregon 97070

Wilsonville Festival of the Arts
Saturday May 31, 2014 10 am
Town Center Park

City of
WILSONVILLE
in OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject**: **Resolution No. 2469** Parks and Recreation tenant improvement bid award. **Staff Member**: Martin Brown, Building Official **Department:** Community Development
Action Required	**Advisory Board/Commission Recommendation**
☒ Motion ☐ Public Hearing Date: ☐ Ordinance 1st Reading Date: ☐ Ordinance 2nd Reading Date: ☒ Resolution ☐ Information or Direction ☐ Information Only ☐ Council Direction ☒ Consent Agenda	☒ Approval ☐ Denial ☐ None Forwarded ☐ Not Applicable **Comments**:
Staff Recommendation: Staff recommends City Council adopt Resolution No. 2469.	
Recommended Language for Motion: I move to adopt Resolution No. 2469.	
PROJECT / ISSUE RELATES TO: *[Identify which goal(s), master plans(s) issue relates to.]*	
☒Council Goals/Priorities	☐Adopted Master Plan(s) ☐Not Applicable

ISSUE BEFORE COUNCIL: To adopt, deny, or modify a Resolution of the Wilsonville City Council acting as the Contract Review Board, approving the bid process, accepting the lowest bidder and awarding a construction contract to Andy Medcalf Construction Company.

EXECUTIVE SUMMARY: The proposed relocation of the Parks and Recreation Department into the existing Visitors Information Center (VIC) required interior tenement improvement work to accommodate the city staff moving into the facility. The tenant improvement work consists of new paint, carpet, two new offices and relocating the existing restroom facilities. The project also includes 430 square feet for the Korean War Memorial Museum. On March 31, 2014 the project was advertised in the Daily Journal of Commerce. A mandatory pre-bid meeting was held at the project facility on April 8, 2014 and on April 22, 2014 City staff opened seven sealed bids. There were seven qualified responders to the invitation to bid and the bid received from

Andy Medcalf Construction Company in the amount of $216,085.00 was the lowest responsible bid. Staff recommends authorizing a contingency budget of 15 percent of the contract amount equaling $32,412.00.

EXPECTED RESULTS: Completing the tenant improvements for the relocation of the Parks and Recreation Department into the existing Visitors Center.

TIMELINE: Substantial completion of the public toilet rooms by June 16, 2014 and substantial completion of the building tenant improvements by July 1, 2014.

CURRENT YEAR BUDGET IMPACTS: The project budget was approved in the supplemental budget on April 7, 2014.

FINANCIAL REVIEW / COMMENTS:
Reviewed by: _____CAR_____ Date: ___4/23/14_____

Project #8101 approved by supplemental budget adjustment in the amount of $362,000.

LEGAL REVIEW / COMMENT: *[Item **must** be sent to City Attorney for review and comment.]*
Reviewed by: _____ Date: _____

COMMUNITY INVOLVEMENT PROCESS: The project was discussed and reviewed by the City Council at their work session on February 3, 2014 Council provided staff with direction to proceed with the project.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY Relocating the Parks and Recreation Department to the existing Visitors Center will provide better visibility and access for the community. The redesign and relocation of the public restrooms as part of the project will provide better and safer access for the public, and increased security for the City.

ALTERNATIVES:

CITY MANAGER COMMENT:

ATTACHMENTS

- **A.** Resolution No. 2469
- **B.** Bid results

RESOLUTION NO. 2469

A RESOLUTION OF THE CITY OF WILSONVILLE ACTING AS THE LOCAL CONTRACT REVIEW BOARD APPROVING THE BID PROCESS; ACCEPTING THE LOWEST RESPONSIBLE BID; AWARDING A CONSTRUCTION CONTRACT TO ANDY MEDCALF CONSTRUCTION CO. THE LOWEST RESPONSIBLE BIDDER; AND VERIFYING FUND AVAILABILITY FOR THE PROJECT COMMONLY REFERRED TO AS PARKS AND RECREATION TENANT IMPROVEMETNS PROJECT.

WHEREAS, in accordance with the provisions of Oregon Revised Statutes, Chapter 279, Public Bids and Contracting; Wilsonville Code 2.3.14, Contracts with the City; and the Attorney General's Model Rules which the City has adopted as its contracting rules; the Wilsonville City Council serves as the city's Contract Review Board; and

WHEREAS, the Parks/Rec. Tenant Improvement Project was duly advertised for pre-qualification and competitive bids in the Daily Journal of Commerce on March 31, 2014; and

WHEREAS, the bid advertisement and invitation to bid included a Request for Qualifications and established a qualification process under which prospective bidders must be qualified in order to be considered a responsive bidder; and

WHEREAS, seven sealed bids were received prior to 2:00 p.m. local time, April 22, 2014, at the City Hall, 29799 SW Town Center Loop East, Wilsonville, OR, 97070; and

WHEREAS, all seven of these bids were from qualified, responsive bidders as defined under the Request for Qualifications; and

WHEREAS, the seven responsive bids were then opened individually, and separately read aloud at 2:00 p.m., local time, April 22, 2014. The Summary of Bids is marked Exhibit "A", attached hereto and incorporated herein; and

WHEREAS, Andy Medcalf Construction Co. submitted the lowest responsible bid; and

WHEREAS, the Andy Medcalf Construction Co. base bid of $216,085 for the Tenant Improvement Project is $77,245 less than the project construction cost estimate of $293,330; and

WHEREAS, the City desires to execute a Construction Contract Agreement in a timely manner; and

WHEREAS, the City's FY13-14 budget includes a $362,000 appropriation for the Park/Rec, Tenant Improvements Project, which is Project #8101; and

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The City Council acting as the Local Contract Review Board finds and concludes:

    a. The recital of findings above is incorporated by reference herein.

    b. The bid from Andy Medcalf Construction Co. in the amount of a $216,085.00 base bid for the Parks/Rec. Tenant Improvement project is the lowest responsible bidder and is qualified for the work.

2. Subject to the final review and approval of the Project Manager and in accordance with the provisions of Oregon Revised Statutes, Chapter 279, Public Bids and Contracting; Wilsonville Code 2.3.14, Contracts with the City; and the Attorney General's Model Rules which the City has adopted as its contracting rules; the City Council acting as the Contract Review Board hereby awards the contract for construction to Andy Medcalf Construction Co. in the amount of $216,085.00 and authorizes expenditure of up to an additional 15 percent of the contract award equaling $32,412.00 as project contingency.

3. Subject to final completion of all improvements specified in the contract documents and any supplementary changes, the Project Manager is authorized to certify the required improvements complete and make final payment including release of retainage.

4. The Project Manager is authorized to approve change orders to this contract as required provided, however, that the total cost does not exceed the approved budget for this project.

5. The City Council hereby authorizes the expenditures for this contract not to exceed the total FY13-14 budget amount:

Account	Amount
580.950.45030.00000	$362,000.00

6. This Resolution becomes effective upon adoption.

ADOPTED by the Wilsonville City Council at a special meeting thereof this 5th day of May, 2014, and filed with the Wilsonville City Recorder this date.

_____
Tim Knapp, Mayor

ATTEST:

_____
SANDRA C. KING, MMC City Recorder

SUMMARY of Votes:

Mayor Knapp ____

Council President Starr ____

Councilor Stevens ____

Councilor Goddard ____

Councilor Fitzgerald ____

Exhibit A

CITY OF WILSONVILLE

PARKS & RECREATION TENANT IMPROVEMENT PROJECT

BID OPENING: APRIL 22, 2014

2 P.M.

	Bidder	Bid	Bid Bond	1st Tier	Base Bid
1	Andy Medcalf	Yes	Yes	Yes	$216,085
2	Todd Hess	Yes	Yes	Yes	$285,810
3	Russell Construction	Yes	Yes	Yes	$293,912
4	First Cascade Corp	Yes	Yes	Yes	$309,888
5	Jaeger & Erwert	Yes	Yes	Yes	$319,870
6	Payne Construction	Yes	Yes	Yes	$320,550
7	Woodburn Construction	Yes	Yes	Yes	$329,750

CITY OF WILSONVILLE
CITY COUNCIL MEETING MINUTES

A regular meeting of the Wilsonville City Council was held at the Wilsonville City Hall beginning at 7:00 p.m. on Monday, March 17, 2014. Mayor Knapp called the meeting to order at 7:08 p.m., followed by roll call and the Pledge of Allegiance.

The following City Council members were present:
- Mayor Knapp
- Council President Starr – excused
- Councilor Goddard - excused
- Councilor Fitzgerald
- Councilor Stevens

Staff present included:
- Bryan Cosgrove, City Manager
- Jeanna Troha, Assistant City Manager
- Mike Kohlhoff, City Attorney
- Sandra King, City Recorder
- Nancy Kraushaar, Community Development Director
- Dan Pauly, Associate Planner
- Mark Ottenad, Government Affairs Director
- Jon Gail, Community Relations Coordinator
- Barbara Jacobson, Assistant City Attorney
- Stephan Lashbrook, SMART Director
- Andrea Villagrana, HR Manager
- Blaise Edmonds, Manager of Current Planning
- Steve Adams, Deputy City Engineer
- Mike Ward, Civil Engineer

Motion to approve the order of the agenda.

Motion: Councilor Fitzgerald moved to approve the order of the amended agenda. Councilor Stevens seconded the motion.

Vote: Motion carried 3-0.

MAYOR'S BUSINESS

Mayor Knapp briefly reported on the annual Metro JPACT trip to Washington D.C. to meet with Oregon's elected official regarding transportation. Much of the discussion centered on the Federal Highway Trust Fund finances and the looming difficulties in funding and maintaining federal highway transportation infrastructure.

A Proclamation declaring April "Parkinson's Awareness Month" was read by the Mayor and accepted by Kevin Mansfield, Oregon State Director for Parkinson's Action Network. Mr. Mansfield provided information regarding the work of the Parkinson's Action Network to provide education about the disease and raise funds for research.

Upcoming City Council meetings were announced by the Mayor.

COMMUNICATIONS

A. Chief Mike Duyck, presented the TVF&R Annual State of the District
Chief Duyck of Tualatin Valley Fire & Rescue presented the state of the District using a PowerPoint presentation. He shared a recap of the 2013 activities, and talked about the local option levy renewal that would be on the May ballot as well as the hands only CPR training offered to the public.

B. Captain James Rhodes introduced Jeff Smith, Wilsonville's new Police Chief
Jeanna Troha, introduced Captain Rhodes who has been promoted in the Sheriff's Office and who, in turn, introduced Jeff Smith, the new Wilsonville Police Chief. Mayor Knapp presented the Wilsonville Police Chief's shield to Chief Smith.

CITIZEN INPUT & COMMUNITY ANNOUNCEMENTS

This is an opportunity for visitors to address the City Council on items ***not*** on the agenda. It is also the time to address items that are on the agenda but not scheduled for a public hearing. Staff and the City Council will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter. Please limit your comments to three minutes.

Ginger Fitch, 29395 SW Camelot Street commented the flashing lights on Barber Street in the school safety zone by Lowrie Elementary School were no longer in place and that signs had been installed to alert drivers. She asked that the change be publicized. Regarding the vacation of portions of the public right of way on 110th Avenue she was concerned there was no north/south access for residents and suggested this connection be completed first prior to the vacation. Staff would contact Ms. Fitch since the public comment period for the street vacation was passed.

Michael Davis, 6295 SW Wilsonville Road, expressed a need for a community recreation center accessible to all children, including handicapped. It was explained the City was in the very beginning stages of such a project; a task force will be assembled and all meeting information would be available in the Boones Ferry Messenger and posted on the City's website.

COUNCILOR COMMENTS, LIAISON REPORTS & MEETING ANNOUNCEMENTS

Councilor Fitzgerald – *(Development Review Panels A & B Liaison)* reported on the decisions made by DRB Panel-A at their last meeting. She announced the next meeting dates for the Library Board and that the Tourism Strategy Task Force will meet March 20, 2014 to review public comments and prepare a recommendation to take to the City Council on tourism strategy.

Councilor Stevens – *(Planning Commission; CCI; Wilsonville Seniors Liaison)* announced the actions taken by the Planning Commission at their last meeting, and that the Wilsonville Seniors are excited about participating in the recreation and aquatic center task force.

CONSENT AGENDA

The Consent Agenda items were read into the record by title only by the City Attorney.

A. **Resolution No. 2454**
A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Professional Services Agreement With Angelo Planning Group, Inc. (Community Development Project #3001) Contract approval Frog Pond PSA.

B. **Resolution No. 2455**
A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Construction Contract With Signal Construction Group LLC For The 2013 Street Lighting Infill Project (Capital Improvement Project #4698).

C. Minutes of the February 20, 2014 and March 3, 2014 Council Meetings.

Motion: Councilor Stevens moved to approve the Consent Agenda. Councilor Fitzgerald seconded the motion.

Vote: Motion carried 3-0

PUBLIC HEARING

Mayor Knapp opened the public hearing on Resolutions 2456, 2457 and 2458 at 8:16 p.m. and read the public hearing protocol. Council members indicated they were familiar with the location of the proposed coffee kiosk based on either visiting the site or purchasing fuel at the gas station at that location; however their familiarity would not influence their decision.

Mr. Kohlhoff noted the Council had adopted procedures for the hearing: the Applicant/Appellant will go first with their presentation limited to 20 minutes. Of those 20 minutes, 5 minutes could be reserved for a rebuttal. The Chief Opponent has also been given 20 minutes to respond. Testimony is limited to the record, except for the issue of circulation in which the Council would take new evidence. If there is anyone who wanted to testify on the issue of circulation, other than the Applicant or part of the Applicant's team or the Chief Opponent and his team, they were welcome to testify for, against, or neutral. Council typically would limit this type of testimony to three minutes.

Mr. Kohlhoff pointed out the titles of the three resolutions all currently read the same, which may lead to some confusion even though the body of the resolution is different. He suggested changing the word "concerning" in the title of each of the resolutions to read as follows and shown in ***bold italics***.

Resolution No. 2456 - approve
Resolution To Issue An Order By The City Council ***Approving*** The Appeal Of The Stage II Final Plan Revision, Site Design Review, And Master Sign Plan Revision And Sign Waiver Of A New 450 Square Foot Drive-Thru Coffee Kiosk At The Corner Of 95th Avenue And Boones Ferry Road. The Subject Site Is Located On Tax Lot 302 Of Section 2DB, T3S, R1W, Washington County, Oregon. Applicant/Appellant/Owner Wilsonville Devco, LLC. Application Nos. DB 13-0046, DB 13-0047, And DB 13-0048. (staff – Pauly)

Or in the alternative
Resolution No. 2457 - deny
Resolution To Issue An Order By The City Council ***Denying*** The Appeal Of The Stage II Final Plan Revision, Site Design Review, And Master Sign Plan Revision And Sign Waiver Of A New 450 Square Foot Drive-Thru Coffee Kiosk At The Corner Of 95th Avenue And Boones Ferry Road. The Subject Site

Is Located On Tax Lot 302 Of Section 2DB, T3S, R1W, Washington County, Oregon. Applicant/Appellant/Owner Wilsonville Devco, LLC. Application Nos. DB 13-0046, DB 13-0047, And DB 13-0048. (staff – Pauly)

Or in the alternative
Resolution No. 2458 - remand
Resolution To Issue An Order By The City Council ***Remanding*** The Appeal Of The Stage II Final Plan Revision, Site Design Review, And Master Sign Plan Revision And Sign Waiver Of A New 450 Square Foot Drive-Thru Coffee Kiosk At The Corner Of 95th Avenue And Boones Ferry Road. The Subject Site Is Located On Tax Lot 302 Of Section 2DB, T3S, R1W, Washington County, Oregon. Applicant/Appellant/Owner Wilsonville Devco, LLC. Application Nos. DB 13-0046, DB 13-0047, And DB 13-0048. (staff – Pauly)

The Staff Report is included here for background.

ISSUE BEFORE COUNCIL:
Applicant Wilsonville Devco LLC has appealed the Development Review Board's denial of its applications to modify its already approved Stage II Final Plan to allow for a drive through Human Bean Coffee Kiosk.

EXECUTIVE SUMMARY:
The DRB denied Wilsonville Devco's applications for a Stage II Final Plan Revision that would have replaced the already approved small mall project with a drive through coffee kiosk and store due to concerns about safety and internal traffic circulation, given the tight nature of the site and the adjoining development's drive through, coupled with traffic to and from the Chevron station. City Council granted the Appeal at the March 3, 2014 City Council meeting. The City Council determined that the appeal would be based on review of the DRB record, with allowance for limited new evidence and testimony relating only to on-site traffic congestion; adequacy, efficiency and safety of on-site pedestrian and vehicle circulation, inclusive of delivery and other larger format vehicles; and Section 4.154, Subsections 4.155(.03)A, 4.400(.02)A and 4.421(.01)C of the Wilsonville City Code.

EXPECTED RESULTS:
The Order will be final action by the City Council on the Appeal.

LEGAL REVIEW / COMMENT:
Reviewed by: MEK Date: 3/6/14
It should be noted that the three attached draft Resolutions are in the alternative, depending on the decision reached by the City Council. It is also important to note that the attached Findings attached to each Resolution are simply proposed Findings to aid the Council as to what the Findings might look like, based on current evidence, without knowing what new evidence might be presented during the Hearing that could lead to a different outcome. Thus, Council members must form their own opinions and reach their own Findings of Fact, Determinations and Conclusions, which may or may not be as written on the draft Resolutions enclosed. If the Council's Findings are significantly different or complex, staff will be tasked with creating new Findings, as directed by Council, which will be brought back before City Council at the next City Council meeting for final review and approval. The next meeting is April 7, 2014 and the 120-day period will expire on April 8, 2014. Thus, unless the Applicant agrees to toll the time period, the remand option is not viable.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY (businesses, neighborhoods, protected and other groups:
Resolution of the Applications.

ALTERNATIVES:
The Council has the following options for consideration:

1) To deny the Appeal and Applications, upholding the DRB decision;
2) To approve the Applications, overturning or modifying the DRB decision and adopting the original staff report to the DRB, with or without modifications;
3) To remand to the DRB (understanding that this is not an option unless the Applicant agrees to extend the deadline for final action by the City).

Option 1 or 2 is recommended by staff given the time constraints for final decision, unless the Applicant voluntarily waives this time limit. Please take special note of the City Attorney's comments with respect to how Council's final Order may be framed.

End of Staff Report.

Documents received March 10, 2014 to be included in the record:

- On behalf of Wilsonville Devco, LLC a letter from Steven L. Pfeiffer dated March 10, 2014 to Mayor Knapp, re: Appeal of Denial of The Human Bean Coffee Kiosk; DB 13-0046, DB 13-0047, DB 13-0048
- Submitted by Gary LaPoint on March 10, 2014:
  - CD containing video of turning movements dated March 17, 2014;
  - Gmail message to Steven High at core-mrk.com from Gary LaPoint dated February 10, 2014 9:22 a.m.
  - Gmail message to Gary LaPoint from Steve High dated February 10, 2014 1:37 p.m.
  - Site plans showing Human Bean Entry Truck Turning movement WB-40 Truck
  - Site plans showing Human Bean Exit Truck Turning movement WB-40 Truck
  - Boones Ferry Pointe: State II Final Plan Parking site plan

Mr. Pauly used a power point presentation to identify the site location and provided a brief development history of the site. Previously, together with the Carl's Jr. development there was a 3,150 square foot multi-tenant building proposed for this portion of the site; however, the developer now has requested to replace this 3,150 square foot building with a coffee kiosk. The portion of the site to focus on is the north portion of the property. The coffee kiosk is located in a position to maximize the queuing available.

Mr. Pauly identified the reasons the Development Review Board denied the application:

- Delivery Truck Circulation. As is standard for this type of development there is no delivery dock or parking required, typically a delivery truck will park in the parking lot to make their delivery. The DRB was concerned with the parking and backing of delivery trucks, the safety of pedestrians, and damage to the curb and impractically with the larger WB-40 truck. Since then the Applicant submitted information indicating they have worked with their suppliers to make deliveries in smaller 30-foot trucks.

Staff prepared a condition that would limit deliveries to be made in the smaller vehicles.

- Pedestrian Access and Safety. This concern is related to the truck traffic and the backing movements and pedestrians in the area. In addition, the rest of the site is developed with the Holiday Inn, Chevron Station and Carl's Jr. and recently when the Council updated their transportation systems plan there were new pedestrian circulation standards adopted; which apply

to this but not to the previous development. The pedestrian circulation paths were displayed on a slide. The pedestrian paths proposed by the Applicant do meet the updated standards; however, the DRB discussed the matter of Human Bean customers walking over from the Holiday Inn and the number of vehicle circulation areas pedestrians would need to walk through. The existing path to the sidewalk was shown, and the connections to the coffee kiosk from the sidewalks. But, there are limited things that are really within the prevue of this application.

- Onsite Traffic and Vehicle Circulation. Mr. Pauly displayed a slide showing the circulation for each of the drive-thru businesses. The Applicant has agreed to pavement markings to divide opposing traffic to aid in circulation and directional exit signs to help customers exit through the Carl's Jr. parking lot rather than the Chevron property. The DRB was concerned with vehicles stacking at the Carl's Jr. drive-thru blocking the exit for the coffee kiosk. The Applicant agreed to an additional condition which would include a stop line with a sign as well as a "do not block" pavement marking to allow traffic to exit the coffee kiosk.

- Traffic Circulation. The City does not require any traffic reports on internal private property circulation. There was no concrete evidence presented that showed the onsite circulation would not work.

Mr. Pauly displayed the three recommended conditions of approval as follows:

1. No vehicles greater than thirty feet (30') in length shall be used to make inventory deliveries to The Human Bean, or future tenant of the kiosk, unless an easement is granted by the neighboring property owner or found to exist by the appropriate legal authority that would allow the maneuvering of larger delivery vehicles.
2. Site circulation to The Human Bean or future tenant of the kiosk, including inventory deliveries and typical customer traffic, shall be accomplished without the use of the curb cut along the property line between the trash enclosures and SW Boones Ferry Road unless an easement is granted by the neighboring property or found to exist by the appropriate legal authority that would allow use of the curb cut and circulation on the neighboring property.
3. The following shall be installed and maintained to aid in site safety and circulation:
    a. A stop line and stop sign for northbound traffic directly east of the north building line of the Carl's Jr. Restaurant building. The stop sign shall meet ASHTO dimensions standards.
    b. A "Do Not Block" areas at the entrance of the Carl's Jr. drive-thru lane sufficient to allow traffic through exiting from the north.

The Mayor invited questions by Council of the Staff.

Councilor Fitzgerald asked if how customers would leave if they were parked in front of Carl's Jr. and there were more than seven cars waiting for the drive-thru.

Mr. Pauly thought that situation was typical of fast food restaurants with stacking and internal parking spots. This does allow additional tenant to have a free flow of traffic coming out, or emergency access. Typically in fast food you are going to see some blockage like that when you get a longer queue.

Councilor Fitzgerald it would be the same for either the Carl's Jr. or the coffee.

Mr. Pauly responded where the stop sign and "do not block" does allow a vehicle to access The Human Bean behind the Carl's Jr. line to some extent.

Councilor Stevens verified a WB-40 was a forty foot truck. She asked if the Applicant was agreeable to smaller delivery truck; was Carl's Jr. agreeable to the condition; and were they in agreement with the "do not block" pavement markings.

Mr. Kohlhoff indicted the Applicant and Objectors could provide testimony in response to the Councilor's questions.

Councilor Stevens asked were the curb cut was located. Mr. Pauly indicated the location on a Power Point slide, noting there was no physical barrier. The goal was to have signs to direct traffic.

Referring to one of the Power Point slides, Mayor Knapp wanted to know the difference between the vehicles shown in grey and those shown in black. Mr. Pauly stated the black vehicles were at the menu board placing their order.

Mayor Knapp asked whose property the curb cut was on. Mr. Pauly explained the location of the property line. Mayor Knapp confirmed the parking spaces above an arrow were for the coffee shop. Mr. Pauly stated they were on the Carl's Jr. and coffee shop property, which is commonly owned by Wilsonville Devco property.

Mayor Knapp asked if there had been discussion about combining the circulation pattern for the drive-thru for Carl's Jr. and coffee shop rather than having them separate. Mr. Pauly had not heard any such discussion. In response to a question about the stacking of cars at the drive-thru Mr. Pauly stated there was more room for vehicle stacking available for the coffee shop than there was for Carl's Jr.

Mayor Knapp referred to a video submitted by the Opposition showing backing maneuvers of a WB-40 delivery truck. Mr. Pauly understood that is the Carl's Jr. delivery truck, which is a similar sized truck as the WB-40 and they were testing out different ideas for circulation to see if a larger truck could work on the site.

The Mayor understood the original plan was to pull into the coffee shop parking and back 180 degrees into the Carl's lot which is not what the truck did in the video, and even in this diagram appears to almost clip the landscape island between Carl's and the coffee shop.

Mr. Pauly stated from staff's view of the video it appeared they were attempting two previous ideas for circulation of the semi that were not proposed at this point.

Mayor Knapp wanted to know if the pattern on the slide showed a pattern that is no longer being advocated. Mr. Pauly stated findings had been made by staff and the DRB, and the DRB rejected this and staff prepared findings, and the Applicant proposed using smaller trucks, and not to use the backing pattern with the smaller trucks. The Mayor asked to see the backing pattern proposed for the 30-foot trucks, which involved backing from the upper right hand position down toward the curb cut and pulling out head forward, and has anyone actually done this with a 30-foot truck. Mr. Pauly did not know; but there was a traffic study and engineering report on this maneuver included in the record.

Mr. Kohlhoff stated a table of the documents submitted by the parties to date has been made a part of the record. Staff has made sure both parties received the information submitted by the other.

Steve Pfeiffer, Perkins Coie, 1120 NE Couch St. 10th Floor, Portland, and Appellant's Representative. Mr. Pfeiffer commented Council's questions and Mr. Pauly's responses confirmed his understanding of the primary focus, of the discussion tonight and the issues that we've raised, and the basis for the DRB's

decision as truck and pedestrian circulation. Mr. Pfeiffer added one of the primary points made below by the Principal Opponent is that vehicular circulation, particularly delivery trucks, should not enter onto their property. That was one of the concerns with the 40-foot truck mentioned by the DRB, there was a concern that a truck could end up on their property. Marc Butorac will speak to the truck circulation analysis and Josh Veentjer will address the vendors' agreement to the size of delivery trucks servicing the Human Bean.

The Applicant will endorse the three additional conditions of approval presented by Mr. Pauly because one reflects information presented to the Council through the additional open record opportunity, which is limiting the length of delivery trucks to the site to 30-feet. The revised circulation plan eliminates any aspect of the additional onsite circulation on the Chevron property which was a concern for the LaPoints. Third, the cross-easement at the property line is a cross easement that essentially allows a break in the common property line for certain kinds of traffic. Mr. Pfeiffer was not concerned with condition number 2 because it is limited to the Human Bean or any future tenants. Mr. Pfeiffer reserved five minutes for rebuttal, and turned the presentation to Josh Veentjer to provide a history of the development of the Boones Ferry Pointe Property, how this evolved from the earlier approved office building that is still available to us to develop today, and the work he has done to come up with a solution to address concerns voiced by the DRB.

Josh Veentjer, 4188 SW Greenleaf Drive, Portland. Since acquiring the property in 2012 he has worked extensively with the LaPoint Business Group, Chevron, and WHI LLC (Holiday Inn) to work out a development agreement which spelled out a majority of the improvements we would make, in part, to improve the shared driveway that would benefit Holiday Inn as well as Chevron to improve the circulation overall to accommodate the Carl's Jr. and future retail. We were approved for a 3.150 square foot retail building. We planned to have a national tenant but they withdrew due to the economy, making it difficult to obtain financing with no tenants in place. At the time we were approached by coffee vendors, we spoke to our neighbors and conveyed that we were looking at this type of business for this site.

The coffee kiosk application is an amendment to a prior approval reducing the building from 3,150 square feet to 450 square feet. A 3,150 square foot retail building could accommodate up to three tenants which would have had a larger impact overall with delivery trucks and cars frequenting the site. Mr. Veentjer thought the coffee use was complimentary in nature with a morning peak and Carl's Jr. with an afternoon peak, where the traffic for each business probably would not overlap.

Regarding delivery trucks Mr. Veentjer worked with the vendors of the Human Bean who cooperated to limit delivery truck sizes to the site, understanding that it is not safe to have a WB-40 truck to the site. In addition, the vendors are willing to comply with delivery hours; Umpqua has agreed to make delivery at 4 a.m.

Mr. Veentjer was agreeable to the additional conditions of approval presented by Planning Staff and noted hearing the concerns raised by the DRB and Planning Staff has provided time to improve on the circulation and pedestrian safety on the site.

Marc Butorac, Kittelson & Associates, Inc. 610 SW Alder Street, Suite 700, Portland. Mr. Butorac stated the diagrams of the traffic circulation need to include the time of the traffic to present a full picture. Truck deliveries will be on the site between 4 a.m. and 5 a.m. when there are few operations going on. The auto-turn analysis of the Umpqua dairy truck was customized to the specific 30-foot truck; the analysis was conservative meaning a non-professional could perform the maneuver. Pedestrians have access to a public sidewalk surrounding the site with separate access to the businesses. Regarding onsite

traffic circulation the Human Bean generates about 27 vehicles in peak morning hours or one car every two minutes, and business drops off at noon. The drive-thru business for Carl's Jr. in the morning is two-three cars, with their heaviest traffic during lunch hour. The overlaps and conflicts while they are there on paper physically will not be there since they happen at two different times of the day. Mr. Butorac thought the circulation was safe and functional from an operational safety standpoint.

Mr. Kohlhoff noted the 15 minutes had run.

Mayor Knapp invited questions of Council.

Councilor Stevens asked if Umpqua was the only delivery truck visiting the Human Bean; and confirmed customers could walk up to the coffee kiosk. Mr. Veentjer said they focused on that truck since it was the largest; the others were box vans or smaller sized trucks, no more than 22 feet. The coffee kiosk will have one drive thru with a preorder board to expedite delivery of the product to the customer.

Councilor Fitzgerald wanted to know how they would manage long term adherence to the early morning delivery schedule. And that the restaurant is dedicated to focusing on the early delivery time since this is an important aspect of this, reducing the size of the truck and reducing the time window in keeping deliveries at the early time. She wanted to hear how that can be the most dependable outcome.

Mr. Veentjer explained the venders have already confirmed their delivery times and they were willing to comply with the restrictions.

Mr. Butorac added there was a contractual obligation between the Human Bean and Umpqua that is enforceable. And there were more practical things on the ground that Umpqua is looking at, for them to have a reliable delivery schedule so they try to get their trucks out and get deliveries made when there is less traffic on the road and they can come in and out of sites conveniently. There is an incentive for them to make deliveries at this time as well.

Mr. Veentjer said the operator does not want to inconvenience their consumer and they want to adhere to the early delivery schedule just as much.

Councilor Stevens confirmed the Applicant was in agreement with the "do not block" pavement markings and Carl's Jr. was as well.

Mr. Veentjer indicated he would work with Carl's Jr. as they have in the past to find what is acceptable to the City and come up with what is appropriate.

Mayor Knapp asked if the size of delivery vehicle and time of delivery was a common contractual arrangement in this type of business.

Mr. Veentjer stated is very common. Vendors are very accommodating, they want the business and they want to help their customer.

Mayor Knapp asked if the proposed layout was optimal for the site – if they were starting with a blank slate with a Carl's Jr. and coffee drive through would this be the layout they would use to maximize the circulation.

Mr. Veentjer believed the layout provided adequate queuing for both businesses and uses the space provided the shape of the parcel very well. He worked with a planner and architect to come up with the most efficient plan possible.

The Mayor asked if the developer looked for common accesses for the two drive-thus rather than each having its own approach. Mr. Butorac stated the drive-thru requires a counterclockwise travel direction to access the driver side window. Mr. Veentjer said the circulation pattern for both businesses is the same, and they share the ingress and egress from the site.

The Mayor wanted to know if the curb cut issue would change the dynamic of this depending on an eventual resolution. Mr. Veentjer did not think the curb cut would change the dynamic at all; there isn't a legal easement in place that was originally established with the development agreement in 2012, and was put into place well into our planning of this site plan.

Mr. Pfeiffer stated their position is the access exists today for both parties to use that curb cut to circulate vehicles to and from their respective properties. And acceptance of the condition for purposes of development of the Human Bean site to not have that cross-circulation is giving up a legal right that we are quite confident we have. But we're happy to do it because we learned at the DRB that despite the history and despite what we thought was a common understanding of what that access easement is, there is no such common understanding, they don't believe the Human Bean traffic in any way can or should use that cross-easement into the Chevron property. That's not an argument we want to have and if it works for the city to impose by condition an assurance that's not going to be the case we will make it work. But we are actually accepting, with that condition, something far less than what we are legally entitled to.

The Mayor invited speakers in favor of the applicant.

Jeff Brown, 25425, SW 95th Avenue, Holiday Inn Manager expressed his support for the Human Bean coffee kiosk.

Can Gjurgrvich, 7263 SW Lynnwood Ct., Wilsonville, Carl's Jr. franchisee owner voiced his support of the Human Bean coffee kiosk noting their busy hours of operation are early morning while his restaurant's is later in the day.

Mayor Knapp declared a recess at 9:25 p.m. and reconvened the meeting at 9:30 p.m. He then invited the opposition to come forward and testify.

The following portion of the testimony is a transcript.

Gary L. LaPoint 25410 SW 95th Avenue Chevron Station Owner	*Mr. LaPoint used a PowerPoint slide presentation during his testimony but did not submit a copy for the record.* I'm not only the developer, the owner and operator of the Chevron and Coca-Cola Fountain Mart, located on the property, my son here Jason LaPoint is the operational manager and Phil is one of our employees that is an IT gentleman that in the event I have trouble with the presentation here he is going to try and help me. I would first like mention that my wife and I did develop this property fifteen years ago. We actually bought it almost twenty years ago and it has

been a family business for us. We were married forty-two years and I've been in the business forty-five years, so I was doing this before I got married.

First of all I'd like to say we strongly agree with the DRB and I think when we show you what was stated at the meeting and show you some of the things that maybe were presented tonight; it will clarify why we agree with them and why we are here again tonight.

So, Resolution 270 cited concerns about traffic and circulation and you're pretty much aware of what those were. The Development Review Board voted 4-1 to reject that proposal and the staff report of January 6, 2014, finding the application did not satisfy the Wilsonville codes requirements pertaining to safety and circulation.

This picture here you can see was taken when they were doing the 95th Street improvements, and I want to note a couple of things on here for you. First of all if you follow the pointer here, this lane right here going around here and around to here, I donated that to the city for one dollar. That's 7,814 square feet. The second lane coming around hereafter I sold the property to George Price, and George Price sold it to the Wilsonville Devco people was paid $107,000 for their property. Mine was actually worth more at the time and was a bigger piece. So that lane out there was a contribution by our group here, you know for this improvement and how to make this whole site work better.

The other thing, if you notice on our site here you can see a delivery truck over here, you can see another delivery van here, then there is another delivery over here. We just pulled this off of Google and it just happened to fit into this presentation. Also our whole traffic circulates around this direction here, counterclockwise.

This was the original parcel of property that has now been downsized somewhat because of the 95th street improvements down here.

This is what I agreed to with the development agreement, Josh, Holiday Inn, City, was this development. If you look here you will see there is a ton of parking spots over here. It just seems to be a lot of parking spaces in here.

At the time this was proposed and I begrudging agreed to this curb cut, and a little bit later on if you start asking me questions on how that occurred I think you're going to get a whole different feeling on the other side of this story on how that curb cut occurred and the reason I encourage you to maybe do that, is because my fuel truck, which I'll show later on, it delivers right here. So why would I want to jeopardize my only means of business or my main business of fuel that's going to block this thing one to three times a day, a minimum of one. We usually have two to three loads a day. And it's going to be in there and takes 45 minutes to an hour and a half each time it comes in, and it can come in sporadically. They know what we need, they know when we need it, it's all automated and they bring it in and

	we have a 5-8 minute window to get the truck on the lot. After they are there and they deliver the fuel. If we don't get them in in that 5-8 minutes then they'll go on to their next delivery and then we'll basically run out of gas and we may not get it for 24 hours. So it is really important that this be an area that we have clear most of the time. Also, this is our fuel tanks. Our fuel tanks need service, our turbines are in there our leak detectors, our DEQ inspections, we have big lids, everything we have to maintain. We have things we have to clean out; my employees have to get in there with the lids off and etcetera to do that. Okay, the green was us with a little bit missing over here. This is what we basically don't agree to now. We agreed to the blue area as a site that we agreed to, but not to this development. What we've been experiencing throughout this whole thing is we have tried to make this piece of property separate from this whole development. And the development agreement, the easement agreement here was all with this entire piece of property here. So again we're confused about that. That is the property line going through here, the property line; this is actually the ODOT center over here where the ODOT has their bio-filtration ditch. The sidewalk actually ends on my property right here, and that's landscaping, a fire hydrant and water meters and a few extra things like that. So to answer your question a little earlier, the sidewalk ends right here, and it's basically at this point in time, the sidewalk to nowhere if you are not parked here. And this property line extends down through here, I actually own it down to the easement agreement, or whatever the city calls their right-of-way and back up here. And this is an easement line that I agreed to give to Josh, and to move it back up here down to here, there is no reason to discuss that. Mr. Greenfield, the opponent is the one thing said during the meeting, "the opponent was not calling for a mitigation of the existing problems, only not for amplifying them at any rate not beyond what had already been approved in the perspective of a multi-tenant commercial building." Not a coffee kiosk but a multi (garbled) commercial building which was described in the former application. Mrs. Keith, "the traffic flow was complex enough and she did not believe keeping the traffic on the Devco property was enforceable because there was a column with the Carl's Jr. traffic already." Here is the traffic flow of our fuel and they also come in on this island over here and they also swing out wide here sometimes to get out depending on what kind of vehicle it is. Basically our traffic flow for gasoline.

	This is our basic traffic flow for the convenience store and if you notice the direction they are going in this area right in here is extremely important to us. You'll see why in a little bit. This is Holiday Inn's traffic flow out the egress here and back onto the shared driveway. So then we have Carl's Jr. traffic into their drive-thru along with all their parking spots here, their parking spots here, and here. Now the one thing that some people ought to take into consideration is people back out of these things and pull into them, some people drive back around this way, and etcetera, but that's basically their drive through traffic pattern. When the retail site was going to be developed here and we agreed to this site plan that had all these extra parking places that Carl's Jr. could encroach on their own property here with their own development, they were miniscule traffic, that's why there's a space kind of blue lines little space because the amount of traffic into here is just considerably less, they may have 50-75 cars per day from the things that he ever talked to me about using here or tenants that he had proposed here, but the coffee shop is just way more traffic. Estimates are 500-700 cars per day. Okay, so now we take our store traffic, Holiday Inn's, and see the thing quit there I can't make it go again, but you get the idea that moving all the traffic there from the previous slides but you've got all of this going on right now. Mr. Greenfield again, "the core issue was whether or not the application met the criteria of WDC4.400 regarding proper function." This is the one thing you hit on a little bit earlier tonight, proper functioning of the whole site. And being as we co-developed this (garbled) part to be their application, and I'm part of this because they use my property. It still lacks the function on our site in using the word "proper". Mrs Keith, "It would be foolish to assume that traffic could be contained entirely within the Devco site unless it was somehow physically blocked. People would drive wherever they wanted." And we are experiencing that now; we've had three accidents on the property since Carl's Jr. opened. Previously to that we had none, we had no accidents I cannot ever recall any type of incident. But since Carl's Jr. opened in November we had a horrendous accident with a semi and an SUV on 95th, which is in some of the pervious stuff submitted to the DRB; we had another on-site accident, two vehicles just by the Carl's Jr. ingress there where two vehicles hit in the cross walk area. So physically block is something you might want to keep in mind here as we go along. Again, if you look here now, look at all the parking spaces gone. And this

	planter area was clear down here before and I'm not sure I can do that, I had two back to back, now I can't show you that, okay. If you go back and look at the other one it was down here farther which gave vehicles the ability to come around here, whatever. Also some of the oversized vehicles were parking here, now Devco has gone out and painted it red and said "fire lane" and "no parking". And it's all red around here and no parking. When I called the fire marshal on it they said they didn't require it so now I'm going like they have a little bit oversized parking available, and they painted it red and put fire lane on it and so I did call the fire marshal and he wasn't aware of it. Again here's the traffic flow now through the coffee kiosk as they propose even through earlier in other presentations they proposed it coming through our lot around this way, they changed it when I said can they do business on their property. This is what they propose now they are going to do and we're all assuming this is exactly what is going to happen.
Jason LaPoint	Just to elaborate on that parking, they running operations and part of our concern is, if you come into their lot with a landscaping trailer or small trailer or oversized van, our lot becomes more viable to park because they really don't have anything available with this site plan that allows for you to be in an oversized vehicle which, in an industrial area where we are at and off of the freeway, you get a lot of those people and they just find our property a lot easier to park on.
Gary LaPoint	And they park in this area right here, and go across to Carl's Jr. and I was just there the other day and a big blue truck was parked there in Carl's Jr. he came out, he came around this way and reversed flow of our traffic and my people had to go out and direct traffic and our customers so that their customer could get out of our lot. Okay, here's the traffic flow that they are proposing that maybe some cars would go through our lot, but it could be the red line, we don't know, they're not open yet. And here's, here we go with all this traffic flow, and this is where I want you to note again, see traffic going against each other and Mayor Knapp pointed out he trades with us so he knows how much traffic can be in there depending on what time of day. This is Keith's again, people tend to take the path of least resistance and whether it was right or wrong, they will drive wherever room was available. And so if we go through this and we see these cars stacked as they did and around here where they're at, I'd like to address the memo from Kittelson. By the Institute of Traffic Engineers which most people like Kittelson and DKS and stuff use, a coffee shop will produce the longest maximum queues of any of the land uses in the study, which studied car washes, banks, they studied a whole bunch of things but the longest maximum queues of any land use in the study was all of the maximum queues occurring in the morning in four of six cases the queues spilled out of the parking lot into the

	street. These spills would typically happen once or twice a day, or at least only for a few minutes at a time. However one location had a stacking into the street for about 15 minutes in addition to multiple periods of several minutes with cars that would queue in the street. They suggest the average queue is 13 vehicles and you would need at least a minimum of 260 stacking feet for cars, and I got that off of their websites they posted. Again here we've got some queuing here going on. The 41.1503 here is parking and loading delivery areas shall be designed with access and maneuver area adequate to serve the function and needs of the site. Separate loading delivery areas and circulation for customers and employees parking, pedestrian circulation, you can read all that, that's what your code is. Okay, here's my fuel truck, it's parked in here. There is no access now on this easement agreement. Here's the Carl's Jr. truck this is the way he has been parking since they've been open and I couldn't figure it out when I talked to Dan I says, Josh told me that if I would give him this curb cut I told him we could draw that later, that they would deliver after midnight and before 4 a.m. and they would back up into here and unload right here, which would also work for the coffee shop. They could back in here and unload here. What happened in practicality, I was sitting over here having a meeting and I looked over and Carl's truck drove up, drove up, blocked off all my island, made two or three runs to get back in here and parked. And when I talked to Dan about it, he said they don't come, they're not open they don't have any deliveries after midnight. And so that brings us to the point of the coffee kiosk where that's going to happen because Josh told me one thing here and something else totally happened. But as you see here, it totally blocked the ingress there, and beings as that did tell me now where and how are the cars going to get into here?
Mr. Kohlhoff	Four minutes – you have four minutes.
Gary LaPoint	Okay you can see right here where the traffic pattern is going to go with both of these blocked, and people are also blocked inside they can't get out except through the drive thru window.
Jason LaPoint	This has happened to us and we did submit the video where both trucks do show up and we're not even in our busy season. We get one truck a day, maybe two now, we get three or more in the busy months and this is without the coffee kiosk.
Gary LaPoint	There's the truck, there's how it parks, there's pictures of it so you can see how big it is and where it parks. There are four video cameras on one site. This is a truck parked, you can also see it over here and then you can see our gas truck and over here. It's not hypothetical, it did happen, it does happen. So that's just another

	picture of that. Is the intent to provide for a safe reasonable and convenient pedestrian access and circulation. Okay, here's our traffic pattern and here's the pedestrian access that everybody is going to take now and the chairman Bower noted if she were staying at the Holiday Inn, she would probably not take the sidewalk, but walk straight across the site to get to the coffee in the morning. People's lives would probably be endangered. We totally agree with her and I totally agree with her. Because with all this traffic here that's the way they're going to go, I'm sorry, but that is. So we've offered a solution that solves all of our problems, I'm talking about mine; whatever problems are on their property you can deal with those. But this solves all the problems, so we offered a solution here. Again I want to show you the sidewalk to nowhere here. What we propose is a fence across the whole thing and across here. Because the spirit of cooperation again with this development and trying to help them we've agreed to put a gate in here, that if they didn't abuse the privilege, which the only thing I want to say real quickly I called up the code enforcer for Wilsonville but to my surprise it was Dan Pauly, I said how do you enforce people's parking on my property, it's a code violation, it was against what they said was going to happen. He says they can't enforce any codes, there's no penalty. So once you agree to let him build whatever he wants he can almost do whatever he wants and there's no repercussion, there's no fine, there's no nothing for somebody violating that code on our property. With respects to vehicle pedestrian circulation including walkways, interior drives and parking, special attention should be given the location, number of access points, circulation, you can read that faster than I can, so we'll go on to how I think Mr. Greenfield summed up the DRB, "the cumulative effect of all the late exhibits, such as tonight again, was to produce a tortured circulation pattern", interesting word tortured, "within the property which simply did not make sense." Technically, which they can prove tonight, which I can prove tonight, technically we can make anything work on paper, but in practicality it doesn't, but technically it could be made to work, but it certainly wasn't efficient or convenient and did not seem to be in good business. And I've got 35 seconds to spare.
Jason LaPoint	I would just like to add too I'm going to be there for the next 15 years and I appreciate my parents handing this down to me, and I'm concerned if it does change brands and is not a Human Bean or a Carl's Jr. or whatever down the road maybe they'll have different sized trucks or different drivers or different something depending on the suppliers to different businesses, is it going to be a Human Bean forever because I'm going to be there for a long time. And once this is in if there's no enforcement I have a concern for the future.
Gary LaPoint	Their comments on Core-Mark they originally proposed that truck pattern. We sent that video out and Josh actually testified at the DRB meeting that

	they actually performed that maneuver of the auto turn program successfully, it wasn't a problem, but they didn't see the need to present a video.
Mr. Kohlhoff	Time.
Mayor Knapp	Okay, thank you for all your information. Council questions for the opponents to the application?
Councilor Fitzgerald	Thank you. I'm interested in finding out more about, well first of all for the viewing audience and myself, could you give a little physical description of what you mean by "curb cut" in that site, was there a curb there that has been taken out. So to the lay person, what exactly do you mean?
Gary LaPoint	Originally Josh came to me and said he couldn't lease out those buildings and there was, I had a curb in here that went around these parking spots around here. This is a curb all the way along here. On the other side of the curb was approximately 10 feet of landscaping, still on my property at the time. And he came to me telling me that he couldn't lease out his tenant buildings over here, and when he did I said well we talked about all the different suggestions of what he could put in there. He said he had one or two tenants interested but they were concerned about getting through the traffic at Carl's Jr. when they're leaving at night or whatever or maybe their customers, and he says if we could just take that curb out, he says I might be able to get some tenants in there. So I told him earlier it was a super bad idea, my tank is there, I can guarantee you have no rights whatever, but if I take the curb out you have to understand that, that this is not good. Then he came back about three weeks, four weeks later, calls me us, says Gary the city's going to make me redo my entire site plan and I have to start completely over. And I say I feel your pain but I don't know if I can help you there. He said I think you can, he said if you'll let me tell the city that I can use this area through here for a loading zone he says that will satisfy the conditions of the loading zone I think they'll let me have that, and he says, but he says I'll tell you right now he says, we're never going to use it, we're going to come in after midnight and we're going to back up into this area to unload. And I said, Josh we're really what if my truck is there, how are you going to get in, what if my truck comes in after your truck is there and he wants to get out. I said this isn't going to work this is really, really bad. He goes we understand we'll work around whatever you have to but we won't block your truck or anything, and I says man, Josh this is getting bad, but in the spirit of cooperation again, I go okay, go ahead and tell them that. So then after about 2-3 weeks later again, he called me up he says well the city said it was okay, he says, but they're not going to approve it without a curb cut or without an easement agreement. And I said Josh now it makes it a legal thing, this is really bad. I was feeling guilty but I figured okay, I let him write up this amended easement agreement which he did, which is what gave this curb cut and etcetera and then he just felt it was a free reign on my property for anything he wanted. And he still does because the traffic pattern that I'm showing you here is, a lot of it is going to happen, and we already proved if their truck is blocking here, they have to use our property,

	there's no way that they can't and we watched a truck pulling this way, and this way, and over here, they did all sorts of maneuvers that day and stuff, and no matter what they do they're still going to block their ingress and egress off the shared driveway. And the fact that they still have to use our property to drive up on to back their truck in there. If they just come in like they showed you in the video one time coming in this way, do whatever they have to and back out, they don't need this curb cut and probably the frosting on the cake after Dan Pauly asked me to call Dan, the franchisee, Gergervitch, I'm going to get it wrong, I'm not going to get it right. But he asked me to call Dan and I did, and then I got the shocker of my life, and that was when I found out that the conditions of building this was predicated on this easement agreement over here and Carl's Jr. was just ready to open in three weeks, this is on the record, you can go back and look, October 14th because I had great reservations about this and I wasn't going to do it, I wasn't going to sign it, and Josh says I need that easement agreement to get my certificate of occupancy. And I didn't want to do it, and I wasn't going to do it and I thought, man, I committed to this, so I'm going to honor my word. And so on October 14th it was notarized, on October 16th I hand delivered it to them on site not knowing what he was going to do here, no plan had been presented to me, he had talked about different things, but he never showed me a plan of any kind, and October 30th he went down and made a new application to do this. You talk about shot at and missed and whatever done gone and hit, I got it. And I go like wow, and so I don't feel guilty about this at all. Their legal problem with Carl's Jr. is their problem that's not ours, that's not yours. Josh committed to something without ever telling me that. He also told us and the city different things to get what he wanted, and then he comes back with all of this and we just see a mass confusion as Mr. Greenfield did.
Councilor Fitzgerald	Thank you. I have one more question. The painting of the green pedestrian walking paths, can you elaborate is that something you had offered to do, was that discussed with the city? Or is this just a concept.
Gary LaPoint	No, we're agreeable to this.
Jason LaPoint	Those are already there the green paths.
Gary LaPoint	The green paths are already here this is in front of my store; this comes from Holiday Inn on a walkway, this joint with us, and what Mr. Ferrios said she would just cut straight across here like we feel most customers would.
Jason LaPoint	You currently to get to the Human Being from the Holiday Inn take the pedestrian path, walk the green line all the way up to 95th Avenue and then all the way over, and then into the Human Bean. I think we all understand that you don't even know that's an option to get there if you're at Holiday Inn, if you're a new person to Wilsonville, like most guests are in hotels. You probably wouldn't even know that is the way that you have to go safety.
Gary LaPoint	Now if this is blocked off here we have safety and control inside our site again that we've had for 15 years, we no longer have an encroachment over here. And even though Dan and Josh want this curb cut, Dan mentioned he

	was disappointed in the amount of traffic he was actually getting from my pump island, and he also mentioned if it wasn't for me and my business and what we did they never would have built there to start with. So there are a lot of reasons for us to exist profitably and like we have for 15 years, and not compromise our site or have them have to use our site and to take care of our pedestrians, bicycles and everybody else by forcing them over to the approved sidewalk that worked for 15 years and once you get past this property line here, then again it's back in your ball park, but you guys think is where he should go and what he should do and probably my last comment on the easement agreement, is he has no easement agreement to have a garbage truck come on my property and empty his garbage.
Jason LaPoint	And when we signed that easement for the retail facilities, we knew the time frame that retail most likely would be busy, it's not morning hours like a coffee shop. Our busy hours are morning hours for commuters and so for us when they said coffee shop we immediately were like oh no, now we have their busy hours conflicting with ours. Just like it was their concern to have their businesses coincide with the busy travel times, now one of theirs coincides with one of ours.
Councilor Fitzgerald	I think this is my last question. The gates, the blue, has been proposed or you've put that out there, is that now still possible or has technically is that still possible?
Gary LaPoint	Oh, yes, that can be put in easily at any time. This is actually a fence. This will be some kind of fence you can't cross, probably not over five feet high, four feet is too low, but five feet might work. And it will be a fence here and then you'll have the garbage bins which are high, I wish I would have brought a picture and showed you. The garbage bins are here, and then alongside their trash enclosure is the pavement and over here it's all open, anybody can walk through this. Anybody can walk through this whole area right now or across here, and even though it is landscaped here, I've watched them, all the trucks park here and walk across through it already.
Jason LaPoint	And just so you know this is a fence that is currently there blocking ODOT properties, so there is no way for someone to walk around the backside of this fence, and it would direct all of their pedestrians to the safety walkway.
Gary LaPoint	So we would like to see a condition of approval of having the fence and gate put up. Or just a solid fence, we don't care. We are willing to compromise because we think we've helped their site plan by giving them a loading zone, a loading zone here that Josh originally asked for and now that he's asked for another loading zone over here, or he's proposed this is where they are going to unload. Beings that the city has no code enforcement, then in the easement agreement would be the fact that if they abuse this or whatever we would have a lock too that we could put on that gate that we're going to lock it then until they agree to or the city enforces the use of that gate.
Mr. Kohlhoff	May I ask a question?
Mayor Knapp	Yes, sir.

Mr. Kohlhoff	The garbage area that appears to be west of the dotted line, is that your property where the two garbage areas are or is that their property?
Gary LaPoint	I have an easement agreement to have that trash on their property. My trash had sat there for several years but it was kind of a little farther towards us on our property, it was actually on our property but it was in our bark dust. We don't need it, we're willing to give it back to them, if they want it they can have it. But they still have no easement to empty theirs. But we have a garbage enclosure that we can still use, but we're actually using it for different storage purpose right now, but we have no problems clearing it out and mot using this trash enclosure at all.
Mr. Kohlhoff	But doesn't that easement that you provided them on the circulation situation give them access then to that garbage area?
Gary LaPoint	It doesn't read that way. It says in return or something, I grant LaPoint easement to their trash enclosure and it doesn't say and LaPoint grants us an easement to their trash enclosure, it doesn't say that. You can go back and read it. I know Dan's read it several times because when I pointed out he had no easement for a loading zone, then all of a sudden he couldn't use the spot over here, and then so they had other problems. There have just been multiple problems after problems in trying to help them develop their site and still make it work and not interfere with us.
Jason LaPoint	Just so we're clear here, I mean we offered this as a solution so they can just build tomorrow. As much as we agree with the DRB and Mr. Greenfield and being a tortured traffic circulation and everything else as far as pedestrian safety and what we're here talking about, we're fine with all of that if we can have our business on our property and them do business on their property
Gary LaPoint	And we also agree with the original site plan. If they want to build tomorrow the site plan proposed and that we agreed to and signed all these conditions on and easements, no problem, we still agree with it. They want to put their office building in and reconfigure it to what it should be, which I don't understand how they're configured right now, without even a DRB approval. So we offered two or three solutions here, one, this, build what you said you were going to build etc. which they could start building tomorrow then and not have a problem; or we need this as a solution to our business problems that they've created.
Councilor Stevens	Could you go back a couple of slides, it's a static picture at the beginning. It was the blue and green.
Gary LaPoint	If I had that working I'd just click on a picture and go back to it. There we go, here we go. That shows the
Councilor Stevens	That's the property line? Okay So what you are referring to, I'm assuming, are those trash enclosures that are where the white line is.
Gary LaPoint	The one on the left is mine, the one on the right belongs to the retail office building and that's what it was for.
Councilor Stevens	One is shared.
Gary LaPoint	We just built them side by side all at one time.
Councilor Stevens.	And where the white line is, is where you want to put that gate?

Gary LaPoint	It could be put there, it could be put back (garbled) we think it would be best here, right were the parking spots end right were this corner here just because then we could put some kind of an access, either that gate or some locking gate that they can get to their trash enclosure. I can tell you I'm probably not going to restrict the garbage truck from picking up, but he doesn't have an easement for it. I mean we can pick fly poop out of pepper like he's done this whole thing, I mean I'm still going to be reasonable, he doesn't have a right to be there.
Councilor Stevens	And your fuel truck comes two and three times a day and it sits there how long?
Jason LaPoint	It's there for at least 45 minutes depending on how much fuel its holding and depending on how many bands since we do have three different grades including diesel.
Gray LaPoint	However the truck is loaded it can take 45 minutes to an hour and a half, because if they've got diesel in the back then they deliver the regular and premium to start with then they've got to move the truck to put the diesel in the diesel tank. It just takes longer to hook, disconnect and everything. And there are four inch hoses draped out there. And we have to be real careful; if a car hits one of those we've got a disaster. I mean, I don't want to talk about it.
Councilor Stevens	So right near where you're closing that gate is where that truck sits.
Gary LaPoint	Yeah, we can deliver on our property as we have for 15 years.
Councilor Stevens	Three times a day for 45 minutes at a time
Gary LaPoint	Minimum.
Jason LaPoint	We are one of the busiest Chevrons in the Northwest and so we get a lot of fuel.
Councilor Stevens	And so you were talking about you got some information off the web where they queued up, do you know where that was?
Gary LaPoint	Counting cars.com
Councilor Stevens	No, what city.
Gary LaPoint	They did it in multiple cities and it was back in
Councilor Stevens	Nationwide?
Gary LaPoint	No, I think they did it some in South Dakota, I can't remember, it was back in that area though. But what we looked at, and I tend to not even agree with it because you wouldn't agree that I pump what I do, because I out pump Costco some months, okay, that's how busy we are sometimes. And depends on how the stars line up.
Councilor Stevens	My question was it wasn't a local company
Gary LaPoint	It wasn't done here locally, no. But when you take the demographics of this site and the fact that Mr. Dan already said they were doing quite well and this is the slowest time of the year, this is the slowest time of the year for all of us, okay.
Councilor Stevens	Because it's not summertime.
Gary LaPoint	Yes, it's not summertime, and he's already doing well, we're down 35-40% from what we do in the summer time, we're way busier. And so right now we have these problems and we only see it getting worse.
Jason LaPoint	I staff people on the busy days to direct traffic into our site. And if you've been there on a Friday you will see somebody out there directing traffic

	because that's how busy we are.
Councilor Stevens	Yes, I've seen that when I get gas there. So when you saw your fuel truck was there and Carl's Jr. had a delivery, how many times has that happened?
Gary LaPoint	We know of once but we haven't monitored it. We know approximately what time Carl's Jr. comes in and on what days and so we can go back and find out if it's happened again. But we didn't bring you a hypothetical thing here, we brought you something that did happen and so we're not saying it could happen, it did happen.
Jason LaPoint	The thing is they deliver between 2 – 2:30 maybe, give or take 15 minutes, they are there, traffic somewhere around half an hour. When they are parked there, there is a good chance we're going to have multiple times during that part of the day when we get fuel truck deliveries and I can go back
Councilor Stevens	You can continue to get customers, they can't.
Jason LaPoint	Yeah, they're shut off completely.
Councilor Stevens	That's their issue, not yours.
Gary LaPoint	You say that, but the problem is the cars come up the driveway, and they're blocked here so then they come around the corner, and they're blocked, then they start doing a U-turn and they drive up to my pumps, they drive around the wrong way, they start doing all sorts of and we have pictures of that and we can provide videos that show all that. One of the board members said they'll do whatever they want and go wherever they want or whatever, it's really true. We have so many cars going in through this egress right here, that's only supposed to be an egress out, and cars come from Carl's Jr. straight across, and cars come our direction over here. I've seen a Holiday Inn semi; I have videos of this, going out the ingress, blocking all the ingress for all of us, and then drive over the curb. I have a video of that; it's already presented to the city, it's in some of the earlier videos we've submitted to the DRB where it shows that and then we had that major accident right here where a truck coming down here 40 mph hit an SUV broadside and stuff, and so.
Jason LaPoint	Like we pointed out this is all without the coffee kiosk.
Councilor Stevens	I've asked all my questions for now, thank you.
Mayor Knapp	It seems that they have decided, and I guess I would have to ask them if that's true that the approved retail building isn't leasable or isn't viable to the marked for some reason. Doesn't seem like there's been interest in moving that forward. But I read in their submission they are emphasizing they still have the authorization to build that building. What if they do build it, what does it do to all these issues on your site?
Gary LaPoint	It definitely is not going to fix them all. And it may add a little bit, but we still have no problem with the office building being built. I was a big boy when I signed it and I told you why, I got basically coerced into it. I can even show you a picture on their presentation on Stage I to the DRB where he manipulated a picture so when I looked at it it was exactly what he told me, and when the city looked at it the planning commission, it was

	exactly what he told them. And I go like; my son actually pointed it out. And I go my god; this guy is that good to manipulate a picture to make it do that. And I can show you if Dan or someone can pull up the original application Stage I, I'll take you right down to the picture and show you where he said he's going to park his truck there, and he took two pictures and overlapped them so it shows a truck parked there, and it also showed it parked down where he told the city where he was going to unload. And I go like whoa, like I couldn't believe it, because when I looked at it and agreed to it, this picture was on there and it was exactly what he told me he was going to do. And then when Jason pointed it out, it was exactly what he told the city he was going to do.
Mayor Knapp	I understand what you are saying. I want to be clear. You are convinced that you could operate adequately or workably if they build that retail building?
Gary LaPoint	We could. I honestly believe
Mayor Knapp	It's better for you than building the coffee
Gary LaPoint	The three tenants that would be down there max, maybe one. I could go down there like I talked with Dan and Dan and I talked out in the hallway before we come in here. And I said no matter what happens Dan, you and I are going to work together and we'll have to resolve something here because Josh is going to be gone, he is just the developer. Developer, owner, operator, operator, we have to live with it. Its not good okay, but, I'm pretty sure we could work, Dan just like I am, we are business people and I would like to work with Dan if the office building was built, I think Dan and I could maybe even come up with delivering
Jason LaPoint	Let's go back to the office building, and I'm going to tell you why we can work with the office building. If you look at the office building site plan like we did when we did sign this
Mr. Kohlhoff	It's a retail building, not an office building
Jason LaPoint	Oh, the retail facility, when we looked at that if you notice where their curb this here, this is a big deal to me because a lot of their traffic with oversized vehicles have no place to park. With this configuration you have the ability for an oversized vehicle to take up these parking spots and turn and go in. You don't have that with the coffee kiosk. You also have additional parking spots up here and you have this spot here that may be an oversize vehicle could figure out how to get in if it's a box van without a trailer and didn't have to back up with a short trailer. But this is the big key here; you gotta have some spot for some type of vehicle that's not just a standard car in our area, especially industrial. I mean, where's the guy that's going to cut the grass with the trailer going to park?
Mayor Knapp	I know but if he swings in as you're describing and parks and takes up all of those spaces, then the only way out is through your fuel delivery trucks.
Gary LaPoint	But, when he goes, he is going in the same direction as our traffic, and that's the important thing here. Is when you have the traffic going backwards against your ingress here is bad, and if Dan's analysis of people

	from my pump island going in there, I have seen it happen and it does, that's alright. But they don't come back out this way they go around to the drive in and they go back out this way. What we have a problem with is people that, not the people coming out, if that was an egress only with signs do not enter, stop, one way only, and etcetera, that would be even more palatable. But that means that nobody goes in this direction which is counterclockwise to or clockwise
Jason LaPoint	To answer your question, in hind sight with what we know now, would we have done it even with the retail shop, I doubt it, and we'd bring up issues. We didn't know what their delivery truck was going to do, we didn't know how their traffic was going to operate. Now we do when we did this
Mayor Knapp	So now that's my question to you. Now that you know what you know, if they are not able to build their coffee drive thru, they already have approval to build the retail building. And so in some sense the answer to one might lead to the other if that were to go that way, and so that's why I'm asking you, if you are prepared to live with the circulation impacts of the retail building.
Gary LaPoint	I say yes. I committed to it, and I'll stick with it. I'm not going to change now. I committed to that and I'm still, I'm okay with it. I mean I still feel that the owners over here like I started to tell you with Dan I could go over there and talk to the owners and tell them what's going on and show them. We're definitely not going to have Holiday Inn traffic or foot traffic or pedestrians all over our lot headed to their lot in this very congested area. And some of the other things they were supposed to do tonight were to [show] how their employees are to get to their trash and stuff. They still haven't pointed out those things. So I mean there are a lot of things the DRB studied and made concern of and they didn't address any of those tonight either. But we're committed to this I signed on to it and I don't have a problem if they build that. And legally they can build it, and I wouldn't fight it because there's no legal stance for me to do anything. And I'm not inclined to do so. Unless he builds a convenience store.
Mayor Knapp	Well that's one of the things that might fit into a retail store
Gary LaPoint	He'll have problems with that. He won round one of the restricted covenants that says no convenience store but it will be an appeal, we're going to appeal that decision. But if he tries to build a convenience store it won't happen, in other words if he, that's considered a store front and that's built like a convenience store that are conventional and etc. but right now that would be a big problem for him. That would be another legal battle.
Mayor Knapp	Council, any other questions?
Councilor Stevens	So just tying in on that, so that could possibly be another Starbucks, an ice cream store and a sandwich shop, and it would be the same, probably more volume of traffic for three different types of businesses. They have to park, get out, and people from the Holiday Inn would be walking across to get Starbucks coffee, you do know that. Pedestrians would be all over the place, I think most of them would use the sidewalk simply because there's so much traffic, I mean I would because it's safer.

	But you could have all that volume coming and going, picking up a lunch, like Big Town Hero, and all that, and you're okay with all that kind of traffic. Which again would also go through probably your area because of the line up from Carl's Jr. so they're going to go around the other way so they don't have to jam up there to get to the other three types of businesses?
Gary LaPoint	It's a retail space; they could put in whatever they want. I disagree with you on traffic, I don't think those businesses generate the kind of traffic that the only drive-thru coffee shop in the city of Wilsonville is going to have in an area that the service station has five times the business that a normal service station does. The C-store does four times the normal business C-store, and the Carl's Jr. already says he's successful and he's going to get busier. I don't think that type of business there or the ones you suggested are that popular all the time. They're going to have certain times that they are, but I don't think that they are.
Jason LaPoint	Here's what I think. A higher volume business like that would look at the parking and go we can't make money in this spot, and they're not going to go in there. Maybe that's why he had some trouble getting some tenants, I don't know. Plus Dan, his other developer Carl's Jr. having competitive food on site may not be something that he would want either. So it would be I think a hard deal for a major franchise as such that sell food items to want to be in that particular, versus an insurance company or somebody else like that.
Gary LaPoint	If you look at the original site plan it said insurance, and it had all these different faces on there; that he showed what type of tenant he is looking for, but if he had those we still wouldn't have a problem with it. That wouldn't be; if you looked here they're made to pull up and park. Versus the other made to drive thru. There's a considerable difference and there's lots of parking here. And I just don't believe that the amount of people that would patronize that business and that particular location would cause any concern to us traffic flow wise or whatever.
Councilor Stevens	Even if there were three different businesses there?
Gary LaPoint	I've seen Quizno's and those things in different spots, they're never that busy, and Subway, they get people, they drive up, their noon rush is going to correspond with Carl's Jr. and Dan would like that so he may have an input with Josh saying I want you to put that business in there.
Jason LaPoint	Again, when we saw this time frame when we're busy is morning and afternoon when people get to work and people leave work. A noon rush is one of our slower times, which is why we didn't think it was a really big deal, because even if they had a lot of traffic at that time, we're not that busy at that time.
Gary LaPoint	And Carl's Jr. was the same way they're busy time was a slower time for us and so it worked out well for us to have them have a busy noon rush. But their morning was slow, ours is busy, our evening rush is just crazy. I mean it's just insane that's why we have to have a person out there guiding people onto the pump island.
Councilor Stevens	And Carl's Jr. rush isn't busy at dinner time?
Gary LaPoint	Haven't been. No, not dinner, I don't think they have a

Jason LaPoint	I think they have a traffic study for that, but what I remember is their noon rush and their morning and their noon rush and mid-to late morning and middle of the day till about 2 p.m. is their biggest rush. And then after that it's not on the scope of what they'd say is busy.
Councilor Stevens	Thank you.
Mayor Knapp	We probably need now to give them; well we need some other testimony that we need to take and then we'll need to let the rebuttal occur. So thank you for your presentation. Leave your equipment there in case you need to come back up. I don't think that would be a problem. I have a speaker card for Mr. Wallace Lien. No? Okay. Are there any other speakers who would like to speak as to opposition to the application? And I see none. If that's the case and there are no other speakers, would the applicant like to rebut?
Steve Pfeiffer	Mayor Knapp, members of the Council, it's with no small amount of frustration that I come up here after an hour of direct testimony. Some of it fancifully, little of it factual. Not much we agree with except for one exception. This is hind sight. Contrary to what you've heard there was a development agreement entered into. It did not specify any use of this Human Bean pad. It said unspecific, non-specific retail use on the site. Everybody was aware there was a range of retail uses that could occur. More importantly, it required as a condition of the development agreement that Mr. LaPoint execute a cross easement. The cross easement was off to the left, it was relocated for reasons entirely different in our understanding than what he just relayed to a commonly agreed to other location. All completely agreed to by Mr. LaPoint. A cross easement allowing reciprocal easement, everybody agreed to it; Carl's Jr., the retail, Holiday Inn, and LaPoint. It allowed cross circulation of vehicles. I don't have any concerns about their hind sight, and their late thinking and conclusions in the search of facts which is much of what you've just heard. But I have a lot of problem with them changing their position, reversing course. Frankly the reasons I find inexplicable misrepresenting the discussions that have happened below in an effort for some reason, and I think I have my sense of why, they would oppose as what doesn't make a lot of sense, as you've just allowed, a reduction from 3,000 square feet of not office, they kept saying office, that's about as fictional as anything. It's a retail building, it could be an office it could be a retail, and as you point out it could be a Starbucks, it could be a Quizno's, it could be a full range of retail that goes in there. Mark will speak to the trip generation associated with that increase. It's just very frustrating to hear that somehow this was all agreed to because we came to them and asked. It was part of a common development plan that the city wanted us to put into play for a site that had a range of uses in it.

Everyone knew there was going to be a single drive aisle access. Everyone knew there was going to be tight circulation. They agreed to that cross easement down there. We couldn't force a private cross easement on anybody. And now they, surprise, come up with let's just put a gate on a cross easement that as a matter of law, is binding on all the property owners.

We frankly may not have a problem with that gate because we can agree to the condition and contrary to Mr. LaPoint we fully intend to comply with any condition you might impose. The problem is, Carl's Jr. built in direct reliance on that cross easement being in place. It's a record, it's on everybody's title. I don't know if they would have constructed if they thought a gate was coming in the future, but I know they have a cause of action if the gate were brought there particularly at Mr. LaPoint's suggestion if it were imposed. We can't control that and agree to a gate when our tenant was completely legitimately built in reliance upon it.

The other thing I find notable, most of the complaints you have heard tonight have to do among an accident, that I'm still trying to connect to our site on 95th, is concerns about Carl's Jr. and Carl's Jr. isn't before you its approved and built and you can't impose any conditions at this stage on Carl's Jr.

We're dealing with the last piece and trying to (garbled) certainty in a highly fluid if not obviously volatile environment. Carl's Jr. is what it is. It's like any other land use that's allowed to be developed. It's interesting they have no legal objection to Carl's Jr. and I think that's in large part because they have no opportunity, because they were fully aware of it, participated, agreed to it and let the appeal clock expire.

There's a lot of revisionist history here and if you reduce it to its common denominator the other thing that's most notable about their presentation just now, they never spoke to the one thing the DRB did not have available to it as a tool, which is the conditions that Dan put on the screen that we readily agreed to. Everything they said tonight, with a lot of embellishment, was said to the DRB. But the DRB because we didn't have the opportunity to present any new evidence, they couldn't, unless it came up on their own, but staff really couldn't present it, they didn't have the conditions that we've worked out with staff, that staff has worked out before you tonight. That would solve the problems they raise.

We frankly aren't bothered by their fuel truck blocking our legally entitled cross easement. Because for the same reason we can live with the conditions that say none of our vehicular traffic will enter into their site. Again much more restrictive than our legal rights. We don't care if they block that easement with a fuel truck. And I'm still trying to figure out how their choice to block the cross easement on their property should justify denial of our ability to build and circulate entirely on our site. Somehow affect site circulation or compatibility with adjacent use. It's a little

	difficult to understand. They didn't speak to any of that. They didn't talk about the efficacy of it, how it's going to work other than the fact that nobody is going comply with conditions of approval in the City of Wilsonville and the City of Wilsonville has no teeth. As a practical matter that apocalyptical view would basically prevent you and your staff from ever proving anything. You take the position the conditions are unenforceable and therefore worthless, then you're pretty much in a different world, and that's a tough one. I can only take you back to our testimony. I think we've met the standard, we've provided the tools that the DRB wasn't aware of and most importantly the fall back, it's not an office as they keep denying to themselves, it's a retail building. And that may very well be the only use that goes in there and it won't be a lesser issue in regard to this it will amplify the same concerns you've just heard. With the 30 seconds I have left I need Mark to speak to some of the misinformation you've just heard about queue lengths, the source of that study and trip generation associated with that office building.
Marc Butorac	A couple points. On the trip generation and the comparison of the retail to the Human Bean in the DKS report dated January 27th in the record, it was 27 trips versus 28 trips in the peak PM hours, so basically dead even between the two. The queuing study cited, which I believe is the IT study from the Dakotas. That's a fairly old study and is based on the classic the high school kid in there with a cash register, non-automated, you pull up you order the coffee, they kind of stumble around and come back, I have a high access location. This is a little bit more highly automated system that the orders come in, its computerized, and a lot of different access to the service time is more expedient here.
Mr. Kohlhoff	Time. Unless you want to ask them.
Mr. Pfeiffer	I have to ask if we could finish the sentence given how much time they just had. I'm sorry, but.
Mayor Knapp	Are there other pertinent points regarding the traffic study that Council should hear?
Marc Butorac	I think there's 30 seconds at best that might be helpful.
Mayor Knapp	Then I guess I would like to hear those answers.
Marc Butorac	The other two issues that come out of that, again the peaking periods you heard from their testimony you heard it from me, they are different. We're talking also about five trucks, we have a Carl's Jr. truck, we have a Human Bean truck, and it sounds like they have in a peak period three of their fuel trucks. That is a slice of time during a very 24-hour type system. All the stuff that we talked about, if it occurs, and maybe it did occur once, that isn't in itself a safety and operation issue. Is there cars backing onto the street onto 95th? No. Are there times when cars may have to slow down in the parking lot, yes, that occurs every day, every life, every situation. So I

	think you're good there. Final piece on this cross easement, I agree with Mr. Pfeiffer on this, just take this for the last piece. There's a garbage truck that goes to those two garbage dumpsters every day, it crosses that easement it served both properties. So by that there is an operation of a truck going back and forth where that truck parks every day to unload garbage. So there is a legal easement that's there and operation as we see it today. Thanks.
Mayor Knapp	Council, any further questions for the applicant? Hearing none, thank you very much.
Mr. Kohlhoff	I would just like to add one thing. If there is a condition that is part of the development agreement we can enforce them. We have zoning conditions; we can enforce conditions under the zoning code that are placed on applications. So I'm not quite sure I understand what the conversation was about enforcement. Now there's an issue here where they have a private easement. And we're not able to enforce the private easements, but as far as conditions go if they are lawful conditions, we can enforce our lawful conditions.
Mayor Knapp	Okay. We've asked for testimony from the public on both sides of this. I guess I will ask one last time if there is any member of the public that hasn't testified and would like to testify. I'm seeing none. I therefore am open to a motion to deal with the hearing. The options are either to close it or to continue it. And that probably pertains to what direction you think we are going. In my mind if a decision is imminent then closing probably is appropriate; if a remand is probable that requires acquiescence because of the time line. Correct Mr. Kohlhoff?
Mr. Kohlhoff	Yes. I believe the 120 days runs on April 8th.
Mayor Knapp	April 8th. Okay.
Councilor Stevens	So in that line of thinking, so we have new conditions that have been agreed upon since the DRB hearing. Correct?
Mr. Kohlhoff	Right. You had evidence since the DRB hearing.
Councilor Stevens	And new conditions that have been (garbled)
Mayor Knapp	Proposed not
Councilor Stevens	The applicant has agreed to
Mayor Knapp	They said they would accept them, they have not been implemented.
Councilor Stevens	Right. Right. So, it could be remanded back to the DRB hearing if the time line was waived for the DRB to consider – I'm just asking the question – to consider those conditions? Is that correct?
Mr. Kohlhoff	That's possible if the applicant would waive the time and toll the time period to do that.
Mayor Knapp	The other thing is the opponent also offered a set of conditions they felt would resolve it which the applicant has not agreed to. But the opposition has said if they did this we think that would be adequate also.
Councilor Stevens	But the opponent is not the applicant.

Mayor Knapp	Right. But if it went back to the DRB that would be in the mix of that discussion. So we need to do something with the hearing at this point. My inclination is to suggest that we close it because even if we were to remand with an agreement it would seem like we have taken all the testimony that's here to be offered tonight.
Councilor Fitzgerald	I have a procedural question to clarify. If we close the hearing today and, I want to get to the timing issue. So April 8 the final decision has to be made unless both parties agree to more time?
Mr. Kohlhoff	The applicant, it's the applicant's issue (garbled) 120 days.
Councilor Fitzgerald	So the applicant could agree to extend that 120 day period?
Mr. Kohlhoff	They could agree to toll it for a period of time, depending on what that period of time is, I assume it would go. If you're thinking about a remand back to the DRB, without their agreement would not be within the 120 day period of time so you would not have made a decision on this case in which that would then allow them to take it to Circuit Court for their application.
Councilor Fitzgerald	Because it wouldn't be feasible to make the April 8th
Mr. Kohlhoff	Time frame.
Mayor Knapp	The 120 days runs from when they apply originally.
Mr. Kohlhoff	When it's deemed complete, their application is deemed complete.
Mayor Knapp **Motion to close hearing**.	After their application. So my suggestion would be that we close the hearing, but that requires a motion. What's the Councils pleasure? Councilor Fitzgerald: Your Honor I move that we close the hearing. Councilor Stevens: Second. It's been moved and seconded that we close the public hearing. All in favor say Aye. Passes 3-0. The public hearing is closed at 10:39 p.m. We would need a motion on the application in order to formally have discussion.
Councilor Stevens	Can we just ask the question; is a waiver of the time possible, can we ask that question? So at least we know if it's on the table or off the table.
Mayor Knapp	I don't know if it's that simple. I think it depends on what answer they think if forthcoming whether or not. I guess I would like to say a few things at this point. I think there are valid concerns in the opposition. I think there is valid belief that the proposal will work on the part of the applicant. The DRB, in my reading of it, seemed to struggle with the sort of non-specific nature of the Code in talking about conserving the character and surrounding sites and structures and all of those kinds of components, which are not easily quantified. My personal experience has been that the circulation patterns on this site are difficult to comprehend when traffic is heavy and that it is not immediately apparent where everybody is going. And I have I guess I believe when everybody is in the busy season that it won't be better. It will be more

	convoluted than it is now. So in light of that observation it seems to me that the question becomes whether the additional circulation of the coffee shop would be a major conflict with the standards set forth in our code. And that is the crux that it comes down to. There were several quotes of Code, but I don't have in front of me, and wish I did at this point what those specific Code sections are. Are they in the report, staff at some point?
Mr. Kohlhoff	Staff addressed the Code provisions in their original report that is in your packet.
Mayor Knapp	The specific ones about compatibility, is that 4.400(.02)?
Councilor Fitzgerald	Do we need a motion to discuss?
Mr. Kohlhoff	Dan can come up and assist in pointing those out in his report.
Mr. Pauly	Another technical thing to note Mayor, the relationship between the Stage II plan and site design review. Those Code sections 4.4 something are part of site design review. So if there is a circumstance where the Stage II criteria aren't met then there's no point in looking at site design reviews really, because we can't have site design review without the underlying Stage II in place.
Mayor Knapp	So what is our code reference on the Stage II that we're talking about?
Mr. Pauly	That would be Section 4.155.
Mayor Knapp	I'm on 47 of 50, which
Councilor Stevens	Page 23 of 92.
Mr. Pauly	I should have had this Code reference memorized by now I've looked at it enough. It is 4.155(.03a) as the functional design of parking, loading and delivery.
Mayor Knapp	And then "C" is parking, loading areas, safe and convenient access.
Mr. Pauly	Another thing that is a subtle, is "C" is parking areas, while "A" is parking, loading or delivery areas. So there is a difference.
Mayor Knapp	"A" is broader?
Mr. Pauly	"A" is broader. While "C" is specific to parking areas.
Councilor Stevens	So the very last sentence of that section, Explanation of Finding, I'll just read it, "Staff has reviewed the site plan and found no code supported site changes to further separate pedestrian and vehicle traffic." So staff felt that at least for the pedestrian side of it the sidewalks and everything that that was safe and adequate?
Mr. Pauly	Again there is a difference and there is in the DRB discussion how far you can reach beyond the site. When you just look at the part that is under review here, really they have done everything that they can. If you're walking across from Holiday Inn isn't ideal, but part of it, a good chunk of that path is adequate per view of what we (garbled)
Councilor Stevens	You can't go across
Mr. Pauly	The sidewalk across the Chevron property and Holiday Inn property

Councilor Stevens	Thank you.
Councilor Fitzgerald	Dan could you, we've heard a lot of things mentioned, one of the challenges of these kinds of situations is statements are made, and they may or may not be applicable to the narrow scope that we are expected to address tonight. Could you just once again define what we are looking at tonight? And which Codes, even if you just said it, if you could just say that once again please.
Mr. Pauly	I would be happy to. So as listed in the Executive Summary of the Staff Report, Section 4.154 has to do with the pedestrian facilities; Subsection 4.155 (.03a) has to do with the functional design of parking, loading and delivery areas. And then from there you get into there are some criteria and the Site Design Review 4.400, 4.402a, 4.421(.01c) However if those really are hand in hand with 4.155 and 4.154 because those Stage II functional more objective standards really are the basis for making the findings on Site Design review. And if you make negative findings for those earlier sections then there is no need to look at Site Design review. I realize that is kind of an odd relationship.
Mayor Knapp	Okay, let's look for a minute at 4.155(.03a)
Mr. Pauly	I would say that was probably the most key criteria
Mayor Knapp	Parking, loading and delivery areas shall be designed with access and maneuvering area. Access and maneuvering area adequate to serve the functional needs of the site and shall: (1) separate loading and delivery areas and circulation from customer and/or employee parking and pedestrian areas.
Mr. Pauly	Something to note there Mayor is there is in the Code there is code required loading in the area.
Mayor Knapp	Does the Code require loading for this site?
Mr. Pauly	It does not.
Mayor Knapp	It does not. Okay. So the delivery areas, is that the component we're talking about trucks bringing supplies to businesses here?
Mr. Pauly	As I explained in the finding, it is typical for this type of use to have the delivery areas in the customer parking. I can't think of any use of this type where that is not the case around town.
Mayor Knapp	So that kind of is in conflict with what this says already.
Mr. Pauly	It's the fact that, the way I've explained that is that required loading and delivery area, if you have truck dock requirements at a larger retail center, that those are separated. But where it's a shared area then it's really not applicable in that sense.
Mayor Knapp	And then number two says, "to the greatest extent possible, separate vehicle and pedestrian traffic." Well it already is qualified so it's not an absolute; it says do the best you

	can.
Mr. Pauly	And also that existed prior to recent adoption of 4.154 which gives a lot more objective and detailed standards for separation of pedestrian and vehicle traffic, including requiring the raised curbs and those sort of things.
Mayor Knapp	But those don't apply in this case?
Mr. Pauly	Those do apply. That's where 4.154 that I mentioned.
Mayor Knapp	Lots of qualifiers, reasonably smooth, reasonably correct.
Mr. Pauly	I'll also mention here so I don't have to switch the computers, Councilor Stevens asked that I put the conditions back up, I actually printed them out.
Mayor Knapp	So, number two condition that you are proposing says, "unless an easement is granted or found to exist by appropriate legal authority"; the applicant contends it already exists by appropriate legal authority and that would negate number two if that is accurate.
Mr. Pauly	Correct. Essentially the City, you've heard it from both sides, and though we've heard arguments and we might be able to draw a conclusion (garbled) or another, we really don't, we're not, this isn't the body that arbitrates what that easement is. The easement agreement, the easement itself spells out who's going to arbitrate that. So that's assuming at some point that will be arbitrated and cleared up what that easement means and then it can function as according to that arbitration.
Mayor Knapp	So do we have any history about how much strength there is in the need in 4.155(.03a) to serve the functional needs of the site? What does "serving the functional needs" mean?
Mr. Pauly	I think in this case you really have to spell out, and site specific what the needs are. In this case, for example, there is the need to get customers and to circulate the customer traffic, there's a need for the deliveries. And so as I read that it requires an analysis of what the particular needs of this site are.
Mayor Knapp	But the legal question in front of us is not whether those needs serves this; whether those functional needs serve the existing adjacent business, that's not the question in front of us.
Mr. Pauly	Correct. Because assumingly it's been found previously that those functional needs are met with the existing site design. There is that criteria of impacting adjacent businesses, but
Mayor Knapp	Where is that worded?
Mr. Pauly	I know that there is some language under Site Design Review, I'm trying to recall if this, it talks about on site. Admittedly with Wilsonville's planned development process that on site is not necessarily a precise terminology.
Mayor Knapp	Can you direct us to anything that says the impact on adjacent businesses is a legal criterion?
Mr. Pauly	The only one I know of is under Site Design Review, that is subsection
Mayor Knapp	But that's contingent on site development, right.
Mr. Pauly	Right. Which under Section 4.421(1c) it talks about, under Site Design Review, drives, parking, circulation it says, "do not detract from the design of proposed buildings and structures and the neighboring properties." But again site design review, Stage II is where you are actually talking about the function of the site, where Site Design Review is the details, the architecture, but also in terms of this saying it supports the Stage II. It's consistent with the Stage II and maybe you may add a couple signs or

	striping or something under Site Design Review, but it wouldn't be making a basis of the function of the site independently of State II through the Site Design Review criteria. In terms of Stage II criteria there is nothing that I can think of at this moment that talks about the impact on an adjacent property.
Mayor Knapp	If that's the case, then the question is whether the applicant is meeting these needs internally on functional needs of the site, separation, which is a narrower set of criteria than much of what the opponents have argued.
Mr. Pauly	The onsite, I don't know if you have opinion on this Mr. Kohlhoff, which could be read as to what extent, the site can be considered kind of the extent you are impacting directly. If you have a phased development like this where it is functional as a site, it can probably be read to mean a broader area beyond just this component as well.
Mayor Knapp	Mr. Kohlhoff this seems like an important question. Are you able to give us any guidance?
Mr. Kohlhoff	I think you correctly read the criteria, parking, loading or delivery area shall be designed with access and maneuvering area adequate to serve the functional needs of the site.
Mayor Knapp	So the question is what is the site? Is the site the tax lot the applicant is dealing with?
Mr. Kohlhoff	Yes, it is the area that is before you, that's the site you are dealing with.
Mayor Knapp	And does not extend onto the adjacent site.
Mr. Kohlhoff	No, not unless the adjacent site is part of and has been made part of by some sort of agreement
Mayor Knapp	Reciprocal access agreement?
Mr. Kohlhoff	Right, right, right. They're denying that. So it takes that away.
Mayor Knapp	Okay, at this point I guess, we have such a small group here in terms of the number of people,
Mr. Kohlhoff	You did talk about the 155(.03d) parking connectivity, right?
Mayor Knapp	Where possible parking shall be designed to connect with parking areas on adjacent sites so as to eliminate
Mr. Kohlhoff	4.155(.03)D "Where possible, parking areas shall be designed to connect with parking areas on adjacent sites so as to eliminate the necessity of utilizing the public street for multiple accesses or cross movements."
Mayor Knapp	It doesn't push it into multiple public street accesses
Mr. Pauly	That's why I didn't mention it as one of the criterion because it doesn't really affect the public street.
Mayor Knapp	And it's also under the qualifier "where possible" and so you could argue that in a given case it is or is not possible.
Mr. Kohlhoff	I'm just suggesting it's the only thing I think we have with connectivity.
Mayor Knapp	And I'm not finding that that is germane. I'm going to put a motion on the table and then I would like to have some more specific discussion. I'm sorry this is going so long.
Councilor Fitzgerald	Your Honor, may I ask if we might want to before making that motion, make a motion to agree to extend our meeting a little later.
Mr. Cosgrove	You read my mind. You were to do that at 10:00 o'clock.
Mayor Knapp	Yeah, where we were at at 10:00 was in the middle of testimony so I didn't

Motion to extend meeting.	ask for that. So. We are under the difficulties of approaching 120 day time line and we have just heard all of the testimony, would the Council like to continue this tonight, and if so make a motion to continue it? Councilor Fitzgerald: I move that we continue our meeting the City Council meeting of March 17th for up to another 60 minutes, at which time maybe we'll have another vote. Councilor Stevens seconded the motion. **Vote:** All in favor please say "Aye", passes 3-0.
Councilor Stevens	Before we make a motion we still never had our question answered whether or not we can remand back to, or are you going to make that motion?
Mayor Knapp **Motion**	Well the difficulty is that the applicants motivation to agree to that or not agree to that is dependent upon the pending outcome, and so there's no absolute answer to whether it is available or not, unless they feel it is to their advantage, and the answer to that is what's happening, in my judgment. I'm going to make **a motion that we approve Resolution 2456 which approves the appeal and reverses the DRB**. Councilor Fitzgerald seconded the motion. It's been moved and seconded, so discussion. The reason for the motion is that I do not see a legal basis within our Code to withhold approval. Within the wording we have been discussing the most applicable that I see is 4.155(.03)A, and I do not see wording that would allow adjacent properties congestion to be the factor that would control. There, the wording that is recommended by staff points out the potential for adjudication of the easement question and it seems to me that that easement question is the primary source of potential conflict on the adjacent site. And our action cannot answer that question. That is a question that derives from an existing agreement, a purported existing agreement that has its own resolution to whatever answers that comes up with. I don't believe that I see anything in our Code that would protect that agreement from this application, nor probably should it. So, I'm looking at the barest facts I can to distill down to what our Code says about the criteria and applying that as directly as I can to the facts we have heard. I don't see anything to hang my hat on that says this proposal is unreasonable and outside of our Code because of these potential impacts on the adjacent property that would primarily flow through that curb cut. Therein is my reasoning for the motion as I've made it.
Mr. Kohlhoff	May I ask a question?

Suggested amendment to motion.	With regards to your motion, the recommended additional conditions of approval that the applicant agreed with or would agree to, is that part of your motion as well? And if so let me suggest that if it were, you could simply do it, call it 1.1; 1.2; and 1.3 and they can fit in under the Findings of Fact, Determinations and Conclusions approving the application and the introduction under number 1 to that.
Mayor Knapp	Yes, **I would like my motion to include the recommended conditions from staff as 1.1, 1.2, and 1.3 as just described by the City Attorney. Would the second agree to that**?
Councilor Fitzgerald	**I would amend my second accordingly. I second the motion as described.**
Mayor Knapp	Councilor Stevens, did you wish to comment?
Councilor Stevens	Yes, just a couple of things. Clearly this is a struggle for this Council at this late hour, and I appreciate the arguments made from both sides of this tough decision. I also appreciate the work that the DRB has put into this, I think we as a Council appreciate the work that our volunteers do and the efforts they put into these tough decisions, as well as staff; staff has put a lot of work into this made their recommendations. The one think that I struggle with is with any development here throughout town, it's hard to predict what the future is going to be, how successful a business is going to be or unsuccessful it's going to be. The fact that we can say this X business is going to create this amount of traffic, there are lots of models, but putting in three businesses there, even two businesses there could generate as much traffic as a coffee kiosk idea. I wish we could just know what the future is going to be, but we don't we have to wait and see. The other think I find compelling is that the other two adjacent businesses, the Holiday Inn and Carl's Jr. are in support of this coffee kiosk. And if anything, I would think the Holiday Inn because they have such a challenge of getting their traffic out onto 95th, would not want to see more traffic coming into that shared driveway. I just wanted to make those points. And especially that we really respect the work the DRB does in doing the work that they do to make sure the City has good development and grows in a very thoughtful way.
Mayor Knapp	I certainly concur with those comments with regard to our volunteers. We mean no disrespect to them in this. I frankly feel like this design is convoluted, difficult, not optimal, and problematic; I don't know what else to say. It seems to me like a poor layout trying to squeeze too much out of too small a site. I'm not happy with that, but I don't see that I have a legal basis to change that. And the fact that the Carl's Jr. is already up and running and of course the fuel station has been there for a period of years and been up and running and it's difficult with incremental development to do what you might do with a clean slate and a whole plan for the whole site, which is one of the reasons we in Wilsonville advocate planned development. Because we can take all

	of those related considerations into effect and I just don't see how that's possible at this time, as near as I can see and as near as I can understand, the legal criteria we are bound to.
Councilor Fitzgerald	Thank you. I think you have both made really good points that I agree with so I won't repeat those. I wanted to address the conditions of approval that I think encompass a lot of the discussions in the DRB and a lot of the point made by both sides. And we're going to be expecting people to adhere to the Code and also the spirit of the decision. That the reduced length of delivery vehicle that has been agreed to I think has been a big help. The understanding, so some of these things are less absolute than others, but I like the spirit of the conditions of approval and number two does the best job possible in addressing all of the discussions about the easement over which we have no control here beyond what's described in the condition. And we are bound to operate within the legal interpretation of the Code, and I agree with you Mayor that I don't think we have any other, there is no explicit violation of the Code here. And I think that we are just going to have to depend on all the people involved including all the future customers, hopefully they will behave in the best possible way, and if not, our Code Enforcement, our traffic people are going to have to help us there. But I think this is where we are and I did want to say one more thing about this idea of a retail building which is pretty large footprint there with who knows if that's enough parking spaces at all. I mean you never know if the potential business that was going to come in there would be one of the fill in the blank really successful donut stores that we've seen come and go, some really successful video game operation that people just come flooding in there, or would it be some failing business that just doesn't draw any customers and goes bankrupt and it's empty. We don't know. And I think that we just can't guess what the future businesses that might have gone into that other proposed idea would be. So I'm in support of this.
Mayor Knapp	I'd like to clarify that if this motion passes, these become the additional conditions of approval, not the recommended conditions of approval.
Mr. Kohlhoff **2nd Amendment to motion suggestion**	That's correct, and if you would like, with your motion, if you like us to do anything further with crafting any of your comments into findings or specific findings along those lines we could still bring those back to you after you make your motion if you include that on the 7th.
Mayor Knapp	I don't know how to word that, I mean we've had so much discussion about so many things.
Mr. Kohlhoff	**Move this with these particular findings, 1.1, 1.2, and 1.3 in addition to those findings that are in the staff report as indicated to the City Council hereby adopts the staff report dated January 6, 2014 as amended by the Planning Division Memorandum dated February 10, 2014, but modifies and amends as follows" and that would be 1.1, 1.2**

	and 1.3. And further **direct staff to review Council's comments and to craft additional findings in line with the Council's comments tonight.**
Mayor Knapp	I think that sounds prudent. So I would so amend. Would the second agree?
Councilor Fitzgerald	Agreed.
Mayor Knapp	So the **motion contains that wording as outlined just now by the City Attorney**. Is there other discussion that we need to have? I will then call for the vote on Resolution 2456 as has been described in great detail. All in favor please say "Aye". **Vote: Motion carried 3-0.** Thank you all, I appreciate your attention, great discussion.
Mr. Kohlhoff	There is an appeal period, 21 days from when the decision becomes final. It obviously won't become final until we present you with the final document on April 7th. I just wanted to make sure the record was clear on that as well.
Mayor Knapp	Yes. So I also need to read, "if you desire to appeal the decision to LUBA you must make application stating the grounds for the appeal and file the appeal within the LUBA period of appeal as prescribed by State law."
	End of transcript portion of the meeting.

Mr. Cosgrove recommended polling the audience to see if anyone wanted to testify during the public hearings for Ordinance No. 735 and Ordinance No. 737 and suggested if there were not, to hold those two items over until the April 7, 2014 Council meeting and forego the City Manager and City Attorney Business sections. Mr. Cosgrove recommended conducting the URA business.

Motion: Councilor Fitzgerald moved to amend the agenda as described by the City Manager. Councilor Stevens seconded the motion.

Vote: Motion carried 3-0.

Ordinance No. 735 and Ordinance No. 737 will be carried over to the April 7, 2014 City Council meeting.

B. **Ordinance No. 735** – 1st hearing
An Ordinance Amending City Of Wilsonville Miscellaneous Code Provisions To Prohibit Smoking At Or Within Twenty Feet Of A Bus Stop Or Transit Shelter. (Staff – Lashbrook)

C. **Ordinance No. 737** – 1st reading
An Ordinance Of The City Of Wilsonville Amending Chapter 10 Of The Wilsonville Code By Adding Section 10.240 Control of Dogs and Amending Section 10.430 Penalties. (staff – Kohlhoff)

CONTINUING BUSINESS

A. **Ordinance No. 736** – 2nd Reading
An Ordinance Of The City Of Wilsonville Declaring And Authorizing The Vacation Of Three (3) Portions Of SW 110th Avenue Public Street Right Of Way Between SW Mont Blanc Street And SW Tooze Road/SW Boeckman Road In Villebois Legally Described In Attachment C. (Staff – Pauly)

Mr. Kohlhoff read Ordinance No. 736 into the record on second reading by title only.

Mayor Knapp wanted to know when the alternative route would be available.

Steve Adams, explained staff would know more once a contractor was hired, at that point alternatives can be discussed. A detour will be established during the construction period for residents.

Motion: Councilor Fitzgerald moved to approve Ordinance No. 736 on second reading. Councilor Stevens seconded the motion.

Vote: Motion carried 3-0
Councilor Starr - excused
Councilor Goddard - excused
Councilor Fitzgerald - Yes
Councilor Stevens - Yes
Mayor Knapp - Yes

CITY MANAGER'S BUSINESS – there was no report.

LEGAL BUSINESS - there was no report.

ADJOURN

Mayor Knapp adjourned the meeting at 11:23 p.m.

Respectfully submitted,

_____
Sandra C. King, MMC, City Recorder

ATTEST:

_____
Tim Knapp, Mayor

CITY OF WILSONVILLE
CITY COUNCIL MEETING MINUTES

A regular meeting of the Wilsonville City Council was held at the Wilsonville City Hall beginning at 7:00 p.m. on Monday, April 7, 2014. Mayor Knapp called the meeting to order at 7:14 p.m., followed by roll call and the Pledge of Allegiance.

The following City Council members were present:
- Mayor Knapp
- Council President Starr
- Councilor Goddard
- Councilor Fitzgerald
- Councilor Stevens - Excused

Staff present included:
- Bryan Cosgrove, City Manager
- Jeanna Troha, Assistant City Manager
- Barbara Jacobson, Assistant City Attorney
- Sandra King, City Recorder
- Eric Mende, City Engineer
- Delora Kerber, Public Works Director
- Cathy Rodocker, Assistant Finance Director
- Jon Gail, Community Relations Coordinator
- Stephan Lashbrook, SMART Director
- Jeff Smith, Police Chief
- Nancy Kraushaar, Community Development Director
- Chris Neamtzu, Planning Director

Motion to approve the order of the agenda.

Motion: Councilor Fitzgerald moved to approve the order of the agenda. Councilor Starr seconded the motion.

Vote: Motion carried 4-0.

MAYOR'S BUSINESS

A. Proclamation Declaring the Month of April 2014 as Volunteer Appreciation Month

April has been designated as *Volunteer Appreciation Month* nationwide. The City Council recognized Gail Lasko, Al Steiger, Hilly Alexander, and Helen Mead four of the many volunteers who give of their time and skills to the community and City.

Mayor Knapp identified the activities and service each of the volunteers participates in and presented a Certificate of Appreciation to each volunteer.

B. 2014 Arbor Day Proclamation

Chris Neamtzu spoke about the Arbor Day activities that would be taking place during the week in the Villebois community.

Mayor Knapp read the proclamation into the record.

C. Proclamation Declaring April Child Abuse Prevention Month

Barbara Peschiera, Executive Director, Children's Center explained the function and importance of the work her organization does.

Mayor Knapp asked if a link to the information could be put on the City's website, and read the proclamation into the record.

Councilors expressed their appreciation for the work the Children's Center does.

COMMUNICATIONS

A. Wilsonville Police Department Annual Report - Chief Jeff Smith

Chief Jeff Smith presented the annual report for the Wilsonville Police Department, including crime rates, calls for service, traffic, and community policing. The 2013 Annual report is part of the record.

B. Metro Activities Update – Metro Councilor Dirksen

Councilor Dirksen used a PowerPoint slide show to provide updates on the projects and programs Metro is involved in to preserve the quality of life in the Metro region, including:

- Land use and transportation
- Regional Transportation Plan update must be adopted by July 2014
- Climate Smart Communities
- Natural Areas update, and
- Visitor Venues

C. Wastewater Treatment Plant (WWTP) Update

Using a PowerPoint presentation, Eric Mende provided the final WWTP quarterly report which is for the period of January – March 2014. During this last quarter, CH2M HILL the City's Operate Design Build Operate contractor successfully completed testing and acceptance of the Wastewater Treatment Plant (WWTP) improvements. All facilities are now on-line and operating. Staff gave a short presentation summarizing the major milestones for the project; highlighted final costs and other key metrics, and provided information on the remaining work needed for final completion.

CITIZEN INPUT & COMMUNITY ANNOUNCEMENTS

This is an opportunity for visitors to address the City Council on items ***not*** on the agenda. It is also the time to address items that are on the agenda but not scheduled for a public hearing. Staff and the City Council will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter. Please limit your comments to three minutes.

There was none.

COUNCILOR COMMENTS, LIAISON REPORTS & MEETING ANNOUNCEMENTS

Council President Starr – *(Park & Recreation Advisory Board Liaison)* reported the Parks and Recreation Advisory Board awarded the Community Services Tourism Match Grants at their past meeting, and announced the next meeting date of the Board. He invited the public to attend the annual Egg Hunt in Memorial Park.

Councilor Goddard – *(Library Board Liaison)* spoke about the activities of the Clackamas County Business Alliance and announced the Library Family Night, as well as the Rural Homebuyers Fair to be held at the Library.

Councilor Fitzgerald – *(Development Review Panels A & B Liaison)* advised the Library Board completed its strategic plan, and reported on the decisions made by the DRB during their last meetings. The Councilor announced the final meeting date of the Tourism Task Force.

CONSENT AGENDA

Ms. Jacobson read the titles of the Consent Agenda items into the record.

A. **Resolution No. 2461**
A Resolution Granting An Exemption From Property Taxes Under ORS 307.540 to ORS 307.548 For Autumn Park Apartments, A Low-Income Apartment Development Owned And Operated By Northwest Housing Alternatives, Inc.

B. **Resolution No. 2462**
A Resolution Granting An Exemption From Property Taxes Under ORS 307.540 to ORS 307.548 For Rain Garden Limited Partnership, A Low-Income Apartment Development Owned And Operated By Caritas Community Housing Corporation.

C. **Resolution No. 2463**
A Resolution Granting An Exemption From Property Taxes Under ORS 307.540 to ORS 307.548 For Creekside Woods LP, A Low-Income Apartment Development Owned And Operated By Northwest Housing Alternatives, Inc.

D. **Resolution No. 2464**
A Resolution Granting An Exemption From Property Taxes Under ORS 307.540 to ORS 307.548 For Charleston Apartments, A Low-Income Apartment Development Owned And Operated By Northwest Housing Alternatives, Inc.

E. **Resolution No. 2465**
A Resolution Granting An Exemption From Property Taxes Under ORS 307.540 to ORS 307.548 For Wiedemann Park, A Low-Income Apartment Development Owned And Operated By Accessible Living, Inc.

Motion: Councilor Fitzgerald moved to approve the Consent Agenda. Councilor Starr seconded the motion.

Vote: Motion carried 4-0.

Mayor Knapp declared a recess at 8:45 p.m. and reconvened the meeting at 8:50 p.m.

PUBLIC HEARING

A. **Ordinance No. 735** – 1st hearing
An Ordinance Amending City Of Wilsonville Miscellaneous Code Provisions To Prohibit Smoking At Or Within Twenty Feet Of A Bus Stop Or Transit Shelter.

Mayor Knapp read the title of the Ordinance into the record and the public hearing procedure. The Mayor opened the public hearing at 8:52 p.m.

Mr. Lashbrook presented the staff report. The City of Wilsonville joined numerous other cities in banning the use of tobacco in public parks in 2012. That City Council decision was in response to strong community support. Since that time, SMART employees have heard from citizens asking that smoking be prohibited in and around transit stops and shelters. When a bus sits at these locations with the doors open, cigarette smoke is often drawn into the bus from smokers outside the bus. Such smoke can also be irritating to people waiting to board a bus. On occasion, bus drivers have asked smokers to move away from transit shelters, but with mixed results. On some occasions, smokers have flatly refused to comply. Twenty feet is a rational and reasonable distance to provide a margin for the smoke to dissipate when people waiting to board a bus may occupy some of the area within the twenty feet and as a practical matter the distance may be closer to ten feet.

If the Ordinance is adopted, signs will be installed at transit shelters and stops indicating that those locations are smoke free. As proposed, this ordinance will be enforced through fines as outlined in the Wilsonville Code, just as with the tobacco ban in Wilsonville parks.

Councilor Goddard asked who would be enforcing the ordinance and how enforcement would be done should a person who is smoking walk by a bus shelter.

Mr. Cosgrove indicated staff has had the conversation with the Police Department who will be conducting bike patrols this summer. The goal is to educate the public on the effects of second hand smoke, not to cite people or generate revenue. In addition bus shelters are a public facility and it was common to have public facilities posted "no smoking".

Councilor Goddard wanted clarity on how the ordinance would be enforced on the public sidewalks.

Ms. Jacobson stated the intent behind the ordinance is someone waiting for the bus or standing by the shelter within those forty feet. If you are talking about someone that is walking quickly by the shelter and who happens to be smoking sixty feet away and then walks past it immediately, I don't believe that is target the police will be looking for. If that is a concern there is an ability to amend the ordinance to make it clear that somebody just walking past the shelter is not the focus of the ordinance.

Councilor Goddard suggested clarifying the intent of the ordinance may make the enforcement easier.

Mr. Cosgrove thought the intent was clearly related to bus shelters, and not the occasional passerby on the sidewalk.

Councilor Fitzgerald understood the ordinance provided a degree of clarity that was lacking now, in that the bus drivers were not expected to debate the topic of smoking with passengers. Adding the ordinance made it easier to say the City has a rule there was no smoking within twenty feet of a bus shelter.

Mr. Cosgrove offered to add language clarifying how bicycle riders and walkers who happened to be smoking while riding or walking past a bus shelter would be addressed. However, the police department would not be out enforcing this ordinance against people who were walking, or biking; they would be enforcing the ordinance in and around bus shelters and WES. The Mayor recommended the appropriate time to suggest an amendment to add clarity was once a motion and second had been made.

The Mayor invited public testimony; hearing nothing he closed the public hearing at 9:02 p.m.

Motion: Councilor Starr moved to approve Ordinance No. 735 on first reading. Councilor Fitzgerald seconded the motion.

Councilor Goddard suggested legal staff consider whether there should be an amendment for Council to consider on second reading that would avoid the ambiguity around whether or not the Council is outlawing smoking in bike lanes or sidewalks that happen to be adjacent to a bus shelter.

Mayor Knapp recommended Councilor Goddard make a motion to amend the ordinance.

Ms. Jacobson suggested a motion to amend the ordinance to clarify the ordinance would exempt persons driving vehicles, biking, or walking by, not stopping; staff could bring back that language on second reading.

Motion to amend: Councilor Goddard moved that amending language be considered for second reading that would explicitly exempt passersby not only those in enclosed vehicles but those who are walking and biking that may be traveling adjacent to a bus shelter without the intent of stopping and taking public transit. Councilor Starr seconded the motion for the sake of discussion.

Councilor Starr favored making the ordinance as simple as possible. He was unsure of the effect of the amendment; however, he was open to reviewing the language provided by the Legal Department.

Mayor Knapp thought the amendment added an additional layer of debate that was unnecessary. He felt people would self-regulate after the bus shelters had been posted with "no smoking within twenty feet" signs.

Vote on Amendment: Motion fails 2-2.

Vote: Motion carried 3-1
Councilor Goddard voting "No".

B. **Resolution No. 2459**
A Resolution Authorizing A Supplemental Budget Adjustment For Fiscal Year 2013-14.

C. **Resolution No. 2460**
A Resolution Authorizing A Transfer Of Budget Appropriations Within Certain Funds For Fiscal Year 2013-14.

Ms. Jacobson read the titles of Resolution Nos. 2459 and 2460 into the record and noted the public hearing for the two resolutions could be conducted concurrently; however, the motions were to be separate.

Mayor Knapp read the public hearing format and opened the public hearing for both Resolution Nos. 2459 and 2460 at 9:07 p.m.

Ms. Rodocker presented the staff report. Local Budget Law allows the Council to amend the adopted budget for an occurrence or condition that was not known at the time the budget was adopted. The following supplemental budget primarily amends the current budget for numerous capital improvement projects and expenditures.

At its June 3, 2013 City Council meeting, the Council adopted the Fiscal Year 2013-14 budget. Since that time, several unanticipated projects and expenses have come to staff's attention that will require additional budget authorization. There are two resolutions for consideration: a budget transfer and a supplemental budget adjustment. The transfer resolution will move expenditures from one category to another with no additional increase to the overall budget. The second resolution is a supplemental budget adjustment that will impact the budget by increases to revenues and expenditures. As per Local Budget Law, the supplemental budget adjustment also includes budget transfers that have surpassed 15 percent of the adopted contingency.

Transfer Resolution (Resolution No. 2460)
"Transfers Only – No Increase on Overall Budget" provides a detail listing of the projects and/or accounts that will be affected by the transfer resolution. The transfers noted are all less than 15 percent of the original adopted contingency in each fund.

Net zero transfers are being made in the Water, Sewer and Streets CIP as funding is being transferred from the existing "Early Planning Project" to a new "Close-out from Prior Years" project. The new project will allow staff to track their time for the end-of-project close out that typically spans more than one fiscal year.

Additional funding for the Basalt Creek Concept Planning and the Frog Pond/Advance Road Planning (grant match portion) will be transferred from various SDC's. The funding will be calculated at 20 percent from Water and Sewer SDC, 40 percent from Street SDC and 10 percent from Parks and Stormwater SDC.

A minimal transfer is being made from the Water Operating Fund for additional direct expenses from the Human Resources program.

Adjustment Resolution (Resolution No. 2459)
"Supplemental Budget Adjustments" provides a detail listing of the projects and expenditures that are recognizing new funding from either interfund transfers or outside funding sources. The largest increase in the budget adjustment is for the Park & Rec Tenant Improvement project. The expense of $362,000 is recorded in the Building Fund where the expenses will be captured and in the General Fund as the funding source.

The resolution also includes additional appropriations for expenses and funding for the Basalt Creek Area Planning and Frog Pond/Advance Road Planning projects as well as the Annual Pedestrian Enhancement project that will begin the implementation of the Bicycle and Pedestrian Connectivity Action Plan.

As stated in the Fiscal Management Polices, the City shall amend its annual budget in accordance with Oregon local budget law. The supplemental budget adjustment is adopted by the Council at a regularly scheduled meeting. The budget committee is not required.

As required by Local Budget Law, a notice for the public hearing has been published in the Wilsonville Spokesman. The notice was published on Wednesday, March 26, 2014. Adoption of the Supplemental Budget Adjustment is required prior to the end of the fiscal year, June 30, 2014. The adoption process requires a public hearing prior to adoption

CURRENT YEAR BUDGET IMPACTS:

Resources:		**Expenditures:**	
Interfund transfers	$ 691,700	Street Capital Projects	$ 263,600
Other governments	25,000	Building Capital Projects	362,000
Charges for services	12,000	Web Design Professional Services	41,000
		Bus Purchases	60,000
		Direct Wages and Expenses	32,500
		Tramser to other funds for Capital Projects	600,600
		Contingencies	(631,000)
Total Resources	$ 728,700		$ 728,700

Not approving the attached supplemental budget could result in overspending current budget appropriations. The City is required to disclose all excess of expenditures over appropriations in the Comprehensive Annual Financial report.

Councilor Starr asked what the funds were for identified as "web design". Ms. Rodocker explained it was the professional services contract for the redesign of the City's web sites and creation of the additional sites as well as the offsite hosting services.

The Mayor closed the public hearing at 9:12 p.m.

Motion: Councilor Fitzgerald moved to approve Resolution No. 2459. Councilor Starr seconded the motion.

Vote: Motion carried 4-0.

Motion: Councilor Starr moved to approve Resolution No. 2460. Councilor Fitzgerald seconded the motion.

Vote: Motion carried 4-0.

D. **Ordinance No. 738** – 1st reading
An Ordinance Of The City Of Wilsonville Approving A Comprehensive Plan Map Amendment From Residential 0 – 1 DU/AC To Residential 4 – 5 DU/AC On 1.79 Acres Comprising Tax Lot 5000 Of Section 13BA, T3S, R1W, Clackamas County, Oregon; Renaissance At Canyon Creek II; Renaissance Development, Applicant.

Ms. Jacobson read the titles of Ordinance No. 738 and Ordinance No. 739 into the record on first reading. She noted the public hearing on the two companion ordinances could be held contemporaneously.

Mayor Knapp read the public hearing protocol and opened the public hearing at 9:15 p.m.

Blasé Edmonds, Manager of Current Planning, and Mike Wheeler, Associate Planner presented the staff report.

The proposed Comprehensive Plan Map Amendment is being forwarded to the City Council by Development Review Board Panel 'A' (DRB) with a recommendation of approval. Under a separate Ordinance, the DRB is also recommending approval of a Zone Map Amendment from RA-H to PDR-3 and to approve the Stage I Preliminary Plan for Renaissance at Canyon Creek II Residential Planned Development. The proposed Comprehensive Plan Map Amendment will enable the development of Renaissance at Canyon Creek II Residential Planned Development, which is comprised of eight (8) residential subdivision lots and open space. Also proposed in companion Ordinance No. 739 is a Zone Map Amendment from Residential Agricultural - Holding Zone to Planned Development Residential - 3. The DRB also approved a Stage I Preliminary Plan, Stage II Final Plan, a Waiver (setback), Tentative Subdivision Plat, Site Design Review and a Type 'C' Tree Plan. Those approvals are contingent on Council approval of the subject Comprehensive Plan Map Amendment.

Proposed Renaissance at Canyon Creek II Residential Planned Development is a private development, so the Applicant is responsible to make all public and private improvements, and pay City application fees and systems development charges for parks, storm sewer and streets. Construction of the subdivision is scheduled to begin in 2014.

The recommended action by the DRB would make the zoning and densities of this remaining parcel consistent with the surrounding properties contained within the same subdivision, as previously approved by the City Council.

On August 23, 2004, Development Review Board approved 03 DB 43 for a 79-lot residential planned development (i.e., Renaissance at Canyon Creek). A companion Comprehensive Plan Map Amendment and Zone Map Amendment was approved by the City Council on September 20, 2004. Four of the nine approved phases have been constructed; more partitions are enabled, in order to achieve full build-out of the project.

The subject site was not a part of the approval of Renaissance at Canyon Creek, although the parcel's development potential was accounted for during the review, illustrating compliance with code provisions in effect at that time. Despite the fact that some code provisions have been revised since then, the applicant proposes to implement most of the original concept for Tax Lot 5000.

On March 10, 2014, the Development Review Board considered the Applicant's proposal for an eight (8) lot residential planned development (DB13-0050 et seq). The Board approved the project, and recommended that City Council approve the proposed Comprehensive Plan Map Amendment and proposed Zone Map Amendment.

The density of the proposed development is the same as the surrounding properties. The Development Review Board and staff reports recommend approval of the Comprehensive Plan and Zone Map Amendment.

Councilor Starr asked if the infill development will mirror the style and size of homes around it.
Mr. Wheeler responded the homes would be similar since they were being built by the developer who built the properties north and south. He clarified the homes would have ten-foot minimums between them.

Mr. Wheeler identified the errata noted in the Mayor's email has been included in the record for both of the ordinances and identified the documents containing the corrections. The project has CC&Rs that are the same as the north and south developments. The developer was not able to purchase this property during the earlier phases of development, but included in the agreements to sell the homes in those projects and within the structure of the CC&Rs his ability, if he acquired this, to have it be a part of that homeowners association.

Mayor Knapp invited the applicant to speak.

Ben Altman, SFA Design Group, spoke on behalf of Renaissance Development. Mr. Altman clarified the CC&Rs. In 2004-05 when the original Canyon Creek Development was built the developer tried to include this parcel however the owner did not want to participate at that time. The developer "shadow" platted the parcel and the CC&Rs were written in such a way to allow only Renaissance Development to acquire and build on this property and become part of the homeowner association. This limited other developers from developing the property. The Code changed subsequent to the original approval regarding open space requirements and the number of lots that could be accessed from a private street. These two things made it difficult for another developer to make it work. Once Renaissance Development was able to purchase the property they were able to fold it into the previous portions of development as if it was part of the original development.

Mayor Knapp wanted to be sure the open space would be available for the other homeowners and not become a private backyard. Mr. Altman indicated tract A and B would be owned by the homeowners association and included in the original CC&Rs.

Mayor closed hearing at 9:40 p.m.

Motion: Councilor Starr moved to approve the amended staff report that goes into the record. Councilor Fitzgerald seconded the motion.

Vote: Motion carried 4-0.

Motion: Councilor Starr moved to approve Ordinance No. 738 on first reading. Councilor Fitzgerald seconded the motion.

Councilor Starr expressed disappointment at how the shadow platting and CC&Rs allowed only one person to make development of the property viable, unworkable for any other developer.

Councilor Fitzgerald agreed with Councilor Starr's statements and thought the shadow platting was unfriendly to the seller and other buyers.

Vote: Motion carried 4-0.

E. **Ordinance No. 739** – 1st reading
An Ordinance Of The City Of Wilsonville Approving A Zone Map Amendment From The Residential Agricultural - Holding (Ra-H) Zone To The Planned Development Residential - 3 (PDR-3) Zone On 1.79 Acres Comprising Tax Lot 5000 Of Section 13BA, T3S, R1W,

Clackamas County, Oregon. Renaissance Development Corp., Applicant.

Motion: Councilor Starr moved to approve the amended staff report that goes into the record. Councilor Fitzgerald seconded the motion.

Vote: Motion carried 4-0.

Motion: Councilor Starr moved to approve Ordinance No. 739 on first reading. Councilor Fitzgerald seconded the motion.

Vote: Motion carried 4-0.

Mayor Knapp read the LUBA appeal process.

F. **Ordinance No. 740** – 1st reading
An Ordinance Of The City Of Wilsonville Declaring A Moratorium On Medical Marijuana Facilities, And Declaring An Emergency.

Ms. Jacobson read the title of Ordinance No.740 into the record on first reading.

Mayor Knapp read the public hearing format and opened the public hearing at 9:45 p.m.

Ms. Jacobson presented the staff report. Senate Bill 1531c, passed by the Oregon Legislature during the short 2014 legislative session, allows for a one (1) year ban on registered medical marijuana facilities by local jurisdictions, provided that the ban is put into place no later than May 1, 2014. If the moratorium is put into place by the City of Wilsonville, the ban will remain in place until May 1, 2015. Earlier passage of an Oregon law (House Bill 3460 (2013)) that legalized medical marijuana dispensaries in Oregon was unpopular and controversial, with many local jurisdictions who, through a variety of legal measures, attempted to ban or restrict medical marijuana dispensaries within their respective jurisdictions. Along those lines, and as City Council is aware, the City of Wilsonville enacted Ordinance No. 734, which prohibits the issuance of a business license to any business that, by its very nature, is illegal under either state or federal law. Federal law still holds that any use or sale of marijuana is illegal. Due to the outcry from local governments, the Oregon Legislature reconsidered their action during the 2014 session and enacted Senate Bill 1521c, which establishes a clear process for local jurisdictions who wish to impose a ban on medical marijuana dispensaries, at least temporarily. In response to passage of this new legislation and the ongoing potential legal challenge to the City's business license Ordinance No. 734, legal staff recommends that it is prudent to adopt the ban, in the manner approved by the Oregon Legislature, as a safe harbor, rather than relying solely on our existing Ordinance No. 734, especially given the possibility it could be overturned by the courts if successfully challenged. As noted above, the ban allowed by the Oregon Legislature is temporary (May 1, 2014 to May 1, 2015), with the Legislature anticipating that a more permanent resolution will occur during the next legislative session.

The proposed Ordinance is expected to prevent medical marijuana dispensaries from locating within the City of Wilsonville City limits and will avoid potential legal challenges to doing so. Due to time constraints imposed by the Oregon Legislature for passage of this moratorium, the proposed Ordinance also declares an emergency to allow for immediate passage. Passage could help avoid potential costly legal challenges to the City's existing Ordinance No. 734.

The goal is that this Ordinance will prevent the location of medical marijuana dispensaries within the City

of Wilsonville until clear and proper regulations can be promulgated to help prevent related crime and negative impacts to the community and neighboring businesses.

Mayor Knapp invited public testimony, hearing nothing he closed the public hearing at 9:48 p.m.

Motion: Councilor Fitzgerald moved to approve Ordinance No. 740 on first reading. Councilor Starr seconded the motion.

Vote: Motion carried 4-0.

NEW BUSINESS

A. Transportation for America (T-4 America)

Ms. Kraushaar indicated the topic had been discussed during work session, and presented the staff report.

The Council is being asked to consider endorsing the T4America platform that proposes stabilized funding for the Highway and Transit Trust Funds and identifying additional revenue for locally-driven transportation projects that spur economic growth and innovation.

T4America is an alliance of elected, business, and civic leaders from communities across the country, partnering to promote that states and the federal government step up to invest in efficient and locally-driven transportation solutions. They believe that:

1) In the interstate era, the federal government led major transportation investments.
2) Now, in the 21st century, the challenge is to promote local and regional initiatives, to stimulate innovation, and to ensure that reliable implementation funding is available.
3) These community investments will result in strong economies that benefit the business community and provide jobs for a wide range of professions.

T4America was established in response to declining reliability of the Highway Trust Fund as a resource for the enormous transportation needs at all jurisdiction levels. Their platform aims at resolving the gap between declining gas tax revenues and growing transportation needs and costs and recognizing the associated beneficial economic outcomes.

T4America goals include the following activities:

1) Investment. Help secure sufficient state and federal transportation funding for infrastructure to move freight to market and people to jobs.
2) Local Control. Advocate for federal and state policy changes that give local communities more authority and funding to spur innovation and strengthen their economies.
3) Innovation. Provide research and peer-to-peer information sharing to help communities develop and take advantage of new approaches to transportation planning, funding, and financing challenges.
4) Options. Help communities adapt to changing market preferences, technology, and consumer demand for a range of transportation options - from managed highway lanes to transit to walkable neighborhoods.
5) Access to Jobs. Advocate for transportation policies that help employers attract new talent and ensure that employees have access to travel options that can reduce costs and stress.

ODOT, the U.S. Secretary of Transportation (Anthony Foxx), and others report that the federal Highway Trust Fund balances will be exhausted in summer 2014. If the fund becomes insolvent, the Federal Highway Administration (FHWA) will be unable to fully reimburse states (and local agencies) for projects funded under the federal-aid highway program. This will require ODOT to cancel or delay a large number of state and local transportation projects programmed for 2015 and beyond – such as the Kinsman Road extension (Barber to Boeckman) project.

ODOT reports that if additional resources are not provided for the Trust Fund, Oregon's future federal transportation funding would be cut by over $150 million per year. Local governments would be impacted as they receive 25 to 30 percent of Oregon's federal highway funding. Revenues to local transit districts from the Transit Trust Fund would also be reduced if additional resources are not identified. SMART relies on federal funding for approximately 20 percent of its budget.

The Highway Trust Fund is primarily supported by the federal gas tax which is declining and currently is not indexed for inflation. In 2008, the General Fund starting subsidizing the Highway and Transit trust fund spending. The General Fund is not considered an ongoing reliable funding source for transportation. T4America proposes to eliminate reliance on the General Fund subsidy by increasing transportation user fees. Several possible revenue sources could be used to raise additional revenues for the trust fund:

1) Index the gas tax to account for inflation and rising vehicle efficiency;
2) Place a fee of up to $4 fee per barrel of oil;
3) Increase the existing 18.3-cent federal gas tax by 17 cents per gallon;
4) Phase in a user fee based on vehicle miles traveled;
5) Add a 5.5% federal sales tax to fuel purchases;
6) Replacing the existing 18.3-cent federal gas tax with an 11% federal sales tax on fuel purchases;
7) A combination of these or other dedicated revenue sources.

A Council motion to support the T4America platform does not signify support for any of the particular options above.

Staff has prepared a DRAFT letter that the Council may consider if they choose to endorse T4America and wish to send a letter of support.

Support for T4America is expected to stabilize funding for the MAP21 (Moving Ahead for Progress in the 21st Century) program that Congress adopted in 2012, protect all transportation modes from budget cuts, and raise additional revenue for locally-driven projects that spur economic growth and innovation.

In April, the Metro Council will be considering a resolution that endorses T4America's proposal to increase federal transportation user fees by $30 billion or other funding options to displace the dependence of the Highway and Transit Trust Funds on the General Fund and support growth in federal transportation investment.

At their April 10, 2014 meeting, JPACT (Joint Policy Advisory Committee on Transportation) will be asked for their recommendation to the Metro Council on the T4America resolution. Lake Oswego Councilor Donna Jordan, the JPACT representative for the Cities of Clackamas County, is seeking input from the City Councils she represents to prepare for the JPACT meeting.

The C4 (Clackamas County Coordinating Committee) Metro Subcommittee will have discussed the topic at their April 3, 2014 meeting.

The T4America platform and membership is being considered by the C4 (Clackamas County Coordinating Committee) Metro Subcommittee, Clackamas County, Washington County, Multnomah County and other cities in the Metro region to provide input to JPACT in their recommendation to the Metro Council.

The City of Wilsonville has received federal funding for SMART and many local projects in the past and hopes to continue to seek federal funding to leverage local funds for medium to large transportation projects (such as the Kinsman Road Extension (Barber to Boeckman). If the Highway Trust Fund becomes insolvent or if the General Fund no longer subsidizes the Highway and Transit Trust Funds, there will be less federal funding available for local agencies and transit districts. ODOT's reduced federal funds may result in the Kinsman Road project being cut or delayed.

Motion: Councilor Fitzgerald moved to endorse platform and send a letter of endorsement. Councilor Starr seconded the motion.

Councilor Fitzgerald favored the proposal because it was important to have the City's voice heard at the federal and regional levels to keep highways and roads and bridges functional for freight traffic and commerce.

Mayor Knapp indicated those who traveled to Washington D.C. to talk with elected representatives heard from them their frustration over the lack of action on transportation issues and funding.

Councilor Goddard stated he would abstain from voting because he wanted additional information on collection of user fees and how they would be used.

Vote: Motion carried 3-0-1. Councilor Goddard abstained.

CITY MANAGER'S BUSINESS

A. Visitor Kiosks

Mr. Cosgrove distributed a letter from the Wilsonville Chamber of Commerce requesting $6,000 to fund their kiosk program for an additional year. He noted there was no data provided by the Chamber explaining what the $6,000 would purchase; but Council could provide direction to: fund the program for an additional year; request Mr. Gilmore come before Council to talk about that program and what the $6,000 would buy the City, or tourism in general. Funding was available for the program.

After a brief discussion the Council agreed the Chamber should attend a Council meeting to discuss the kiosk program and prepare a written proposal about what services would be provided.

Motion; Councilor Fitzgerald moved to ask staff to contact the Chamber and arrange for a verbal presentation at the next meeting and a written description of the service. Councilor Starr seconded the motion.

Vote: Motion carried 4-0.

LEGAL BUSINESS - There was no report.

ADJOURN

The Mayor adjourned the Council meeting at 10:14 p.m.

Respectfully submitted,

_____
Sandra C. King, MMC, City Recorder

ATTEST:

_____
Tim Knapp, Mayor

City of
WILSONVILLE
in OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject: Ordinance No. 742** Statewide Planning Goal 10 Residential Land Study **Staff Member:** Katie Mangle **Department:** Community Development
Action Required	**Advisory Board/Commission Recommendation**
☒ Motion ☒ Public Hearing Date: 5/5/14 ☒ Ordinance 1st Reading Date: ☐ Ordinance 2nd Reading Date: ☐ Resolution ☐ Information or Direction ☐ Information Only ☐ Council Direction ☐ Consent Agenda	☒ Approval ☐ Denial ☐ None Forwarded ☐ Not Applicable **Comments:** On April 9th the Planning Commission conducted a public hearing and unanimously recommended approval of the Residential Land Study.
Staff Recommendation: Staff recommends Council adopt Ordinance No. 742.	
Recommended Language for Motion: I move to approve Ordinance Number 742	
PROJECT / ISSUE RELATES TO:	
☒Council Goals/Priorities 5. Thoughtful Land Use	☒Adopted Master Plan(s) Comprehensive Plan ☐Not Applicable

ISSUE BEFORE COUNCIL:
Council consideration of the goal 10 Housing Needs Analysis, and update to the City's comprehensive Plan.

EXECUTIVE SUMMARY:
The City has prepared a Residential Lands Study, also known as a housing needs analysis, to plan for the future of Wilsonville's next neighborhoods. The purpose of the housing needs analysis is to forecast Wilsonville's housing needs over the next 20 years. The outcomes of the project are the Residential Lands Study report (see Attachment A, Exhibit 2), which summarizes the analysis and Wilsonville's strategy for the future, and the Wilsonville Residential Study:

Technical Report (see Attachment B), which presents the detailed demographic, economic, and forecasting analysis.

In February 2014, staff shared the draft Study with Council, who then directed staff to prepare the report for public hearings and adoption. The Planning Commission, after holding a public hearing, has recommended that Council adopt the Study. The Commission received testimony from one citizen who expressed general concerns about planning for growth, and suggestions for enhancing livability in Wilsonville. City Council's public hearing on the Study is the last step for this project. Development Code amendments that are necessary for the City to fully comply with Goal 10 will be forthcoming as a separate project.

The Study includes information about Wilsonville demographics, its housing stock, and development capacity. Additionally, it recommends a strategy for planning for housing in future growth areas. The analysis prepared by ECON Northwest has concluded that:

- Generally, Wilsonville's Comprehensive Plan and Development Code meet state requirements and already provide an adequate framework for meeting the forecasted housing need;
- When planning for future development in Frog Pond or Town Center, the community has latitude (though not complete autonomy) for local decision-making about the form and density of housing;
- In the next 20 years, Wilsonville is likely to run out of residential land capacity;
- Development Code amendments will be needed to fully comply with Goal 10. Staff is continuing to work with DLCD staff to refine the scope of these amendments, which include:
    - Adding a clear and objective review process for residential development in Old Town;
    - Adding a clear and objective Site Design Review process for stand-alone residential developments that don't require a Planned Development application.

The Study and the Technical Report have been available on the City website since early December, and were presented at a public forum in early January. Staff from DLCD, Metro, Washington and Clackamas Counties had the opportunity to review and comment on draft memoranda and the draft reports. Staff has incorporated comments received from the City Council, Planning Commission, DLCD staff, and general public into the final reports, which are proposed to be adopted by ordinance as a sub-element of the Wilsonville Comprehensive Plan.

Following a 14-month process of evaluation and technical analysis, on April 9, 2014 the Planning Commission unanimously recommended that Council adopt the Wilsonville Statewide Planning Goal 10 Residential Land Study ("Study"). The Study meets the requirements of statewide planning program Goal 10 Housing, and will inform planning for the Frog Pond and Advance Road areas.

EXPECTED RESULTS:
Completion of the housing needs analysis will fulfill one of the City's two remaining Periodic Review tasks. The information and strategies developed during this project will lead to legislative amendments to the Development Code and will inform the upcoming planning work for the Frog Pond and Advance Road growth areas.

TIMELINE:
The Planning Commission held a public hearing on April 9, 2014 and voted unanimously to recommend that Council adopt the Residential Land Study as a sub-element of the Comprehensive Plan. This is the first City Council hearing on the proposal. As the proposal to amend the Comprehensive Plan is a legislative land use action, there is no set deadline by which Council must act. However, adoption of the Study is needed for the City to meet its periodic review task. Additionally, completion of this project is an important step toward planning for the Frog Pond area. Continuation of the Residential Land Study work could divert resources and attention from the larger planning project the community is ready to undertake.

Needed amendments to the Development Code will be reviewed for adoption at a later date.

CURRENT YEAR BUDGET IMPACTS:
ECON Northwest's contract is being funded by the Planning Division consultant services budget, as adopted in the 2012-13 and 2013-14 fiscal year budgets. The scope of work for the project has been completed; additional tasks will require additional funding.

FINANCIAL REVIEW / COMMENTS:
Reviewed by: _____CAR_____ Date: __4/22/14_____

LEGAL REVIEW / COMMENT:
Reviewed by: MEK_____ Date: April 22, 2014_____
The Ordinance is approved as to form.

COMMUNITY INVOLVEMENT PROCESS:
The Planning Commission has been the primary public advisory group for the project, and has been deeply involved in the creation of the Study. Over the course of a 14-month process of evaluation and technical analysis, Commissioners engaged in review of each chapter of the technical report during eight work sessions. Video recordings of all of these meetings were available online and were televised.

On January 8, 2014, in its role as the Committee on Citizen Involvement, the Planning Commission hosted a public forum on the Wilsonville Residential Lands Study. The project team presented the results and draft recommendations of the Study. Approximately 35 members of the public attended the meeting; many attendees owned property in the Frog Pond or Advance Road areas. Following the presentation, the group engaged in a discussion about planning for future growth, types of housing, and the process for planning the Frog Pond and Advance Road growth areas.

Additionally, staff has coordinated with the counties, state, and regional agency staff to gain advice and procedural concurrence on the project.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY
The outcomes of this project will inform long-range planning and policy for the next generation of residential growth in Wilsonville.

ALTERNATIVES:
The City Council may direct staff to revisit the analysis or modify the recommendations in the draft Residential Land Study.

CITY MANAGER COMMENT:

ATTACHMENTS

A. Ordinance No. 742 to adopt the Wilsonville Residential Land Study as a sub-element of the Comprehensive Plan

   Exhibit 1. Conclusionary Findings dated April 15, 2014
   Exhibit 2. Residential Land Study, final draft dated March 2014

B. Residential Land Study Technical Report, final draft dated March 2014
C. Planning Commission Record Index
D. Public Involvement Summary
   - Planning Commission Decision Documents
   - Planning Commission Public Hearing Documents
   - Citizen Outreach and Responses
   - Planning Commission work session and informational documents
   - January 8, 2014 CCI Public Forum

   Available at: http://www.ci.wilsonville.or.us/goal10housing

Attachment A

ORDINANCE NO. 742

AN ORDINANCE OF THE CITY OF WILSONVILLE ADOPTING THE WILSONVILLE RESIDENTIAL LAND STUDY AS AN AMENDMENT TO AND A SUB-ELEMENT OF THE COMPREHENSIVE PLAN

WHEREAS, Oregon law requires that state, regional, and local governments plan for housing needs for the people of state; and

WHEREAS, Wilsonville has not undertaken a housing needs analysis since completing periodic review in 1988 and Wilsonville has experienced significant growth since then; and

WHEREAS, the City contracted with ECON Northwest to conduct a Residential Land Study that provides a housing needs analysis and will inform the context for planning of Wilsonville's future growth areas; and

WHEREAS, the adoption of the Residential Land Study will result in compliance of the Wilsonville Comprehensive Plan with Statewide Planning Goal 10 – Housing, which satisfies a periodic review work program task; and

WHEREAS, the Wilsonville Planning Commission conducted eight work sessions, including two joint work sessions with the City Council, and hosted one public forum as part of the process that went into developing and shaping the Residential Land Study; and

WHEREAS, the Wilsonville Planning Director, taking into consideration input and suggested revisions provided by the Planning Commission members and the public, submitted proposed Wilsonville Residential Land Study to the Planning Commission, along with a Staff Report, in accordance with the public hearing and notice procedures that are set forth in Sections 4.008, 4.010, 4.011 and 4.012 of the Wilsonville Code; and

WHEREAS, the Planning Commission, after Public Hearing Notice was provided to a list of interested agencies, e-mailed to 33 people, mailed to eight people, and posted in three locations in the City and on the City website, and advertised in the Wilsonville Spokesman, held a Public Hearing on April 9, 2014 to review proposed Residential Land Study and gather additional testimony and evidence regarding the proposed amendment; and

WHEREAS, the Planning Commission duly considered the subject, including the staff recommendations and all the exhibits and testimony introduced and offered by all interested parties, and recommended that the City Council adopt the Residential Land Study as a sub-element of the Wilsonville Comprehensive Plan;

WHEREAS, the City Council has considered the Planning Commission's recommendation, the staff reports in this matter, and testimony and evidence of interested parties, and has evaluated the draft Residential Land Study against the Statewide Goals, state, county, and regional requirements, the Comprehensive Plan, and other applicable standards;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section1. Findings. The City Council hereby adopts as findings and conclusions the foregoing Recitals and the conclusionary findings in this matter attached hereto, marked as Exhibit 1 and incorporated by reference as if set forth fully herein.

Section 2. Amendments. The City Council adopts the Residential Land Study, attached hereto as Exhibit 2, as an amendment to and a sub-element of the Comprehensive Plan.

Section 3. Staff Directive. To reflect adoption of the Residential Land Study, staff is directed to make conforming changes to the Comprehensive Plan necessary to incorporate the amendments adopted herein.

SUBMITTED to the Wilsonville City Council and read for the first time at a regular meeting thereof on the 5th day of May, 2014, and scheduled for a second reading at a regular meeting of the Council on the 19th day of May, 2014, commencing at the hour of 7:00 P.M. at the Wilsonville City Hall.

_____

Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the ___ day of ___, 2014 by the following votes:

Yes:___ No: ___

_____

Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this _____ day of ____, 2014.

_____

TIM KNAPP, Mayor

SUMMARY OF VOTES:

Mayor Knapp -

Council President Starr -

Councilor Goddard -

Councilor Fitzgerald -

Councilor Stevens -

Exhibit 1
CONCLUSIONARY FINDINGS

In support of Approval of Application #LP14-0001
2014 Residential Lands Study

WILSONVILLE DEVELOPMENT CODE

Section 4.032. ***Authority of the Planning Commission.***

(.01) As specified in Chapter 2 of the Wilsonville Code, the Planning Commission sits as an advisory body, making recommendations to the City Council on a variety of land use issues. The Commission also serves as the City's official Committee for Citizen Involvement and shall have the authority to review and make recommendations on the following types of applications or procedures:

B. Legislative changes to, or adoption of new elements or sub-elements of, the Comprehensive Plan;

Response: The Residential Lands Study is a sub-element of the Comprehensive Plan. The Planning Commission conducted a public hearing and has provided the City Council with a recommendation of approval with minor modifications. The City Council is the final local authority on this Study. **These criteria are satisfied.**

Section 4.033. ***Authority of City Council.***

(.01) Upon appeal, the City Council shall have final authority to act on all applications filed pursuant to Chapter 4 of the Wilsonville Code, with the exception of applications for expedited land divisions, as specified in Section 4.232. Additionally, the Council shall have final authority to interpret and enforce the procedures and standards set forth in this Chapter and shall have final decision-making authority on the following:

B. Applications for amendments to, or adoption of new elements or sub-elements to, the maps or text of the Comprehensive Plan, as authorized in Section 4.198.

E. Consideration of the recommendations of the Planning Commission.

Response: The City Council has received a recommendation from the Planning Commission on the Residential Lands Study. The City Council is the final local authority regarding adoption of the Study, which will be adopted via Ordinance as a sub-element of the City's Comprehensive Plan. **These criteria are satisfied.**

(.02) When a decision or approval of the Council is required, the Planning Director shall schedule a public hearing pursuant to Section 4.013. At the public hearing the staff shall review the report of the Planning Commission or Development Review Board and provide other pertinent information, and interested persons shall be given the opportunity

to present testimony and information relevant to the proposal and make final arguments why the matter shall not be approved and, if approved, the nature of the provisions to be contained in approving action.

(.03) To the extent that a finding of fact is required, the Council shall make a finding for each of the criteria applicable and in doing so may sustain or reverse a finding of the Planning Commission or Development Review Board. The Council may delete, add or modify any of the provisions pertaining to the proposal or attach certain development or use conditions beyond those warranted for compliance with standards in granting an approval if the Council determines the conditions are appropriate to fulfill the criteria for approval.

Response: Following the public hearing before the Planning Commission, the Planning Director scheduled a public hearing before the City Council, at which time the Council will review the findings and recommendations provided by the Planning Commission. **At conclusion of the public hearing process, these criteria will be satisfied.**

Section 4.198. Comprehensive Plan Changes - Adoption by the City Council.

(.01) Proposals to amend the Comprehensive Plan, or to adopt new elements or sub-elements of the Plan, shall be subject to the procedures and criteria contained in the Comprehensive Plan. Each such amendment shall include findings in support of the following:

- *A. That the proposed amendment meets a public need that has been identified;*
- *B. That the proposed amendment meets the identified public need at least as well as any other amendment or change that could reasonably be made;*
- *C. That the proposed amendment supports applicable Statewide Planning Goals, or a Goal exception has been found to be appropriate; and*
- *D. That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.*

Response: The Goal 10 Residential Land Study is a Periodic Review requirement for the City (Tasks 1.B(a), 1.C(b), and 1.C(d)). Accordingly, the Study that has been prepared is in compliance with the requirements of Goal 10. The Study addresses the public need for residential land and adoption of the Study will not result in conflicts with other provisions of the Plan. **The above criteria are satisfied.**

Citizen Involvement
In recognition of Statewide Planning Goals and to provide a framework for development of park and recreation facilities, the following policy and implementation measures have been established:

GOAL 1.1 To encourage and provide means for interested parties to be involved in land use planning processes, on individual cases and City-wide programs and policies.

Policy 1.1.1 The City of Wilsonville shall provide opportunities for a wide range of public involvement in City planning programs and processes.

Response: Attachment 4 contains a list of public outreach that were part of the project to prepare the Study. Four community members with expertise in Wilsonville's housing market were interviewed at the start of the project, and provided valuable input to the project. In January 2014, the Committee for Citizen Involvement hosted a widely advertised public forum to present and discuss the project's findings and recommendations. At every stage of the project, documents and maps were posted to the City-hosted project web page. The project was highlighted in three articles in the City newsletter, which is mailed to every property in the 97070 zip code.

The Planning Commission was assigned the duty of fulfilling the role of project advisory committee on the Goal 10 Study. The City Council and Planning Commission conducted a total of eight work sessions on the strategies, policies, and recommendations contained in the Residential Lands Study. These work sessions were televised, streamed online, and open to the public. Public notice of the public hearing was mailed to affected agencies and interested individuals. **The above criteria have been met.**

Implementation Measure 1.1.1.a Provide for early public involvement to address neighborhood or community concerns regarding Comprehensive Plan and Development Code changes. Whenever practical to do so, City staff will provide information for public review while it is still in "draft" form, thereby allowing for community involvement before decisions have been made.

Response: The Planning Commission practice is to conduct a minimum of one work session per legislation agenda item allowing for early involvement into the concepts being proposed. The Commission held eight work sessions on this item, in addition to two joint meetings with City Council. Technical memoranda were posted on the project website throughout the project, and draft versions of the Study and Technical Report have been available in paper and digital form, as well as on the City web site, since December 2013. **This criterion is met.**

Implementation Measure 1.1.1.e Encourage the participation of individuals who meet any of the following criteria:

1. *They reside within the City of Wilsonville.*
2. *They are employers or employees within the City of Wilsonville.*
3. *They own real property within the City of Wilsonville.*

4. *They reside or own property within the City's planning area or Urban Growth Boundary adjacent to Wilsonville.*

Response: Through the public forum, work sessions, public notification, and public hearing schedule, the City has encouraged the participation of a wide variety of individuals addressing the groups listed above. **This criterion is met.**

Implementation Measure 1.1.1.f Establish and maintain procedures that will allow any interested parties to supply information.

Response: The established procedures, public notification process and City web site notifications all allow interested parties to supply information. The City's Citizen Request Module (CRM) provides another venue for citizens to comment on projects. **This criterion is met**.

GOAL 1.2: For Wilsonville to have an interested, informed, and involved citizenry.

Policy 1.2.1 The City of Wilsonville shall provide user-friendly information to assist the public in participating in City planning programs and processes.

Response: Through the open houses, work session schedule, public hearing notices, available Planning Commission meeting minutes and project-related materials and announcements on the City website, Council liaison reports and Boones Ferry Messenger articles, the City has informed and encouraged the participation of a wide variety of individuals. **This criterion is met**.

Urban Growth Management

Goal 2.1: *To allow for urban growth while maintaining community livability, consistent with the economics of development, City administration, and the provision of public facilities and services.*

Policy 2.2.1: *The City of Wilsonville shall plan for the eventual urbanization of land within the local planning area, beginning with land within the Urban Growth Boundary.*

Response: The Study supports the Plan in its approach to plan for future residential development in the Frog Pond area. **This criterion is met**.

Land Use and Development

Policy 4.1.4 The City of Wilsonville shall provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville.

Implementation Measure 4.1.4.b Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City's desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also

recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.

Implementation Measure 4.1.4.d *Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.*

Response: The Study demonstrates that development in Wilsonville is implementing its policies for creating a diverse stock of housing, and that a variety of housing types and price levels are provided. The Study concludes that though Wilsonville will have an on-going need for housing affordable to lower-income households, the City is planning for needed housing types for households at all income levels. **This criterion is met**.

Implementation Measure 4.1.4.e *Targets are to be set in order to meet the City's Goals for housing and assure compliance with State and regional standards.*

Response: The City must meet housing mix targets set in OAR 660-007. The study demonstrates that Wilsonville is complying with these standards. **This criterion is met**.

Implementation Measure 4.1.4.u *To provide variety and flexibility in site design and densities, residential lands shown on the Land Use Map of the Comprehensive Plan have been divided into districts, with different density ranges for each district. In all residential developments, other than those that are so small that it is not mathematically feasible to achieve the prescribed minimum density, the 80% minimum shall apply. The following density ranges have been prescribed for each district:*

Density:

0-1 units/acre
2-3 units/acre
4-5 units/acre
6-7 units/acre
10-12 units/acre
18-20 units/acre

Response: For land designated as Residential on the Comprehensive Plan map, the density assumptions for the capacity analysis are based on the low and high density allowed, per the above measure. **This criterion is supported by the proposal**.

STATEWIDE PLANNING GOALS

Statewide Planning Goal #1 - Citizen Involvement (OAR 660-015-0000(1)): *To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.*

Response: Work sessions were held with both the Planning Commission and City Council throughout the project.

The City of Wilsonville has provided notice of public hearings before the Planning Commission and City Council hearings, consistent with the Planning and Land Development Ordinance requirements. Such notices were posted in the newspaper, and were provided to a list of interested agencies, emailed to 33 interested parties, mailed to 8 parties, and posted in three locations throughout the City and on the City's website. Notice was published in the Wilsonville Spokesman.

At the upcoming public hearing, the public will be afforded an opportunity to provide public testimony to the City Council (see Attachment 4, Public Involvement Summary). **This goal is met.**

Statewide Planning Goal #2 - Land Use Planning (OAR 660-015-0000(2)): *To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.*

Response: This goal is implemented through the applicable Goals and Policies in the Land Use and Development section of the Wilsonville Comprehensive Plan. Because the Residential Lands Study is a sub-element of the City's Comprehensive Plan, the application to adopt the Study was processed pursuant to the legislative decision process outlined in Section 4.032 and Section 4.033 of the Development Code.

Notice was provided to DLCD 35 days prior to the first scheduled public hearing as required.

The Study was developed in coordination with DLCD, Metro, and surrounding counties and was developed to be consistent with those applicable regulations, as is provided later in this set of findings.

The Study and associated amendments are consistent with Statewide Planning Goal 2. **This goal is met.**

Statewide Planning Goal #5 – Natural Resources, Scenic and Historic Areas, and Open Spaces (OAR 660-015-0000(5)): *To protect natural resources and conserve scenic and historic areas and open spaces.*

Response: This goal is implemented through the applicable Park/Recreation/Open Space Goals and Policies in the Public Facilities and Services section of the Comprehensive Plan. The City

Code contains specific review criteria for uses within a Significant Resource Overlay Zone (Development Code Section 4.139.00, SROZ Ordinance) to ensure that designated Goal 5 resources are appropriately considered when development is proposed. Goal 5 resources were considered part of the Buildable Lands Inventory that is included in the Residential Lands Study Technical Report. **This goal is met.**

Statewide Planning Goal # 7 – **Areas Subject to Natural Disasters and Hazards:** *To protect people and property from natural hazards.*

Response: Areas subject to natural disasters and hazards, such as floodplain, have been considered in the development of the Buildable Lands Inventory. **This goal is met.**

Statewide Planning Goal #10 – Housing (OAR 660-015-0000(10)): *To provide for the housing needs of citizens of the state.*

Response:
Compliance with Goal 10 is a Periodic Review work program requirement for the City (Tasks 1.B(a), 1.C(b), and 1.C(d)). The proposed amendment is consistent with Goal 10 by directing the City to maintain policies that provide adequate housing for the needs of the community. The proposed strategy for future growth builds on housing policies already in place in the community. The Study includes the following key findings and recommendations:

- Wilsonville is a city of 21,000 people that has been growing at an average annual rate of 3.2% between 2000-2012, faster than the tri-county region. This is faster than the Metro forecast for 1.8% annual growth.
- Wilsonville's existing housing stock is 50% multi-family, 41% single-family, and 9% single-family attached.
- Wilsonville is meeting Goal 10 requirements to "provide opportunity for at least 50 percent of new residential units to be attached single-family housing or multiple-family housing," and to "provide for an overall density of 8 or more dwelling units per net buildable acre."
- Median household income in the 2007-2011American Community Survey was $55,316, 13% less than the median for Clackamas County. 41% of Wilsonville households are cost burdened, a comparable rate to the rest of the region.
- Wilsonville had 477 gross acres of developable residential land in 2013.
- Assuming the Frog Pond area is developed at 5 - 8.5 units per gross acre, the capacity of the Wilsonville planning area is for 3,390 – 4,229 units.
- If Wilsonville grows faster than the Metro forecasted growth rate, the City will run out of residential land before 2030. The Study recommends that the City begin planning for future urbanization of the Advance Road Urban Reserve, and consider planning for more housing in the Town Center area.
- Amendments to the Development Code will be required to fully comply with Goal 10 and related statutes. These amendments are on the City's work program and will be addressed in a future proposal.

Metropolitan Housing Rule (OAR 660-07-0000)

OAR 660-007-0030 - New Construction Mix

(1) Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances.

Response:
When estimating land capacity and future need for the Residential Land Study, Wilsonville's assumed housing mix meets the requirement of OAR 660-007-0030 to "designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single-family housing or multiple-family housing." Wilsonville's housing need projection (e.g., needed mix of housing) is for: 50% single-family detached (1,875 dwelling units), 10% single-family attached (375 dwelling units), and 40% multi-family housing (1,499 dwelling units).

The residential capacity analysis shows that, based on existing policies, Wilsonville has designated sufficient buildable land to provide opportunity for 48% single-family detached and 52% single-family attached and multi-family housing. This planned capacity is consistent with the requirement of OAR 660-007-0030(1).

Both capacity scenarios exceed the State requirement (OAR 660-007-0035(2)) to "provide for an overall density of eight or more dwelling units per net buildable acre." The low capacity scenario results in an average density of 8.7 dwelling units per net acre and the high capacity scenario results in an average density of 10.9 dwelling units per net acre.

OAR 660-007-0035: Minimum Residential Density Allocation for New Construction

The following standards shall apply to those jurisdictions which provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing:
(2) Clackamas and Washington Counties, and the cities of Forest Grove, Gladstone, Milwaukie, Oregon City, Troutdale, Tualatin, West Linn and Wilsonville must provide for an overall density of eight or more dwelling units per net buildable acre.

Response:
Based on the City's Comprehensive Plan, the City has met the requirement of OAR 660-007-0030. See Table 6-6 in the Residential Land Study Technical Report, which includes average and citywide development densities for suitable buildable land. In calculating the capacity of buildable land for residential development, Wilsonville's assumed average (citywide) housing density is 7.1 dwelling units per gross acre, which is an average of about 8.7 dwelling units per net acre. Wilsonville's assumed average density of 8.7 dwelling units per net acre meets the requirements of OAR 660-007-0035 to "provide for an overall density of eight or more dwelling units per net buildable acre".

Additionally, development in Wilsonville is effectively implementing the adopted policies. Between 2000 and 2012, Wilsonville's average residential development density was 12.4 dwellings per net acre. OAR 660-007 requires that Wilsonville designate land to allow the opportunity for housing development with a minimum density of 8 dwelling units per net acre for new development. Between 2000 and 2012, Wilsonville exceeded this target.

This standard is met.

Goal 14 – Urbanization:
The City has an adopted Comprehensive Plan that complies with this goal. The proposal will not impact this goal, as it only involves land that is within the City and Metro urban growth boundary.

OREGON REVISED STATUTES

Urban Growth Boundaries and Needed Housing within Boundaries (ORS 197.295 - 197.314)

ORS 197.296: Factors to establish sufficiency of buildable lands; Residential housing patterns. This section establishes the requirements for conducting a residential Buildable Lands Inventory (BLI) and housing needs and capacity analysis. It requires lands zoned for needed housing be in locations appropriate for the housing types identified.

(1) (a) The provisions of this section apply to metropolitan service district regional framework plans and local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of 25,000 or more.

Response: Wilsonville is located within the Metropolitan Service District boundary.

(2) At periodic review ...or at any other legislative review of the comprehensive plan or regional plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use, a local government shall demonstrate that its comprehensive plan or regional plan provides sufficient buildable lands within the urban growth boundary established pursuant to statewide planning goals to accommodate estimated housing needs for 20 years. The 20-year period shall commence on the date initially scheduled for completion of the periodic or legislative review.

Response: Wilsonville's Comprehensive Plan is undergoing Periodic Review, and completion of the Residential Lands Study is a required product to complete Periodic Review Task 1B – Housing. The City's original Periodic Review schedule was to complete this task by 1997, but the project was delayed until 2007, and once begun a report was not completed. Due to the delay, and to correspond with the Metro regional growth forecast, the 20-year forecast period for the 2014 Residential Land Study is 2014 – 2034.

(3) In performing the duties under subsection (2) of this section, a local government shall:

(a) Inventory the supply of buildable lands within the urban growth boundary and determine the housing capacity of the buildable lands; and

(b) Conduct an analysis of housing need by type and density range, in accordance with ORS 197.303 and statewide planning goals and rules relating to housing, to determine the number of units and amount of land needed for each needed housing type for the next 20 years.

Response: The foundation of the Study is the City's buildable lands analysis, which identified existing supply of land available in the Wilsonville planning area for residential development. The methodology for this analysis was reviewed by staff from DLCD and Metro, and modified in response to this feedback. The inventory of buildable lands determined that 477.3 gross acres of buildable land are available and suitable for residential development.

Metro's adopted population forecast for Wilsonville was used to determine an annual growth rate that then allowed for a calculation of the amount of land that will be required for future housing needs. Table 5-4 in the Residential Land Study Technical Report estimates the number of dwelling units and gross acres needed for each needed housing type for the next 20 years.

Table 5-1. Forecast of needed housing units by mix and density, Wilsonville planning area, 2014-2034

Housing Type	New Dwelling Units (DU)	Percent	Density (DU/gross acre)	Gross Acres
Single-family detached	1,875	50%	5.0	375
Single-family attached	375	10%	10.0	38
Multifamily	1,499	40%	13.0	115
Total	**3,749**	**100%**	**7.1**	**528**

Source: ECONorthwest

(4)(a) For the purpose of the inventory described in subsection (3)(a) of this section, buildable lands includes: (A) Vacant lands planned or zoned for residential use; (B) Partially vacant lands planned or zoned for residential use; (C) Lands that may be used for a mix of residential and employment uses under the existing planning or zoning; and (D) Lands that may be used for residential infill or redevelopment.

Response: The BLI methodology analyzed "buildable lands" as defined in this subsection.

(b) For the purpose of the inventory and determination of housing capacity described in subsection (3)(a) of this section, the local government must demonstrate consideration of:

(A) The extent that residential development is prohibited or restricted by local regulation and ordinance, state law and rule or federal statute and regulation;

(B) A written long term contract or easement for radio, telecommunications or electrical facilities, if the written contract or easement is provided to the local government; and

(C) The presence of a single family dwelling or other structure on a lot or parcel.

Response: Wilsonville's housing capacity was estimated as defined in this subsection. Buildable lands were identified in all areas where residential development is likely to occur, as outlined in the Wilsonville Comprehensive Plan: the Residential and Village plan districts, portions of the Commercial district that allows for mixed use, and the Area of Special Concern L (Frog Pond planning area). Such areas that also include the public easement to the Bonneville Power Authority were excluded from the inventory. As documented in the BLI Methodology Memorandum dated July 2013, structures existing on lots were identified and then the underlying lot was classified as either not available, dividable, or redevelopable. Wilsonville's capacity for new residential units is estimated to be between 3,390 and 4,229 dwelling units. This range reflects the allowed range of densities allowed in the adopted Plan and zoning for residential land within Wilsonville. Wilsonville's estimated need for 3,749 units falls within this capacity range.

(c) Except for land that may be used for residential infill or redevelopment, a local government shall create a map or document that may be used to verify and identify specific lots or parcels that have been determined to be buildable lands

Response: The BLI map illustrates the specific lots determined to be buildable lands.

(5)(a) Except as provided in paragraphs (b) and (c) of this subsection, the determination of housing capacity and need pursuant to subsection (3) of this section must be based on data relating to land within the urban growth boundary that has been collected since the last periodic review or five years, whichever is greater. The data shall include:

(A) The number, density and average mix of housing types of urban residential development that have actually occurred;

(B) Trends in density and average mix of housing types of urban residential development;

(C) Demographic and population trends;

(D) Economic trends and cycles; and

(E) The number, density and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

Response: The determination of housing need and capacity is based on building and housing data collected by the City and also Census data. Wilsonville last completed Periodic Review of its Comprehensive Plan in 1988. The period used in the analysis of housing density and mix is 2000 to 2012 for the following reasons:

- Wilsonville's building permit data is available in a database that tracks information since 2005. Data prior to 2005, building permit data is only available on a permit-by-permit basis, from paper records. Compiling an accurate, complete historical database of residential development from 1980 to 1999 would be time consuming for City staff.

  The City also has a database of dwelling units by year that dates back to 1980 and describes the mix of dwelling unit types in Wilsonville. To ensure accuracy for this study, the City checked building permit data against the database of dwelling units.

- In addition, the City changed development policies in 2000, with substantial revisions to its Zoning Code. Among other changes, this revision included the addition of density requirements in planned unit development areas, which include the majority of vacant residential land in Wilsonville. Even if staff were able to develop an accurate database of development between 1980 and 1999, this development occurred under outdated development policies and is not reflective of current residential development policies.

(6) If the housing need determined pursuant to subsection (3)(b) of this section is greater than the housing capacity determined pursuant to subsection (3)(a) of this section, the local government shall take one or more of the following actions to accommodate the additional housing need...

Response: Wilsonville's capacity for new residential units is estimated to be between 3,390 and 4,229 dwelling units. This range reflects the allowed range of densities allowed in the adopted Plan and zoning for residential land within Wilsonville. Wilsonville's estimated need for 3,749 units falls within this capacity range, but given Wilsonville's historic growth pattern it is likely that the city does not have sufficient land to accommodate forecasted growth. The Residential Land Study concludes that Wilsonville may have need for additional residential land, by 2032 or sooner. Advance Road was identified as an Urban Reserve area for residential uses. The City is beginning to plan for development of Advance Road, through the Concept Planning process for Frog Pond and Advance Road. The City will work with Metro to begin discussions about bringing Advance Road into the UGB, while also exploring accommodation of more housing in the Wilsonville Town Center area.

The requirements of 197.296 have been met.

ORS.197.307: Effect of need for certain housing in urban growth areas;

Subsection (3): *When a need has been shown for housing within an urban growth boundary at particular price ranges and rent levels, needed housing shall be permitted in one or more zoning districts or in zones described by some comprehensive plans as overlay zones with sufficient buildable land to satisfy that need.*

Response

The Wilsonville Comprehensive Plan allows a variety of housing types in the Residential and Village designations. Additionally, multifamily housing is allowed in the Commercial designation in a limited fashion. This allowance is implemented through the adopted Wilsonville Development Code, which has and will continue to allow for a variety of needed housing to be provided throughout the City, including single-family detached, single-family attached, multi-family, accessory dwelling units, and manufactured homes. As shown in Table 6-3 of the Residential Land Study, capacity exists on buildable land to accommodate a wide range of housing densities, and therefore housing types. **The requirements of 197.307 have been met.**

METRO FUNCTIONAL PLAN

Title 1: Requirements for Housing and Employment Accommodation – *Use land within the UGB efficiently by increasing its capacity to accommodate housing and employment. Each city and county in the region should consider actions to accommodate its share of regional growth.*

Response: The Study includes data and findings to demonstrate that Wilsonville is surpassing regional goals while implementing locally adopted plans. Wilsonville is in compliance with Title 1, and has surpassed the Table 3.07-1 goal for dwelling unit capacity. No change to the capacity of any Plan designation is proposed.

Title 6: Central City, Regional Centers, Town Centers, and Station Communities – *Enhance Centers by encouraging development in these Centers that will improve the critical roles they play in the region and by discouraging development outside Centers that will distract from these roles.*

Response: The estimate of residential capacity includes 200-270 dwelling units on vacant or partially vacant and in and near the Town Center. One of the Study's recommendations is for the City to update the vision and master plan for Town Center to determine the potential market for housing.

Title 7: Housing Choice – *Establish voluntary affordable housing production goals to be adopted by local governments and assistance from local governments on reports on progress toward increasing the supply of affordable housing.*

Response: Wilsonville is in compliance with Title 7. The City of Wilsonville has a variety of publicly and privately assisted housing options, including housing for people with physical and mental disabilities. **Error! Reference source not found.** of the Residential Land Study Technical Report shows affordable housing developments existing within Wilsonville in 2013. Wilsonville has seven low cost apartment complexes for low-income residents, with a total of 474 units. The units are a mixture of 1-, 2-, and 3-bedroom units. While some developments have low or no vacancies, some developments have available units.

The City of Wilsonville supports the development and operations of affordable housing through exempting low-income housing from property taxes. Five of the seven apartment complexes in **Error! Reference source not found.** were exempted from property taxes in 2013. The City estimates the tax exemptions will lower rent at these five complexes by a total of $277,000 over a twelve-month period.[1]

The requirements of Metro Functional Plan Titles 1, 6, and 7 have been met.

GENERAL CONCLUSIONARY SUMMARY OF FINDINGS

The Residential Lands Study complies, with applicable Statewide Planning Goals, Metro regulations, the Wilsonville Comprehensive Plan, and applicable provisions of the City's Development Code. Specifically, the City complies with the Metropolitan Housing Rule (OAR, Division 7).

[1] Wilsonville City Council Meeting Staff Report, April 15, 2013.

Wilsonville Residential Land Study March 2014

And

Wilsonville Residential Land Study: Technical Report, March 2014

Are Bound Separately.

ORD. 742

WILSONVILLE
RESIDENTIAL LAND STUDY

March 2014

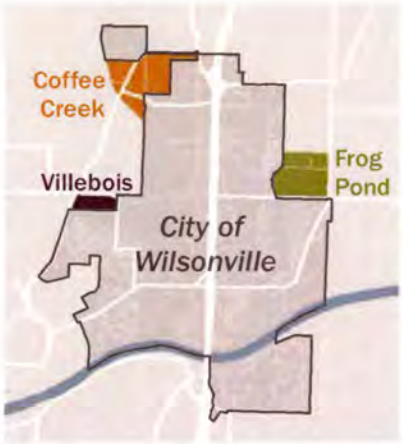
DRAFT

City of
WILSONVILLE
OREGON

ECONorthwest
ECONOMICS • FINANCE • PLANNING

Summary

Wilsonville is actively planning to accommodate future population and employment.



WILSONVILLE PLANNING AREA

Coffee Creek, Frog Pond, and Villebois are currently outside Wilsonville city limits but are included in the Wilsonville Planning Area.

The City of Wilsonville, Oregon, features high-quality neighborhoods, popular amenities, and a healthy job base. The City's population has grown continuously over time, even during the Great Recession. Between 2000 and 2012, Wilsonville added 6,500 new people—an increase of 47%. This growth has continued throughout the economic recovery: between July 2012 and July 2013, Wilsonville added more than 1,000 new residents.

Population growth creates a need for housing. Wilsonville is actively planning to accommodate future population and employment. This report, the Wilsonville Residential Land Study, is a key part of the City's planning efforts. Key findings of the study include the following:

- **Wilsonville is planning for a complete, balanced community.** The Wilsonville Comprehensive Plan includes a balanced portfolio of different housing types that are well designed and will be developed across the community to serve different people at different points in their lives.
- **Wilsonville's Comprehensive Plan and Development Code meet state requirements.** The City's primary obligations are to (1) designate land in a way that 50% of new housing could be either multifamily or single-family attached housing; (2) achieve an average density of 8 dwelling units per net acre; and (3) provide enough land to accommodate forecasted housing needs for the next 20 years.
- **Under current Comprehensive Plan policies, Wilsonville can achieve a development mix of 50% single-family detached and 50% single-family attached and multifamily housing.** This assumes that Frog Pond is planned exclusively for single-family housing.
- **Wilsonville has historically grown faster than Metro's growth forecasts.** Recent trends suggest that Wilsonville is likely to grow faster than Metro's forecasts predict. The implication of faster growth is that the City needs to plan for housing in Town Center and Advance Road to meet the forecasted need. These areas will be needed to accommodate more housing in the next 20 years.
- **Wilsonville is anticipating significant employment growth in the next 20 years.** Many people who work in Wilsonville live in other communities. Providing housing options in close proximity to employment centers could reduce pressures on the transportation system and reduce household commuting costs.

Introduction

The Residential Land Study provides Wilsonville with a factual basis to support future planning efforts related to housing and options for addressing unmet housing needs in Wilsonville. It provides information that informs future planning efforts such as the Frog Pond and Advance Road Concept Plan, but it is not intended to be prescriptive about how Wilsonville meets housing needs. The Study is a background document that supports the Wilsonville Comprehensive Land Use Plan. It provides the City with information about the housing market in Wilsonville and describes the factors that will affect housing demand in Wilsonville in the future, such as changing demographics and potential changes to commuting patterns.

In addition, the Residential Land Study is intended to comply with Statewide Planning Goal 10, which governs planning for housing and residential development. Goal 10 requires the City to plan for housing that meets identified needs for housing within an urban growth boundary, at particular price ranges and rent levels. In short, Wilsonville must plan for a range of housing types at a range of price levels.

The Wilsonville Residential Land Study focuses on planning over the 2014 to 2034 period, using Metro's forecasts of housing growth and historical development trends in Wilsonville from 2000 to 2012. The study considers an alternative forecast for growth to illustrate housing demand if Wilsonville continues to grow faster than Metro's growth forecasts. City staff and decisionmakers can use information in the study to inform their work with Metro to expand the regional urban growth boundary.

The purpose of the Residential Land Study is to help decision makers develop policies to guide residential development over the next twenty years.

PRODUCTS OF THE RESIDENTIAL LANDS STUDY

Summary of the Comprehensive Plan

"The City of Wilsonville shall provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville."

Wilsonville Comprehensive Plan, Policy 4.1.4

Wilsonville has a history of pro-active planning to accommodate residential development. Wilsonville's Planning and Land Development Ordinance is structured and implemented differently than the codes of most other cities.

When Wilsonville incorporated in the 1960s, much of the land in the City was greenfields. By 1971, the City had a General Plan that included a goal related to affordable housing, plus the following objectives:

- Establish residential areas that are safe, convenient, healthful, and attractive places to live
- Encourage variety through the use of clusters and planned developments
- Develop a renewal program to update the "Old Town" area

Wilsonville has a unique and flexible market-based system of planning for and permitting residential development. Since Wilsonville's Comprehensive Plan was initially acknowledged in 1980, Wilsonville has planned for growth of an industrial base surrounded by quality residential areas that feature a mix of single- and multifamily development, with an emphasis on open space and the natural environment. The 1988 plan update identified several issues that continue to be issues today:

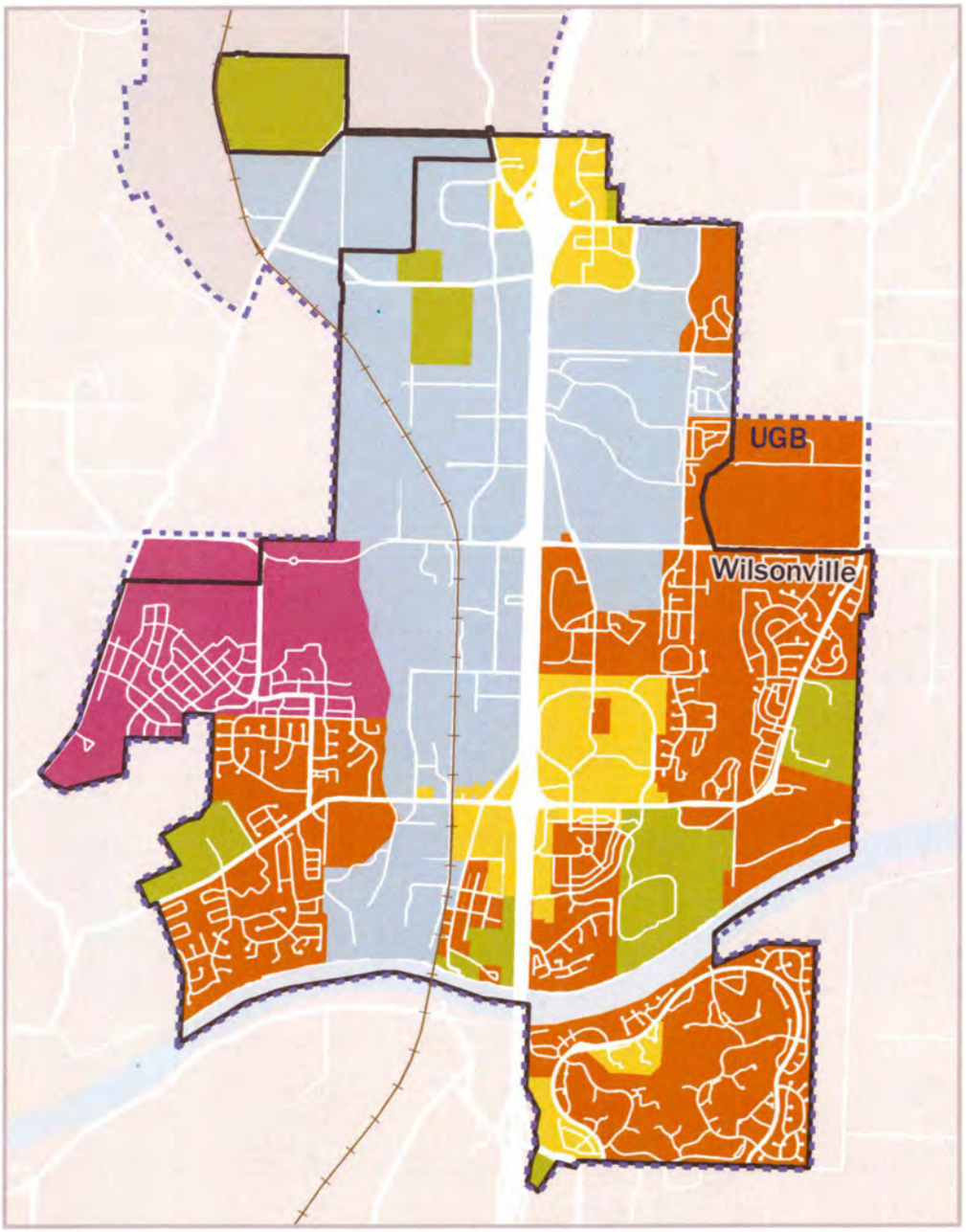
- The majority of workers employed in Wilsonville do not live in the City
- Housing in Wilsonville is not affordable to much of the community's workforce
- Loss of existing mobile home parks will decrease the amount of affordable housing

Since 1980, the Comprehensive Plan has established 4 to 6 residential districts, each with a different planned density of between one and 20 dwelling units per acre. In Wilsonville's Comprehensive Plan map, one of these districts was applied to all land planned for residential development. Over time, policy and language has been modified but, in general, the Plan has consistently allowed a range of densities around the city and encouraged a range of housing types.

In sum, Wilsonville has long had a strong vision to provide a mix of housing types that match the financial capacity of the community. That commitment is reflected in the City's Comprehensive Plan and implementing ordinances and played a big role in the residential development pattern seen in Wilsonville in 2013.

Providing a mix of housing types and densities to create a whole community was envisioned in the original Comprehensive Plan map and text—a vision that the City has consistently implemented.

COMPREHENSIVE PLAN MAP



Snapshot of Wilsonville

Population and housing characteristics are useful for better understanding Wilsonville and the people who live here. Characteristics such as population growth, age of residents, household size and composition, commuting patterns, average pay per employee, and home ownership provide useful information about the City's historical development patterns and how Wilsonville fits into Clackamas County, Washington County, and the broader Portland Region (defined here as Multnomah, Clackamas, and Washington counties.)

Unless otherwise noted, all data in this document are from the U.S. Census.

Wilsonville is growing.

Between 2000 and 2012, Wilsonville grew faster than the tri-county region. Wilsonville added more than 6,500 residents between 2000 and 2012.

Wilsonville's location, transportation connections, and mix of amenities are attractive to younger people who want to live in the southern part of the Portland Region.

AVERAGE POPULATION GROWTH PER YEAR, 2000-2012

POPULATION, 2012

Source: Portland State University, Population Research Center

Wilsonville	Clackamas Co.	Washington Co.	Portland Region
20,515	381,680	542,845	1,672,970

Wilsonville is young.

Wilsonville has a relatively young median age and a large share (34%) of young working-age residents.

MEDIAN AGE, 2010

Wilsonville	Clackamas Co.	Washington Co.
36	41	35

PERCENT OF RESIDENTS WHO ARE 18-39 YEARS OLD, 2010

AVERAGE NUMBER OF PEOPLE PER HOUSEHOLD, 2010

2.3	2.6	2.6	2.5
Wilsonville	Clackamas Co.	Washington Co.	Portland Region

Wilsonville has smaller household sizes than the regional average.

PERCENT OF HOUSEHOLDS THAT ARE SINGLE-PERSON, 2010

Wilsonville	Clackamas Co.	Washington Co.	Portland Region

Wilsonville has large shares of single-person and non-family households.

Wilsonville attracts younger 1 or 2 person households. Wilsonville also has a higher percentage of older households, in part because of senior housing developments and Charbonneau.

PERCENT OF HOUSEHOLDS THAT ARE NON-FAMILY, 2007-2011

A family household is one in which the householder is related to at least one other person in the household by birth, marriage, or adoption. Non-family households include people living alone, unmarried couples, and unrelated housemates.

Wilsonville	Clackamas Co.	Washington Co.	Portland Region

PERCENT OF HOUSEHOLDS THAT RENT, 2010

54%	31%	39%	40%
Wilsonville	Clackamas Co.	Washington Co.	Portland Region

More than half of households in Wilsonville rent.

Wilsonville has a higher percentage of renters than other cities in the region.

Commuting Trends

Wilsonville imports workers from the Portland Region.

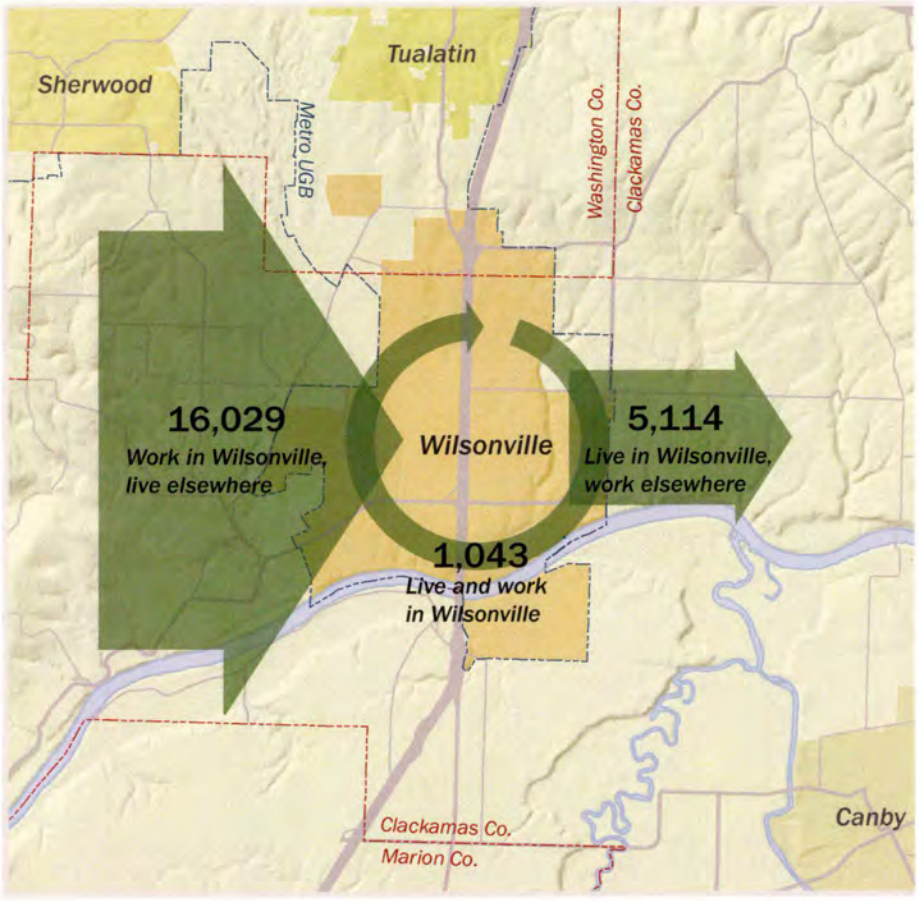
About 16,000 people commute to Wilsonville to work, mostly from Clackamas and Washington counties.

Relatively few people–about 1,000–live and work in Wilsonville.

The majority of Wilsonville's workers commute to work in other parts of the Portland Region.

About 5,100 workers commute from Wilsonville to work across the Portland Region.

EMPLOYMENT INFLOW AND OUTFLOW, 2010



Nearby cities have similar commuting patterns to Wilsonville.

PERCENT OF WORKERS WHO COMMUTE IN, 2010

Wilsonville	Tualatin	Oregon City	Tigard
92%	93%	85%	92%
(16,029 out of 17,072)	(18,827 out of 20,142)	(10,221 out of 11,961)	(34,142 out of 37,034)

PERCENT OF WORKING RESIDENTS WHO COMMUTE OUT, 2010

Wilsonville	Tualatin	Oregon City	Tigard
83%	88%	86%	86%
(5,114 out of 6,157)	(9,501 out of 10,816)	(10,589 out of 12,329)	(17,917 out of 20,809)

Characteristics of Wilsonville's Workforce

In 2011, Wilsonville had more than 17,800 jobs at more than 900 businesses.

AVERAGE PAY PER EMPLOYEE, 2011

Source: Oregon Employment Department, Quarterly Census of Employment and Wages

$54,534	$43,400	$56,600	$49,400
Wilsonville	Clackamas Co.	Washington Co.	Portland Region

6 out of Wilsonville's 10 largest employers are manufacturers.

WILSONVILLE JOBS BY SECTOR OF FIRM, 2011

1 square represents 100 jobs. Source: Oregon Employment Department, Quarterly Census of Employment and Wages

Manufacturing (4,600 jobs / 26%)

Wholesale Trade (2,300 jobs / 13%)

Other Industrial (1,600 jobs / 9%)

Retail Trade (1,900 jobs / 10%)

Other Services (6,300 jobs / 35%)

Government (1,100 / 6%)

AVERAGE PAY PER EMPLOYEE, WILSONVILLE, 2011

Source: Oregon Employment Department, QCEW

Manufacturing: $69,700

Wholesale Trade: $60,300

Other Industrial: $51,900

Retail Trade: $31,200

Other Services: $49,900

Government: $49,700

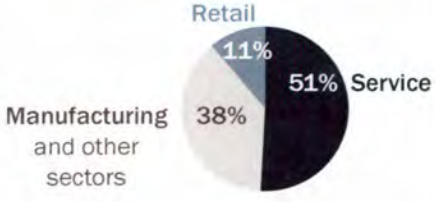
METRO FORECAST OF JOB GROWTH, 2010 TO 2035

Metro forecasts that employment in and around Wilsonville will grow by nearly 14,000 jobs by 2035. About half of this growth is expected to be in jobs with higher-than-average pay, such as manufacturing. This growth will increase demand for all types of housing in Wilsonville, with the biggest increase in demand for owner-occupied single-family detached housing.

Metro forecasts an increase in the highest paying jobs, such as manufacturing.

Wilsonville Planning Area

9,000 new jobs



Coffee Creek, West Railroad, and Basalt Creek

4,900 new jobs

The City is planning for approximately 1,100 jobs in Coffee Creek by 2020.

Snapshot of Wilsonville's Housing

Analysis of historical development trends in Wilsonville provides insights into how the local housing market functions in the context of the region. The Portland Region is expected to add nearly 300,000 new households by 2035. Population employment growth forecasts suggest that Wilsonville's housing market will remain strong for a long time to come, despite the recent downturn in the regional and national housing market.

HOUSING TYPES

Single-family detached (includes mobile and manufactured homes)

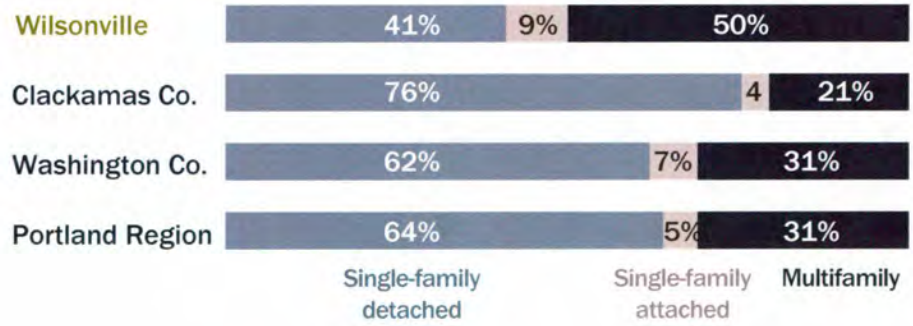
Single-family attached (townhouses)

Multifamily (condos, apartments, duplexes)

Wilsonville has a wider range of housing types than the regional average.

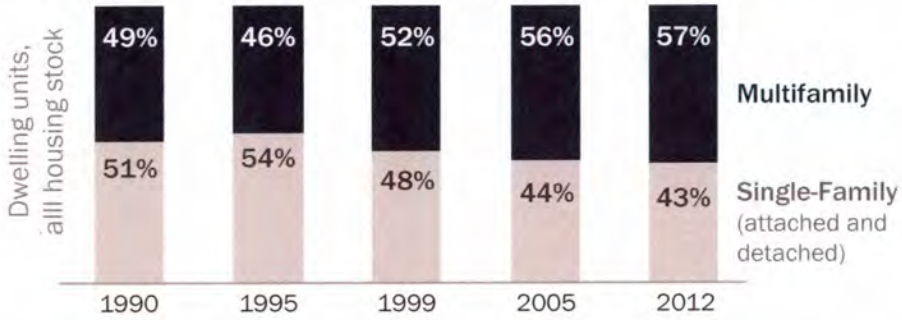
MIX OF EXISTING HOUSING, 2007-2011

Note that the housing mix shown below compares Wilsonville to all of Clackamas and Washington counties.



CHANGE IN HOUSING MIX, WILSONVILLE, 1990-2012

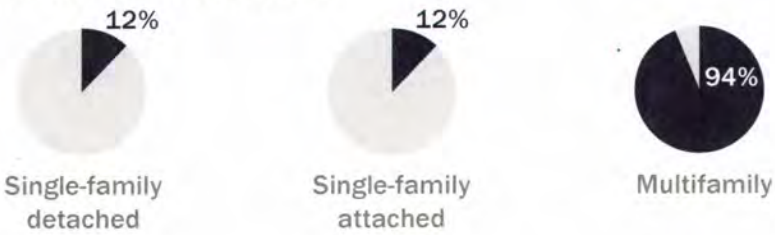
Source: 1990: Annual City housing inventory report, 1995: Annual City housing inventory report, 1999: Comprehensive Plan, 2005: 2005 Wilsonville Housing Study, 2012: Annual City housing inventory report



The amount of multifamily housing in Wilsonville increased over the last decade.

Two-thirds of units permitted during the 2000-2013 period were multifamily housing.

PERCENT OF WILSONVILLE HOUSING UNITS THAT ARE RENTER-OCCUPIED, 2007-2011



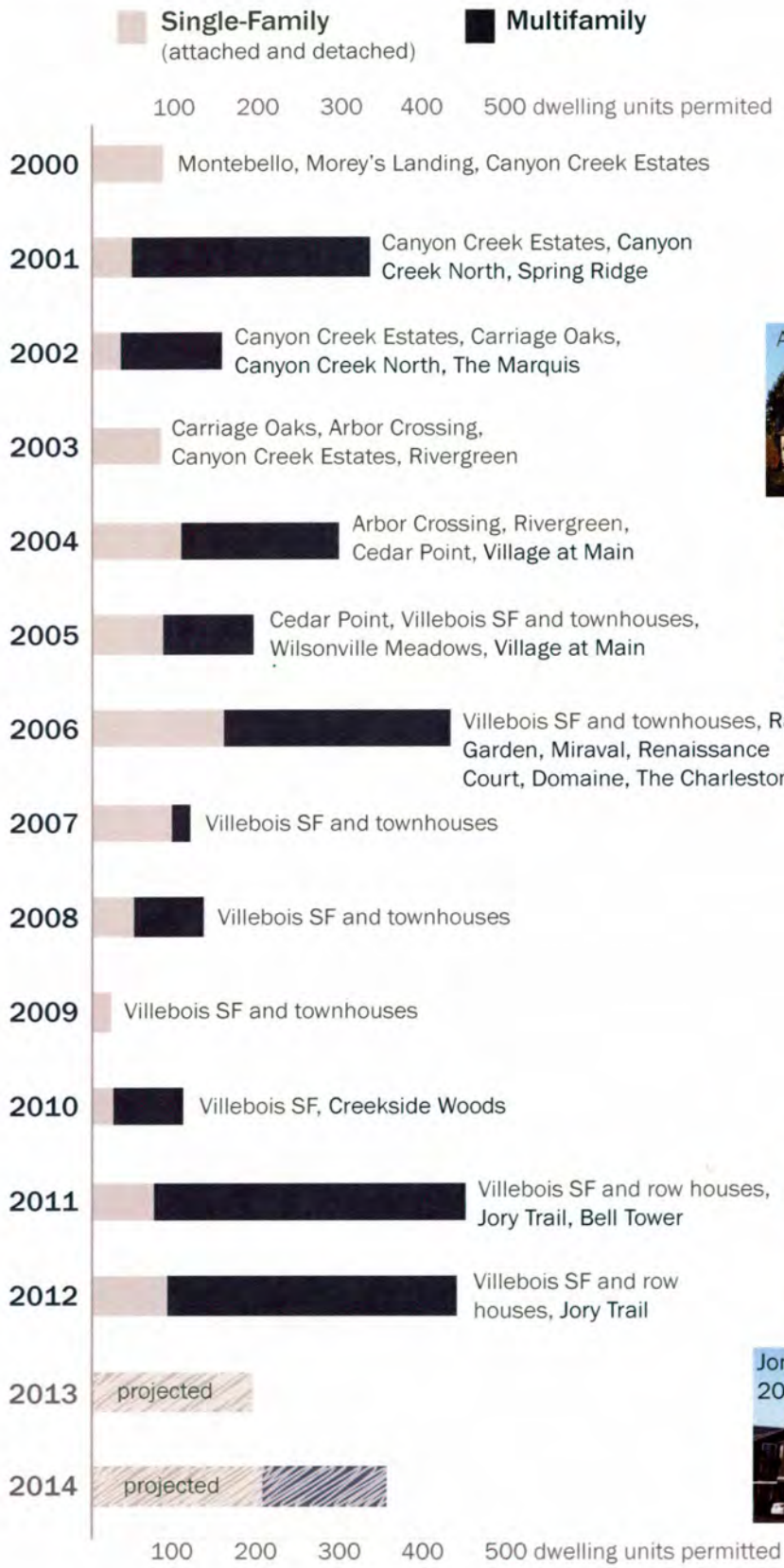
Homeownership and housing type are related.

Although most single-family housing is owner occupied, 12% is occupied by renters.

The development timeline on the following page summarizes recent single-family and multifamily development in Wilsonville. Between 2000 and 2012, Wilsonville permitted 2,862 housing units, 1,892 (66%) of which were multifamily. New multifamily developments in Wilsonville serve a diverse range of people and are located throughout the City. Types of new development include:

- **Market-rate apartments and townhouses** with amenities like patios, fitness centers, and high-speed internet. Examples include Jory Trail at the Grove, Domaine, Bell Tower, and Village at Main.
- **Senior living**, both assisted and independent, with amenities such as housekeeping, on-site library, social or recreational activities, and laundry service. Examples include Spring Ridge and the Marquis.
- **Government-subsidized affordable housing**, some of which is designated for seniors or people with mental illnesses. These developments often include amenities like internet and nursing services. Examples include Creekside Woods, Rain Garden Apartments, and the Charleston.

SNAPSHOT OF WILSONVILLE'S HOUSING



Development Timeline, 2000-2014

Source: City of Wilsonville Building Permit Database

Affordability

The term *affordable housing* refers to a household's ability to find housing within its financial means. Housing affordability affects both higher and lower income households and is an important issue for Wilsonville and the Portland Region. Low-income households have fewer resources available to pay for housing and have the most difficulty finding affordable housing. Key points about affordability include:

- Wilsonville will have an on-going need for housing affordable to lower-income households.
- The City is planning for needed housing types for households at all income levels and will work with non-profit and private housing providers to ensure availability of housing affordable to lower-income households.

Wilsonville's planning framework supports the development of housing that is affordable to a variety of households.

RATIO OF MEDIAN OWNER VALUE TO MEDIAN HOUSEHOLD INCOME

(Lower ratios indicate that housing is more affordable. HUD's standard is 3.0)

6.7	5.1	4.4
Wilsonville	Clackamas Co.	Washington Co.

Wilsonville's owner-occupied housing is less affordable than regional averages.

PERCENT OF HOUSEHOLDS THAT ARE COST BURDENED, 2007-2011

41%	40%	39%	41%
Wilsonville	Clackamas Co.	Washington Co.	Portland Region

Cost burden is as common in Wilsonville as in the region.

Households that are cost burdened spend more than 30% of their gross income on housing.

Wilsonville has seven low-cost apartment complexes for low-income residents, with a total of 474 units. The units are a mixture of 1-, 2-, and 3-bedroom units.

Over the next 20 years, Wilsonville's population growth will be driven by employment growth, much of which will be in jobs with average or higher-than-average pay. The types of housing generally affordable to workers in Wilsonville with average pay (about $54,000) are owner- or renter-occupied townhouses, duplexes, or apartments.

The City's planning framework provides opportunities for development of housing that is affordable to Wilsonville's current and future workforce, both for owner-occupied and renter-occupied housing. That said, like other communities in the Metro region, Wilsonville will have an on-going need for housing affordable to lower-income households, as well as middle- and upper-income households.

Wilsonville is meeting its obligations to plan for a range of housing types for households at all income levels.

Development Capacity

Density of some existing Wilsonville neighborhoods:

Legend at Villebois: 6 units per gross acre, 12 units per net acre

Jory Trail: 10 units per gross acre, 14 units per net acre

Wilsonville had about 477 gross acres of developable residential land in 2013. The inventory identified 251 gross acres of vacant buildable land and 228 gross acres of land that is partially vacant or likely to redevelop. The Buildable Residential Lands Inventory Map on the opposite page shows the location of vacant land and land likely to redevelop.

The capacity analysis estimates the number of new dwelling units that can be accommodated on Wilsonville's residential land supply. By applying assumptions based largely on the Comprehensive Plan, the capacity analysis evaluates different ways that vacant suitable residential land could be developed.

This study assumes new development will occur within the range of densities adopted for each residential district in the Comprehensive Plan, or at the densities outlined in the Villebois Master Plan. For the purposes of this study, Frog Pond, which has yet to be planned, is assumed to have a density of 5 - 8.5 units per gross acre (i.e., with houses on roughly 7,300 to 4,350 square-foot lots).

DEFINITIONS

Buildable residential land: Unconstrained suitable land designated for residential development.

Dwelling unit: Any type of residential structure. Wilsonville has an average of 2.3 persons per dwelling unit.

Capacity: Number of dwelling units that can be accommodated on buildable land at planned densities.

Housing density: Number of dwelling units in an acre of land, with 43,560 feet to 1 acre.

Housing density can be expressed as the number of dwelling units per net or gross acre.

Gross acre: Includes rights-of-way (land used for roads and streets). Land used for rights-of-way is not buildable.

Net acre: Does not include rights-of-way.

LOW CAPACITY SCENARIO

3,390 dwelling units

Single-family detached:

1,622 / 48% units

Multifamily:

1,768 / 52% units

7.1 dwelling units per gross acre (citywide average)

HIGH CAPACITY SCENARIO

4,229 dwelling units

Single-family detached:

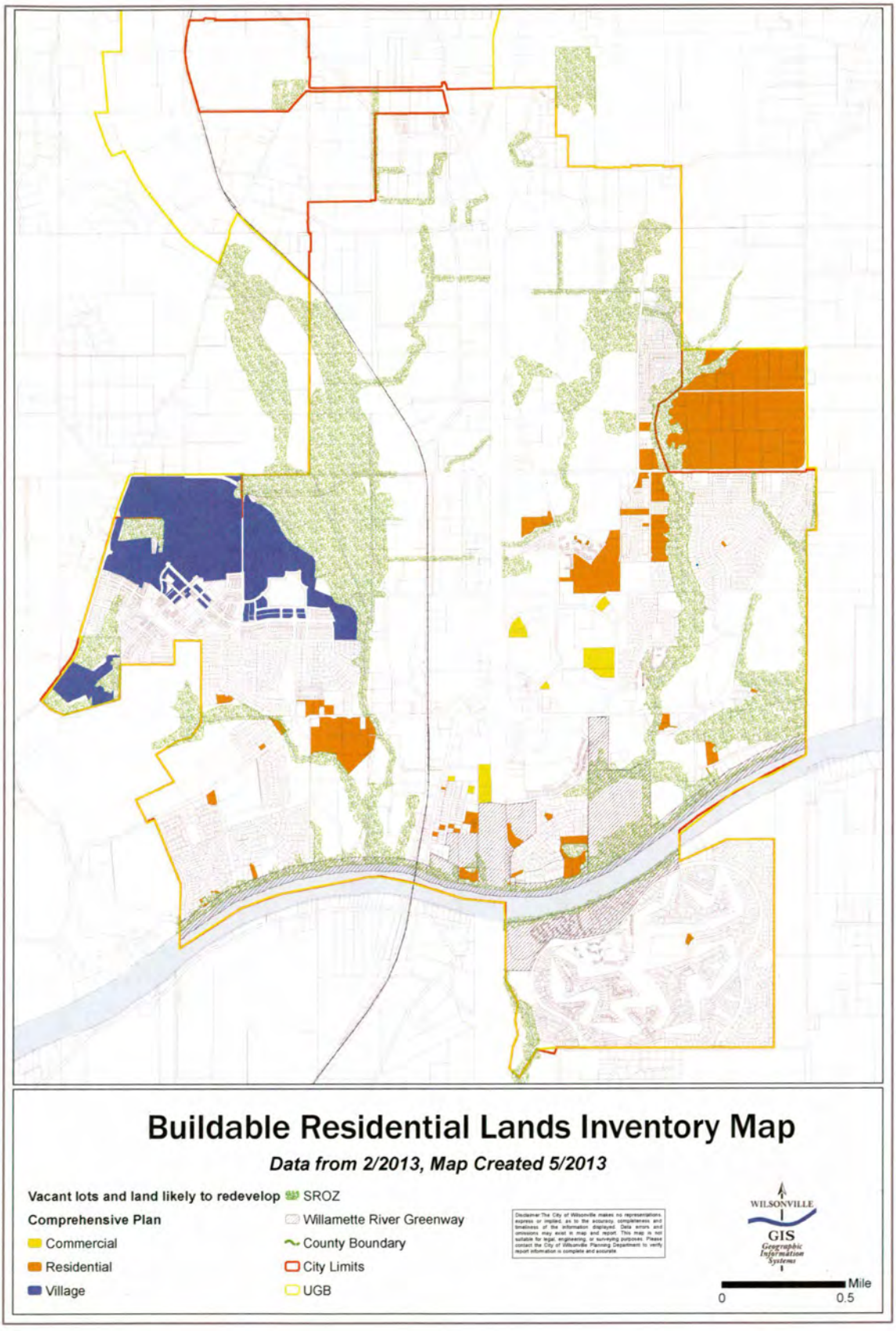
2,016 / 48% units

Multifamily:

2,213 / 52% units

8.9 dwelling units per gross acre (citywide average)

- The low-capacity scenario results in an overall density of 7.1 dwelling units per gross acre or 8.8 dwelling units per net acre.
- The high-capacity scenario results in an overall density of 8.9 dwelling units per gross acre or 10.5 dwelling units per net acre.



Buildable Residential Lands Inventory Map

Data from 2/2013, Map Created 5/2013

Vacant lots and land likely to redevelop

Comprehensive Plan

- Commercial
- Residential
- Village
- SROZ
- Willamette River Greenway
- County Boundary
- City Limits
- UGB

Disclaimer: The City of Wilsonville makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. Data errors and omissions may exist in map and report. This map is not suitable for legal, engineering, or surveying purposes. Please contact the City of Wilsonville Planning Department to verify report information is complete and accurate.

WILSONVILLE GIS Geographic Information Systems

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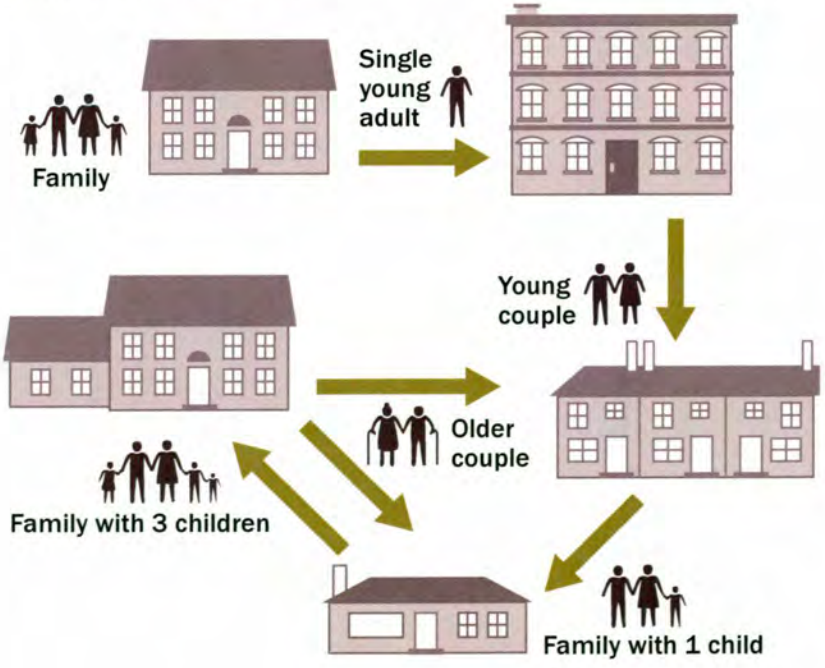
Factors Affecting Housing Need

Studies and data analysis have shown a clear linkage between demographic characteristics and housing choice, as shown in the figure below. Key relationships include:

- Homeownership rates increase as income increases
- Homeownership rates increase as age increases
- Choice of single-family detached housing increases as income increases
- Renters are much more likely to choose multifamily housing than single-family housing
- Income is a stronger determinant of tenure and housing-type choice for all age categories.

HOUSING LIFE CYCLE



The linkages between demographics and housing need can be used to predict future housing need in Wilsonville. Three main demographic trends are particularly important for Wilsonville and the Portland Region:

- Aging of the Baby Boomer Generation (born 1946 to 1964)
- Aging of the Millennial Generation (born early 1980s to early 2000s)
- Continued growth of the Hispanic/Latino population

Aging of the Baby Boomers

People 60 and older are the fastest growing age group in the Portland Region. By 2040, 23% of the region's population is forecasted to be 60 and over, up from 14% in 2000.

LIKELY TRENDS AMONG BABY BOOMER HOUSEHOLDS:

- ↓ Household sizes
- ↓ Homeownership rates, especially after 75 years old
- ↓ Income

IMPLICATIONS FOR HOUSING:

Need for smaller, lower-cost housing near transit access and urban amenities such as shopping and health care services.

Aging of the Millennials

Wilsonville is successful at attracting young, working age people. The biggest question, with implications for Wilsonville's future housing needs, is whether younger people who move to Wilsonville for rental opportunities will continue to live in Wilsonville if they are ready to become homeowners.

LIKELY TRENDS AMONG MILLENNIAL HOUSEHOLDS:

- ↑ Household sizes (as they form families)
- ↑ Homeownership rates
- ↑ Income

IMPLICATIONS FOR HOUSING:

Need for low-cost ownership opportunities with high quality of life. (Millennials' incomes will increase as they age, but the impact of the Great Recession is unclear.)

Continued growth of the Hispanic/ Latino population

Growing at more than 9% per year, the Hispanic/Latino population is Wilsonville's fastest growing racial or ethnic group. Nationwide, the Hispanic/Latino population is predicted to be the fastest growing racial/ ethnic group over the next few decades.

CHARACTERISTICS OF HISPANIC HOUSEHOLDS COMPARED TO NON-HISPANIC HOUSEHOLDS:

- ↑ Household sizes
- ↑ Homeownership rates
- ↓ Income

IMPLICATIONS FOR HOUSING:

Need for larger, lower-cost renting and ownership opportunities for larger households with more children and multiple generations.

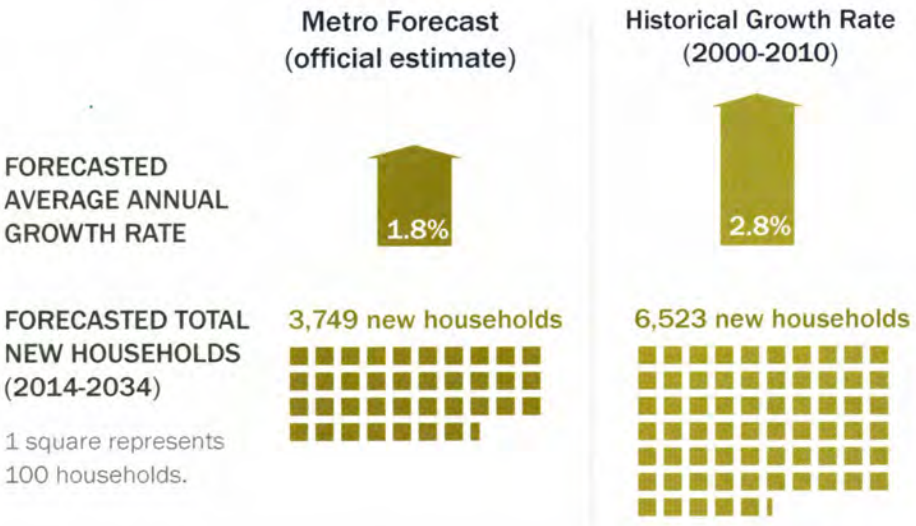
Accommodating Housing Need

The number of households in Wilsonville grew by 2.8% per year between 2000 and 2010.

The City's population grew faster than the number of households, in part because population growth includes people in the Coffee Creek Prison, which opened in 2001. Because prisoners are not in households, they are not counted in the household growth rate.

DEMAND FOR RESIDENTIAL LAND

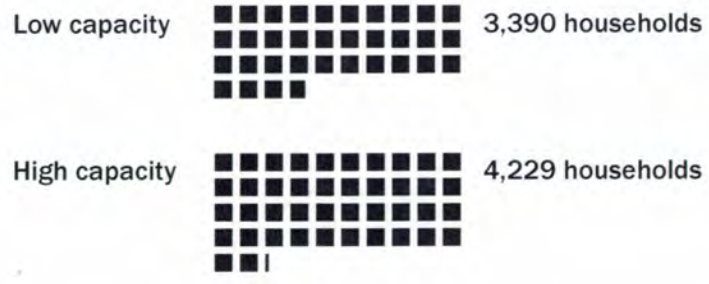
The rate at which Wilsonville grows over the next 20 years will affect the number of new households and the demand for residential land. Metro forecasts that Wilsonville will grow at a rate of 1.8% per year for the 2014-2034 period. For comparison purposes, we show demand for residential land with both the official Metro forecast (1.8% annual growth) and at the historical growth rate over the 2000 to 2010 period (2.8% annual growth).



Metro forecasts that Wilsonville will add 3,749 households between 2014 and 2034.

CAPACITY ON BUILDABLE RESIDENTIAL LAND, WILSONVILLE PLANNING AREA

(1 square represents 100 households. For more detail, see page 14)



The Wilsonville planning area—which includes Frog Pond—has capacity to accommodate between 3,390 and 4,229 new dwelling units.

BASED ON METRO'S FORECAST, DOES WILSONVILLE HAVE ENOUGH BUILDABLE RESIDENTIAL LAND TO ACCOMMODATE HOUSING NEED?

- Under the low capacity scenario described on page 14, Wilsonville does not have enough land to accommodate new housing over the 20-year period. Wilsonville has a deficit of land to accommodate 359 new dwelling units.
- Under the high capacity scenario described on page 14, Wilsonville has enough land to accommodate new housing over the 20-year period. Under this scenario, Wilsonville can accommodate 480 dwelling units more than the Metro forecast projects over the 20-year period.

Wilsonville's Planning Area includes all land in City limits and Frog Pond, Coffee Creek, and North Villebois.

COMPARISON OF HOUSING CAPACITY TO HOUSING DEMAND
METRO FORECAST, 2014-2034

Wilsonville will need to add more residential land to the city limits between 2024 and 2032, depending on how fast the city grows.

RESIDENTIAL LAND STUDY KEY FINDINGS:

The key conclusions of this study are that Wilsonville: (1) may not have a 20-year supply of residential land and (2) the City's residential policies meet Statewide Planning Goal 10 requirements.

- Under the Metro forecast, Wilsonville is very close to having enough residential land to accommodate expected growth. Wilsonville could run out of residential land by 2032.
- If Wilsonville grows faster than the Metro forecast, the City will run out of residential land before 2030.
- Getting residential land ready for development is a complex process that involves decisions by Metro, City decision makers, landowners, the Wilsonville community, and others. The City is beginning the process of ensuring that additional residential land is available through the concept planning process for the Advance Road area.
- Wilsonville is meeting Statewide Planning Goal 10 requirements to "provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing" and to "provide for an overall density of 8 or more dwelling units per net buildable acre."

If Wilsonville continues to grow at its historical growth rate, the city will consume available residential land by about 2025.

Planning for Growth Areas

A key objective of the Wilsonville Residential Land Study is to inform policy choices related to residential development. Wilsonville's key residential policy choices are on the topics of planning for growth areas, Town Center, monitoring development, and removing barriers to needed housing types in the city development code.

Frog Pond

Information in the Residential Land Study will inform the Frog Pond Concept Plan and subsequent Master Plan. The City will develop strategies to determine desired densities and housing types for the Frog Pond Concept Plan. Given the City's experience with implementing the Villebois Master Plan, the adoption of a Frog Pond Concept Plan will provide a sufficient regulatory framework for developing certainty about achieving a specific mix and density of housing.

The Residential Land Study assumes that the majority of housing in Frog Pond will be single-family detached. The study also assumes that housing will develop at densities between 5.0 and 8.5 dwelling units per gross acre in Frog Pond which equates to 7,300 to 4,350 square-foot lots.

While this study does not set the densities or other development assumptions for Frog Pond, it provides a reasonable place to begin discussions about residential development at Frog Pond. ECONorthwest recommends that the density and mix assumptions eventually built into the Frog Pond Concept Plan consider the results of the housing needs analysis, comply with the density and mix requirements of OAR 660-007, and consider the context of overall housing need in Wilsonville.

Advance Road

The Residential Land Study concludes that Wilsonville may have need for additional residential land, by 2032 or sooner. Advance Road, an Urban Reserve immediately east of Wilsonville, has been identified by Metro and the City for residential uses. The City is beginning to plan for development of Advance Road, through the Concept Planning process for Frog Pond and Advance Road.

ECONorthwest recommends that City staff use information from Wilsonville's residential growth monitoring program to inform regional discussions with Metro about expansion of the UGB. City staff can provide Metro with information to inform UGB expansion discussions.

Given the amount of time it takes to get a new area to be development-ready (i.e., brought into the UGB, planned, and services extended to the area), Wilsonville should begin discussions about bringing Advance Road into the UGB as part of the next cycle of UGB expansion discussions.

Town Center

City staff estimated the capacity of vacant land in the Town Center zone ranges from 200 to 270 dwelling units. Town Center may be able to accommodate more housing, depending on the community's vision for development. The issue of how much housing to encourage in the Town Center is beyond the scope of this study.

ECONorthwest recommends that the City update the vision and master plan for Town Center, as part of a future planning process. This update should determine the potential market for housing in the Town Center, the amount and types of housing that the community wants in Town Center, Town Center's relationship to other residential areas, and how housing will relate to commercial development in Town Center.

Monitoring development activity

The determination of residential land sufficiency (page 19) is based on dwelling unit forecasts prepared by Metro. The Metro forecasts show new housing units increasing at a rate of 1.8% annually between 2014 and 2034 in the Wilsonville Planning Area. Under this forecast, Wilsonville will run out of residential land by about 2032.

If Wilsonville grows faster than Metro's forecast predicts, the city will run out of residential land sooner. For example, Wilsonville's household growth over the 2000-2010 period averaged about 2.8% annually. If Wilsonville continues to grow at this rate, the city will consume the available residential land by about 2025.

ECONorthwest recommends that City staff develop a monitoring program that will allow Wilsonville to understand how fast land is developing. The monitoring program will inform Metro's UGB planning process by providing more detailed information about housing growth and development capacity in Wilsonville. This information can help City staff and decision makers make the case to Metro staff and decision makers about the need for residential expansion areas. We recommend using the following metrics to monitor residential growth: population, building permits, subdivision and partition activity, land consumption, and right-of-way and open space dedications.

Legislative action on code changes

As part of this study, Wilsonville staff conducted a Goal 10 policy and Development Code evaluation. Staff concluded that Wilsonville is "...in compliance with applicable Federal and State housing regulations." City and DLCD staff identified several types of amendments to the Development Code to better comply with state requirements to review residential development through a clear and objective process. ECONorthwest recommends that the City take action on these amendments. No Comprehensive Plan map or text amendments are needed.

Recommended Code amendments:

- Allow duplexes in all PD-R zones
- Add clear and objective review for housing in the Old Town Overlay Zone
- Add clear and objective Site Design Review process for new multifamily development when such development does not also trigger Planned Development review

Acknowledgements

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ECONorthwest specializes in economics, planning, and finance. Established in 1974, ECONorthwest has more than three decades of experience helping clients make sound decisions based on rigorous economic, planning, and financial analysis.

ECONorthwest gratefully acknowledges the substantial assistance provided by staff at the City of Wilsonville. Many other agencies and staff contributed to other research that this report relied on.

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City of WILSONVILLE OREGON

ECONorthwest
ECONOMICS • FINANCE • PLANNING

Wilsonville Residential Land Study: Technical Report

March 2014

Prepared for:

City of Wilsonville

Draft Report

For Discussion Only. Do Not Cite or Quote.

ECONorthwest
ECONOMICS • FINANCE • PLANNING

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Chapter 1. Introduction

This report is part of the Wilsonville Residential Land Study. The full study is contained in two documents:

- **Residential Land Study: Summary** briefly presents the key findings and conclusions of the residential land study.
- **Residential Land Study: Technical Report** presents the full results of the housing needs analysis (HNA) for the City of Wilsonville and is intended to comply with statewide planning policies.

This report presents the Technical Report of the Residential Land Study. It is intended to comply with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing), and OAR 660 Division 7. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

This report provides Wilsonville with a factual basis to support future planning efforts related to housing and options for addressing unmet housing needs in Wilsonville. It provides information that informs future planning efforts such as the Frog Pond and Advance Road Concept Plan, but it is not intended to be prescriptive about how Wilsonville meets housing needs. The report is a background document that supports the Wilsonville Comprehensive Land Use Plan. It provides the City with information about the housing market in Wilsonville and describes the factors that will affect housing demand in Wilsonville in the future, such as changing demographics and potential changes to commuting patterns.

In addition, Wilsonville entered Periodic Review in 1996. This report meets the Goal 10 requirements of Wilsonville's Periodic Review work plan and presents a housing needs analysis that projects Wilsonville's housing needs over the 2014 to 2034 period.

BACKGROUND

Through this project, the City wants to complete the outstanding Periodic Review requirement to complete an HNA, while complying with the requirements of Goal 10, OAR 660 Divisions 7, and the Metro Urban Growth Management Functional Plan. However, this project is about more than complying with State and Metro requirements to identify housing needs. This project will provide the basis for planning and policies that support the next generation of residential growth in Wilsonville.

Wilsonville has a history of pro-active planning to accommodate residential development. Wilsonville's Planning and Land Development Ordinance is structured and implemented differently than the codes of most other cities. When Wilsonville incorporated in the 1960's, much of the land in the City was greenfields.

Wilsonville's development code was designed to allow for continuation of existing uses until land is developed. Much of Wilsonville's vacant residential land is zoned RA-H Residential Agricultural Holding (RA-H) zone, which allows land within the city to continue to be used as agricultural or rural residential until the time when the land is ripe for the type and scale of development designated in the Comprehensive Plan.

In addition, Wilsonville has a substantial amount of development-ready land that is in planned development (PD) zones. Development of land in these zones requires development of a preliminary and final master plan and site design review. Through this process, the City is able to ensure that residential development happens through a deliberate, thoughtful process to address the City's residential and livability goals. Wilsonville has three approved residential master plans for residential development that have not yet been fully implemented. These are the plans for Villebois, Brenchley Estates, and Town Center (which is primarily commercial but allows some residential development).

The purpose of the technical report of Residential Land Study is to develop a factual basis for Wilsonville to continue proactive planning to accommodate expected residential growth. The housing needs analysis focuses on planning over a 20-year period, using Metro's forecasts of expected housing growth.

Beyond the core purposes of determining whether Wilsonville has enough residential land to accommodate forecast growth and compliance with State policy, the Residential Land Study is intended to inform:

- Strategies to implement local housing priorities
- The Frog Pond concept planning process
- Updates to the Housing Element of the Wilsonville Comprehensive Plan
- Code amendments to better implement the local housing strategy

ORGANIZATION OF THIS REPORT

This document is the technical report that accompanies the Residential Land Study summary report. The rest of this document is organized as follows:

- **Chapter 2. Framework for a Housing Needs Analysis** describes the theoretical and policy underpinnings of conducting a Goal 10 housing needs analysis for Wilsonville, including requirements outlined in the Metropolitan Housing Rule (OAR 660-007).
- **Chapter 3. Historical and Recent Development Trends** summarizes the state, regional, and local housing market trends affecting Wilsonville's housing market.
- **Chapter 4. Demographic and Other Factors Affecting Residential Development in Wilsonville** discusses the factors that affect housing need in Wilsonville, focusing on the key determinants of housing need: age, income, and household composition. This chapter also describes housing affordability in Wilsonville relative to the larger region.
- **Chapter 5. Housing Need in Wilsonville** forecasts housing need in Wilsonville for the 20-year period between 2014 and 2034 based on Metro's forecast for household growth.
- **Chapter 6 Residential Land Sufficiency within Wilsonville** estimates the Wilsonville UGB's residential land sufficiency needed to accommodate expected growth over the planning period.
- **Appendix A. Summary of Residential Buildable Lands Inventory**

Chapter 2. Framework for a Housing Needs Analysis

Economists view housing as a bundle of services for which people are willing to pay: shelter certainly, but also proximity to other attractions (job, shopping, recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools). Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs. What they can get for their money is influenced by both economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of household head, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

Thus, housing choices of individual households are influenced in complex ways by dozens of factors; and the housing market in the Portland Region, Clackamas and Washington Counties and Wilsonville are the result of the individual decisions of hundreds of thousands of households. These points help to underscore the complexity of projecting what types of housing will be built in Wilsonville between 2014 and 2034.

The complex nature of the housing market was demonstrated by the unprecedented boom and bust during the past decade. This complexity does not eliminate the need for some type of forecast of future housing demand and need, with the resulting implications for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions about the dynamics of markets and policies than from the specific estimates of future demand and need. Thus, we start our housing analysis with a framework for thinking about housing and residential markets, and how public policy affects those markets.

SUMMARY

Goal 10 requires the City to plan for "needed" housing types, which are housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels. Needed housing also includes (but is not limited to) attached and detached single-family housing, multiple-family housing, and manufactured homes, whether

occupied by owners or renters. In short, Wilsonville must plan for a range of housing types at a range of price levels.

Goal 10 intends that cities identify housing needs and develop a land use policy framework that meets identified needs. One of the key issues that is addressed in a housing needs analysis is to determine how much land is needed for different housing types, and therefore must be designated for those needs. Providing sufficient land in the proper designations is one of the most fundamental land use tools local governments have to meet housing need.

The *2012 Compliance Report* by Metro[1] found Wilsonville to be in compliance with the City's responsibilities for Title 1, Title 7, and Title 11.

OREGON HOUSING POLICY

Statewide planning Goal 10

The passage of the Oregon Land Use Planning Act of 1974 (ORS Chapter 197), established the Land Conservation and Development Commission (LCDC), and the Department of Land Conservation and Development (DLCD). The Act required the Commission to develop and adopt a set of statewide planning goals. Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies.

At a minimum, local housing policies must meet the requirements of Goal 10 and the statutes and administrative rules that implement it (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600-008).[2] Jurisdictions located in the Metro UGB are also required to comply with Metropolitan Housing in OAR 660-007 and Title 7 of Metro's Urban Growth Management Functional Plan in the Metro Code (3.07 Title 7).

Goal 10 requires incorporated cities to complete an inventory of buildable residential lands and to encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

---

[1] 2012 Compliance Report. Metro Code Chapter 3.07 Urban Growth Management Functional Plan and Metro Code Chapter 3.08 Regional Transportation Functional Plan. March 2013. Available at: www.oregonmetro.gov.

[2] ORS 197.296 only applies to cities with populations over 25,000.

Goal 10 defines needed housing types as "housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels." ORS 197.303 defines needed housing types:

> (a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple family housing for both owner and renter occupancy;
>
> (b) Government assisted housing;[3]
>
> (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and
>
> (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions.

In summary, Wilsonville must identify needs for all of the housing types listed above as well as adopt policies that increase the likelihood that needed housing types will be developed.

The Metropolitan Housing Rule

OAR 660-007 (the Metropolitan Housing rule) is designed to "assure opportunity for the provision of adequate numbers of needed housing units and the efficient use of land within the Metropolitan Portland (Metro) urban growth boundary." OAR 660-0070-005(12) provides a Metro-specific definition of needed housing:

> "Needed Housing" defined. Until the beginning of the first periodic review of a local government's acknowledged comprehensive plan, "needed housing" means housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels.

The Metropolitan Housing Rule also requires cities to develop residential plan designations:

> (1) Plan designations that allow or require residential uses shall be assigned to all buildable land. Such designations may allow nonresidential uses as well as residential uses. Such designations may be considered to be "residential plan designations" for the

[3] Government assisted housing can be any housing type listed in ORS 197.303 (a), (c), or (d).

> purposes of this division. The plan designations assigned to buildable land shall be specific so as to accommodate the varying housing types and densities identified in OAR 660-007-0030 through 660-007-0037.

OAR 660-007 also specifies the mix and density of new residential construction for cities within the Metro UGB:

> "Provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances." (OAR 660-007-0030 (1))

OAR 660-007-0035 sets specific density targets for cities in the Metro UGB. Wilsonville's density target is eight dwelling units per net buildable acre.[4]

Metro Urban Growth Management Functional Plan

The Metro Urban Growth Management Functional Plan describes the policies that guide development for cities within the Metro UGB to implement the goals in the Metro 2040 Plan.

Title 1: Housing Capacity

Title 1 of Metro's Urban Growth Management Functional Plan is intended to promote efficient land use within the Metro UGB by increasing the capacity to accommodate housing capacity. Each city is required to determine its housing capacity based on the minimum number of dwelling units allowed in each zoning district that allows residential development, and maintain this capacity.

Title 1 requires that a city adopt minimum residential development density standards by March 2011. If the jurisdiction did not adopt a minimum density by March 2011, the jurisdiction must adopt a minimum density that is at least 80% of the maximum density. Wilsonville has met this requirement.

---

[4] OAR 660-024-0010(6) defines Net Buildable Acres as follows: "Net Buildable Acre" consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.

This report uses a definition of "net acre" that is consistent with the definition in OAR 660-024. A net acre is defined as including the parcel upon which residential dwellings are constructed, including any open space provided on that parcel. Net acreage does not include public or private rights of way, city or homeowners association (e.g., public or privately owned) parkland, homeowners association-owned common tracts in the net area, or land with constraints that prohibit development (e.g., land in a Significant Resource Overlay Zone (SROZ) in Wilsonville).

Title 1 provides measures to decrease development capacity in selected areas by transferring the capacity to other areas of the community. This may be approved as long as the community's overall capacity is not reduced.

Metro's *2012 Compliance Report* concludes that Wilsonville is in compliance for the City's Title 1 responsibilities.

Title 7: Housing Choice

Title 7 of Metro's Urban Growth Management Functional Plan is designed to ensure the production of affordable housing in the Metro UGB. Each city and county within the Metro region is encouraged to voluntarily adopt an affordable housing production goal.

Each jurisdiction within the Metro region is required to ensure that their comprehensive plans and implementing ordinances include strategies to: ensure the production of a diverse range of housing types, maintain the existing supply of affordable housing, increase opportunities for new affordable housing dispersed throughout their boundaries, and increase opportunities for households of all income levels to live in affordable housing. (3.07.730).

Metro's *2012 Compliance Report* concludes that Wilsonville is in compliance for the City's Title 7 responsibilities.

Title 11: Planning for New Urban Areas

Title 11 of Metro's Urban Growth Management Functional Plan provides guidance on the conversion of land from rural to urban uses. Land brought into the Metro UGB is subject to the provisions of section 3.07.1130 of the Metro Code which requires lands to be maintained at rural densities until the completion of a concept plan and annexation into the municipal boundary.

The concept plan requirements directly related to residential development are to prepare a plan that includes: (1) a mix and intensity of uses that make efficient use of public systems and facilities, (2) a range of housing for different types, tenure, and prices that addresses the housing needs of the governing city, and (3) identify goals and strategies to meet the housing needs for the governing city in the expansion area.

Metro's *2012 Compliance Report* concludes that Wilsonville's deadline to comply with Title 11 for the Frog Pond urban growth area is December 31, 2015.

WILSONVILLE HOUSING POLICY

Wilsonville has a unique and flexible system of planning for, and permitting, residential development. Since Wilsonville's Comprehensive Plan was initially acknowledged in 1980, Wilsonville has planned for growth of an industrial base surrounded by quality residential areas that feature a mix of single and multi-family development, with an emphasis on open space and the natural environment. That strategy is reflected in Policy 4.1.4 of the Wilsonville Comprehensive Plan:

"The City of Wilsonville shall provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville." This commitment to providing a range of housing opportunities is reinforced in Implementation Measure 4.1.4d (and other measures) of the Wilsonville Comprehensive plan:

> "Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms."

In sum, providing a mix of housing types and densities to create a whole community was envisioned in the original Comprehensive Plan map and text—a vision that the City has consistently implemented. According to the Wilsonville Comprehensive Plan, as of October 1999, the existing housing stock of 6,788 units consisted of 41.2% single-family 52.4% multi-family (including duplexes and condominiums), and 6.4% manufactured housing (mobile homes). This mix of housing types indicates that the City met the intent of the State's "Metro Housing Rule" applying to housing mix. It is notable that Wilsonville had a high percentage of multifamily housing in 1999, a trend that continued through 2013.

It is also important to note that the total number of housing units within the city increased by more than 45% in thirteen years. During that period, there were 476 more multiple-family units than single-family units added to Wilsonville's housing mix.

In short, land within the city that was planned for Residential use was allocated a minimum and maximum density per acre, and these planned densities have generally not changed since 1980. Moreover, plan policies and implementation measures emphasize inclusion of all housing types, and provision of housing for people who work in Wilsonville.

One of the core elements of Wilsonville's approach is master planning. Villebois Village is the largest master-planned neighborhood in Wilsonville, planned to include 2,300 housing units. The Villebois Concept Plan and subsequent Master Plan established a vision for an "urban village" surrounding a mixed-use urban center. Each of the neighborhoods within the village include a mix of housing types, and the Village Center was planned for higher-density and mixed use development.

To summarize, Wilsonville has long had a strong vision to provide a mix of housing types that meet the financial capacity of the community. That commitment is reflected in the City's comprehensive plan and implementing ordinances and played a big role in the residential development pattern seen in Wilsonville in 2013.

Chapter 3. Historical and Recent Development Trends

Analysis of historical development trends in Wilsonville provides insights into how the local housing market functions. The housing type mix and density are also key variables in forecasting future land need. The specific steps are described in Task 2 of the DLCD *Planning for Residential Lands* Workbook:

1. Determine the time period for which the data must be gathered
2. Identify types of housing to address
3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types

This chapter presents information regarding Wilsonville's housing stock and recent development trends.

SUMMARY OF KEY FINDINGS ABOUT DEVELOPMENT TRENDS

This section summarizes the findings in Chapter 3 about historical and recent development trends in Wilsonville.

Steady population and employment growth, combined with the constraints on buildable lands in the Portland Region, ensure that Wilsonville's housing market will maintain a solid underpinning for a long time to come, despite the recent downturn in the regional and national housing market. In the long run, the Portland Urban Growth Boundary is expected to add nearly 300,000 new households by 2035. If these estimates are correct, this will be enough people to ensure an on-going demand for all types of housing and new neighborhoods.

The trends summarized below describe recent and historical residential development activity in Wilsonville. This chapter provides information to describe Wilsonville's role in the Portland Region's housing market.

Residential development trends over the 2000 to 2012 period

- **Wilsonville is growing.** Wilsonville issued permits for nearly 2,900 new dwelling units between 2000 and 2012. Four percent of permits issued in the largest cities in the Portland UGB (shown in Table 3-2) were issued by Wilsonville. In comparison, Wilsonville accounted for 1.2% of the population in the Portland Region in 2012. The large number of permits issued in Wilsonville shows that the City is growing comparatively quickly, relative to similar sized and larger cities in the Region.

- **Wilsonville added both single-family and multifamily housing over the 2000 to 2012 period.** The City has had a relatively steady stream of single-family housing construction, with the addition of 13 multifamily projects with 10 or more units, resulting in in the addition of about 1,800 new multifamily units (95% of all new multifamily units). New dwellings have been developed in all parts of the City.

- **Wilsonville's mix of housing provides a range of needed housing types.** Development in Wilsonville since 2000 included housing that is affordable to a range of households, including government-subsidized affordable housing, market-rate workforce housing, high-amenity multifamily rental housing, and a range of types of owner-occupied single-family housing.

- **Development of Villebois contributed substantially to Wilsonville's growth.** Nearly 900, or 31%, of new dwelling units developed in Wilsonville from 2000 to 2012 were in Villebois, accounting for 53% of new single-family units and 20% of new multifamily units.

- **Wilsonville is achieving the vision in its Comprehensive Plan.** Wilsonville's Comprehensive Plan envisions providing a variety of housing options for residents of Wilsonville in a range of housing densities, sizes, and costs.

Trends in the mix of Wilsonville's entire housing stock

- **Wilsonville has a high percentage of multifamily housing (as a percent of total housing stock) relative to other municipalities in the region.** About 43% of Wilsonville's overall housing stock housing was in single family housing types in 2012.

- **Wilsonville has a variety of types of multifamily housing.** The types of multifamily housing in Wilsonville include apartments, single-family attached dwellings, condominiums, and duplexes. In addition, Wilsonville has a substantial amount of housing for seniors, such as

assisted living facilities. While the majority of Wilsonville's multifamily housing is market-rate housing, Wilsonville has nearly 500 units of government-subsidized affordable housing for low-income seniors, families, people with disabilities, and other low-income households. In addition Wilsonville.

Trends in homeownership

- **Homeownership rates in Wilsonville are lower than the regional average.** In 2010, 46% of Wilsonville homes were owner-occupied, compared with 60% of Portland Region homes. Homeownership rates in other cities in the Portland Region varied from 50% in Beaverton to 60% in Tigard to 88% homeownership rates in Happy Valley.
- **Homeownership in Wilsonville decreased between 2000 and 2010.** The homeownership rate decreased from 54% in 2000 to 45% in 2010. Some of this decrease can be attributed to the national and statewide decreases in homeownership rates.
- **Homeownership rates vary widely between housing types,** with single-family housing types having much higher homeownership rates than multifamily types. In Wilsonville in 2007-2011, 88% of single-family detached housing was owner-occupied, which is slightly higher than is typical for cities the size of Wilsonville. About 3% of housing in buildings with five or more units was owner-occupied, which is typical for a city the size of Wilsonville.

Residential development density over the 2000 to 2012 period

- **Wilsonville's average development density is higher than the minimum density required by OAR 660-007.** Between 2000 and 2012, Wilsonville's average residential development density was 12.4 dwellings per net acre.[5] OAR 660-007 requires that Wilsonville designate land to allow the opportunity for housing development with

[5] OAR 660-024-0010(6) defines Net Buildable Acres as follows: "Net Buildable Acre" consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.

This report uses a definition of "net acre" that is consistent with the definition in OAR 660-024. A net acre is defined as including the parcel upon which residential dwellings are constructed, including any open space provided on that parcel. Net acreage does not include public or private rights of way, city or homeowners association park land, homeowners association-owned common tracts in the net area, or land with constraints that significantly constrains development (e.g., land in a Significant Resource Overlay Zone (SROZ) in Wilsonville).

a minimum density of 8 dwelling units per net acre for new development. Between 2000 and 2012, Wilsonville exceeded this target.

- **Wilsonville's average density was high, in part, because two-thirds of development was multifamily.** Over the 2000 to 2012 period, the City's average multifamily development density was 18.5 dwelling units per net acre.
- **Wilsonville's single-family density is relatively high.** Over the 2000 to 2012 period, the City's average single-family density was 7.6 dwelling units per net acre, which is close to the average minimum density that Wilsonville is required to plan for by OAR 660-007.

Vacancy rates

- **Wilsonville's vacancy rate has been similar to or lower than other urban areas within the Portland Region.** Since the Spring of 2010, Wilsonville's vacancy rates have generally been below 4%, which is comparable to or less than most of the larger cities in the southern portion of the Portland Region. In Spring 2013, Wilsonville's vacancy rate was 3.8%, compared to the Portland/Vancouver Metro average of 3.6%.

METHODS USED IN THE ANALYSIS

To better understand the dynamics of local housing markets, housing studies commonly include an analysis of housing mix and density. Wilsonville has not completed periodic review since developing its Comprehensive Plan in 1980. The period used in the analysis of housing density and mix is 2000 to 2012 for the following reasons:

- Wilsonville's building permit data is available in a database that tracks information since 2005. Data prior to 2005, building permit data is only available on a permit-by-permit basis, from paper records. Compiling an accurate, complete historical database of residential development from 1980 to 1999 would be time consuming for City staff.

  The City also has a database of dwelling units by year that dates back to 1980 and describes the mix of dwelling unit types in Wilsonville. To ensure accuracy for this study, the City checked building permit data against the database of dwelling units.
- In addition, the City changed development policies in 2000, with substantial revisions to its zoning code. Among other changes, this revision included the addition of density requirements in planned unit development areas, which include the majority of vacant residential

land in Wilsonville. Even if staff were able to develop an accurate database of development between 1980 and 1999, this development occurred under outdated development policies and is not reflective of current residential development policies.

The housing needs analysis presents information about residential development by housing types. There are multiple ways that housing types could be grouped. For example, housing types could be grouped by:

(1) Structure type (e.g., single-family detached, apartments, etc.)
(2) Tenure (e.g., distinguishing unit type by owner or renter units)
(3) Housing affordability (e.g., units affordable at given income levels)
(4) Some combination of these categories

For the purposes of this study, ECONorthwest grouped housing types based on: (1) whether the structure is stand-alone or attached to another structure; and (2) the number of dwelling units in each structure. The housing types used in this analysis are:

- **Single-family detached** includes single-family detached units and manufactured homes on lots and in mobile home parks.
- **Single-family attached** includes townhouses, row houses, and other attached structures that are generally located on an individual tax lots.[6]
- **Multifamily** is all attached structures, ranging from duplexes to tri- and quad-plexes to structures with more than five units. Lower density attached housing (e.g., duplexes or quad-plexes) and higher density attached housing (e.g., multi-story condominium or apartment buildings) are both included in this category because they meet the definition of multifamily housing in OAR 660-007, described below.

This distinction in housing types meet the requirements of OAR 660-007 to "Provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing…"

One of the key sources for data about housing and household data is the U.S. Census. This report primarily uses data from two Census sources:

[6] In some instances, single-family attached is included with single-family detached because the source data does not distinguish between these types of housing. These housing types are most commonly blended in Wilsonville's building permit data. Where these housing types are blended, they are labeled "single-family" (rather than "single-family detached") and the table or figure notes this fact.

- The **Decennial Census**, which is completed every ten years and is a survey of all households in the U.S. The Decennial Census is considered the best available data for information such as demographics (e.g., number of people, age distribution, or ethnic or racial composition), household characteristics (e.g., household size and composition), and housing occupancy characteristics. As of the 2010 Decennial Census, the Census Bureau does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information. Decennial Census data is available for 2000 and 2010.

- The **American Community Survey (ACS)**, which is completed every year and is a sample of households in the U.S. The 2011 ACS sampled about 3.3 million households in 2011 or about 2.5% of the households in the nation. The ACS collects detailed information about households, such as: demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics.

  For cities with a population of fewer than 20,000—which included Wilsonville until 2012—ACS data is only available as a 5-year estimate because the ACS sample is not large enough to give statistically significant results from a one-year sample. The 2007-2011 ACS employs a continuous measurement methodology that uses a monthly sample of the U.S. population. By pooling several years of survey responses, the ACS can generate detailed statistical portraits of small geographies, such as Wilsonville.

  For example, the 2007-2011 ACS shows that Wilsonville's median household income was about $51,000. This estimate of income was generated from households' responses to the ACS in each of the five years of the period (i.e., 2007, 2008, etc.). This median is not an average of medians but the median for all ACS responses collected from Wilsonville households over the five-year period.

In general, this report uses data from the 2007-2011 ACS for Wilsonville. Where information is available, we report information from the 2010 Decennial Census.

NATIONAL HOUSING MARKET TRENDS

The following evaluation of housing trends is based on previous research conducted by ECONorthwest for other housing needs studies as well as new research. This evaluation is based, in part, on conclusions from The State of the Nation's Housing, a 2012 report from the Joint Center for Housing Studies of Harvard University.

> "After several false starts, there is reason to believe that 2012 will mark the beginning of a true housing market recovery. Sustained employment growth remains key, providing the stimulus for stronger household growth and bringing relief to some distressed homeowners. Many rental markets have already turned the corner, giving a lift to multifamily construction but also eroding affordability for many low-income households. While gaining ground, the homeowner market still faces multiple challenges. If the broader economy weakens in the short term, the housing rebound could again stall."

The national housing market continues to suffer from a large backlog of foreclosed homes, large numbers of 'underwater' mortgages, and high vacancy rates. The eventual recovery of the national housing market is dependent on near-term resolution of outstanding foreclosures and long-term job growth and expansion of the economy.

This evaluation presents a mixed outlook for housing markets with some signs of improvement in the jobs sector countered by the difficulty of acquiring new loans and reduced expectations for household growth. Following are some other relevant findings from the 2011 and 2012 Harvard reports:

- The last seven years saw a continuation of the significant departure from the recent housing boom that had lasted for 13 consecutive years (1992-2005). By 2007 and early 2008, housing market problems had reached the rest of the economy, resulting in a nationwide economic slowdown and recession. The slowdown has continued through 2012, although the national housing market shows signs of recovery.
- The on-going recovery from the housing downturn is weaker than any housing cycle since the 1970's. Most notably, housing starts have been below 1 million units per year since 2009, with little of the rebound present after housing troughs seen in other decades.
- The number of delinquent loans or home foreclosures has begun to decrease, although a large number of homes remain in foreclosure proceedings. The number of loans 90 days or more delinquent decreased since its peak in late 2009. The backlog of loans in the

foreclosure process decreased only slightly between late 2009 and 2012.

- Since 2008, foreclosures have contributed to sharp decrease in housing prices, leaving roughly 11.1 million homeowners underwater on their mortgages (where the value of the house is less than the owner's mortgage). These loans equate to $717 billion in negative equity.
- Homeownership peaked at 69.9% in 2005. After 13 successive years of increases, the national homeownership rate slipped each year from 2005 to 2011 and was at 65.4% in the first quarter of 2012. The Joint Center for Housing Studies predicts that the homeownership rate will continue to decline in the near-term due to the foreclosure backlog and tight credit conditions.
- Nationally, the rental market continues to experience growth, adding 1.0 million rental households in 2011 and averaging 730,000 new rental households per year from 2005 through 2011. After an increase in the overall rental vacancy rate from 9.6% in 2007 to 10.6% in 2009, the rental market has begun to tighten. The rental vacancy rate fell to 9.5% in 2011.

REGIONAL AND LOCAL HOUSING MARKET TRENDS

Residential development trends

Wilsonville had a total of 9,100 dwelling units in 2012. Figure 3-1 and Table 3-1 show residential building permits issued in Wilsonville between January 1, 2000 and December 31, 2012. During this period, the City issued permits for a total of 2,862 dwelling units or one-third of Wilsonville's total housing stock. Wilsonville permitted an average of 220 dwelling units annually. More than 400 units were permitted each year in 2006, 2011, and 2012.

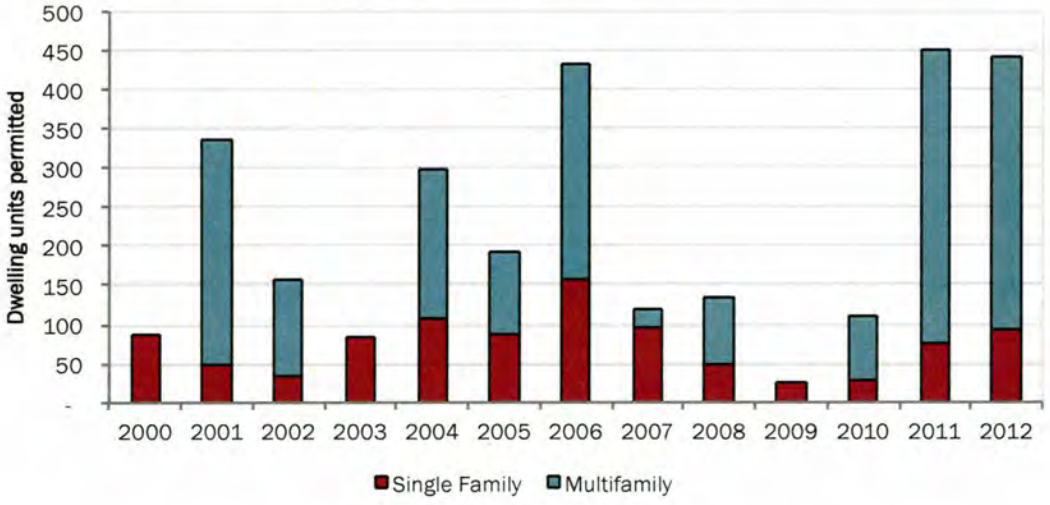
The number of single-family units permitted, which includes both single-family detached and attached dwellings, was relatively stable over the 13-year period, averaging 75 units permitted annually. The largest number of single-family permits was issued between 2004 and 2007, consistent with the national housing market boom.

While the number of permits issued decreased substantially in 2009 and 2010, the number of single-family permits issued in 2011 and 2012 rebounded to at or above the period average. The major reason for this was construction of single-family dwellings in Villebois. This rebound suggests that Wilsonville's

housing market was less impacted by the national and regional housing market decline that started in 2008, and Wilsonville's housing market is rebounding relatively quickly.

Two-thirds of units permitted during the 2000-2013 period were multifamily housing, which includes apartments, condominiums, and congregate housing. The number of multifamily dwellings permitted varied from zero in 2000 and 2003 to more than 400 annually in 2006, 2011, and 2012. The large number of units permitted in 2011 and 2012 also suggests that demand for housing in Wilsonville has remained strong, despite the recent national and regional housing market decline.

Figure 3-1. Dwelling units approved through building permits issued for new residential construction, Wilsonville, January 1, 2000 to December 31, 2012



Source: City of Wilsonville Building Permit Database 2012 and Comprehensive Plan and Zoning designations; Analysis by ECONorthwest
Note: Single-family includes single-family detached, single-family attached, and manufactured homes, not including accessory dwelling units.

Table 3-1. Dwelling units approved through building permits issued for new residential construction, Wilsonville, January 1, 2000 to December 31, 2012

Year	Single Family	Multifamily	Total
2000	87	-	87
2001	49	286	335
2002	34	122	156
2003	83	-	83
2004	107	190	297
2005	87	106	193
2006	158	274	432
2007	97	21	118
2008	50	85	135
2009	24	-	24
2010	27	84	111
2011	75	376	451
2012	92	348	440
Summary of Units Permitted			
Total	**970**	**1,892**	**2,862**
Percent	**34%**	**66%**	**100%**
Annual Average	**75**	**146**	**220**

Source: City of Wilsonville Building Permit Database 2012 and Comprehensive Plan and Zoning designations; Analysis by ECONorthwest
Note: Single-family includes single-family detached, single-family attached, and manufactured homes.

The images below show examples of multifamily housing developed in Wilsonville between 2000 and 2012.

Canyon Creek North, 2001

Spring Ridge, an assisted living facility in Charbonneau

Canyon Creek North, 2002

Village at Main, 2004

Jory Trail, 2011-2012

Bell Tower, 2011-2012

The Charleston, Villebois

Table 3-2 shows the permits issued for both new single-family and new multifamily dwellings in selected cities in the Portland Region between 2000 and 2012. Table 3-2 shows that the majority of housing development in the region occurred in Portland and Hillsboro. Wilsonville accounted for 3% of single-family units permitted and 6% of multifamily units permitted within the Portland Region.

Table 3-2. Total permitted single-family and multifamily dwellings by year, selected cities in the Portland Region, 2000 to 2012

	Single-family detached		Multifamily		Total	
	Units	Percent of Region	Units	Percent of Region	Units	Percent of Region
Beaverton	2,991	8%	2,937	9%	5,928	9%
Forest Grove	1,216	3%	251	1%	1,467	2%
Happy Valley	2,667	7%	163	1%	2,830	4%
Hillsboro	6,379	17%	4,082	13%	10,461	15%
Lake Oswego	1,042	3%	104	0%	1,146	2%
Milwaukie	179	0%	68	0%	247	0%
Oregon City	2,817	8%	206	1%	3,023	4%
Portland	11,090	30%	21,138	66%	32,228	46%
Sherwood	1,920	5%	265	1%	2,185	3%
Tigard	3,133	8%	214	1%	3,347	5%
Troutdale	627	2%	402	1%	1,029	1%
Tualatin	1,100	3%	281	1%	1,381	2%
West Linn	1,359	4%	147	0%	1,506	2%
Wilsonville	970	3%	1,892	6%	2,862	4%
Total units permitted in selected cities	**37,490**	**100%**	**32,150**	**100%**	**69,641**	**100%**

Source: U.S. Census, Building permits data site, http://censtats.census.gov/bldg/bldgprmt.shtml
Note: Wilsonville data is based on the permit data in Table 3-1 from the City of Wilsonville, not from the Census
Note: For Wilsonville, Single-family includes single-family detached, single-family attached, and manufactured homes.

Trends in foreclosures

Housing foreclosure activity was substantially higher than normal between 2007 and 2012. Nationally, foreclosure activity is decreasing after the peak in 2009. In Oregon, Clackamas County, and Washington County, foreclosure activity decreased from highs in 2011, with large decreases in foreclosures starting the Fourth Quarter of 2012. Compared to Third Quarter 2012, foreclosure related activity (e.g., foreclosure inventories and foreclosure filings) decreased by more than half at the State-level and by more than 60% in Clackamas and Washington Counties.

Foreclosure activity in Wilsonville and nearby cities (e.g., Tigard, Tualatin, Beaverton, or Hillsboro) followed the same pattern. Foreclosure filings in

Wilsonville and nearby cities decreased by about 90% between Third Quarter 2012 and Third Quarter 2013. The number of for-sale dwellings in foreclosure decreased by more than 70% in Wilsonville and nearby cities over the same period.

Trends in housing mix

Housing mix is the mixture of housing structure types (e.g., single-family detached or apartments) within a city. The housing mix by type (i.e., percentage of single family or multi-family units) is an important variable in any housing needs assessment. Distribution of housing types is influenced by a variety of factors, including the cost of new home construction, area economic and employment trends, demographic characteristics, and amount of land zoned to allow different housing types and densities.

This section presents housing mix data for two periods (1) housing mix over the 2001 to 2012 period based on data from the City of Wilsonville and (2) housing mix over the 2000 to 2007-2011 period based on data from the American Community Survey from the U.S. Census.

There are several ways to look at change in housing mix over time, each of which shows a slightly different mix of housing. Table 3-3 shows the mix of housing units in Wilsonville in the fourth quarter of 2012.

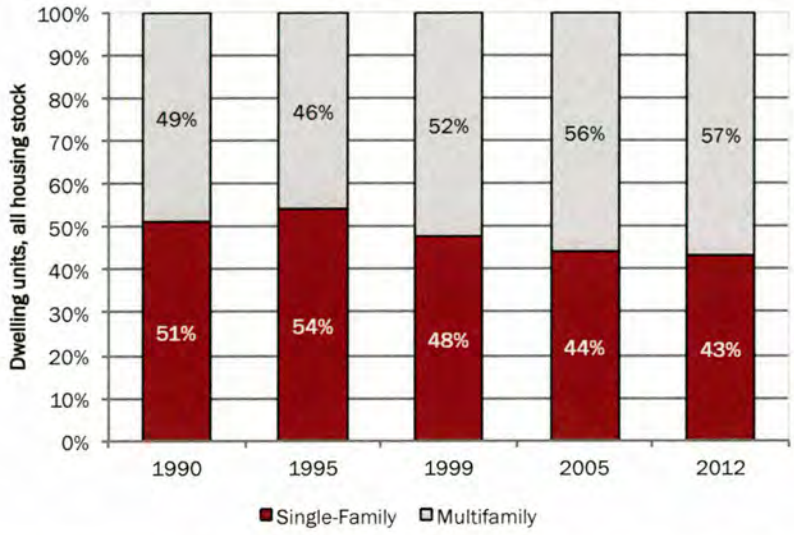
Table 3-3. Wilsonville Housing Unit Inventory, 2012

Housing type	Number of units	Percent of total
Single-Family	**3,931**	**42%**
Single-Family	3,768	40%
Mobile Home	163	2%
Multifamily	**5,486**	**58%**
Duplex	68	1%
Condominium	563	6%
Apartment	4,855	52%
Total	**9,417**	**100%**

Source: Wilsonville Housing Unit Inventory, 4th quarter 2012
Note: Single-family includes single-family detached, single-family attached, and manufactured homes.

Figure 3-2 shows changes in the mix of Wilsonville's housing stock from 1990 to 2012. The percentage of single-family housing varied from 54% in 1995 to 43% in 2012.

Figure 3-2. Change in housing mix, all housing stock, Wilsonville, 1990 to 2012



Source: 1990: Annual City housing inventory report, 1995: Annual City housing inventory report
1999: Comprehensive Plan, 2005: 2005 Wilsonville Housing Study, 2012: Annual City housing inventory report

OAR 660-007-0030 requires that jurisdictions "Provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances." This means that the City is required to designate sufficient land in zones that allow multifamily housing so that half of all new housing could be multifamily.

Starting with its Comprehensive Plan in 1980, Wilsonville has planned for growth of an industrial base surrounded by quality residential areas that feature a mix of single and multi-family development, with an emphasis on open space and the natural environment. Providing a mix of housing types and densities to create a whole community was envisioned in the original Comprehensive Plan map and text. Land within the City that was planned for residential use was allocated a minimum and maximum density per acre. The planned densities have generally not changed since 1980.

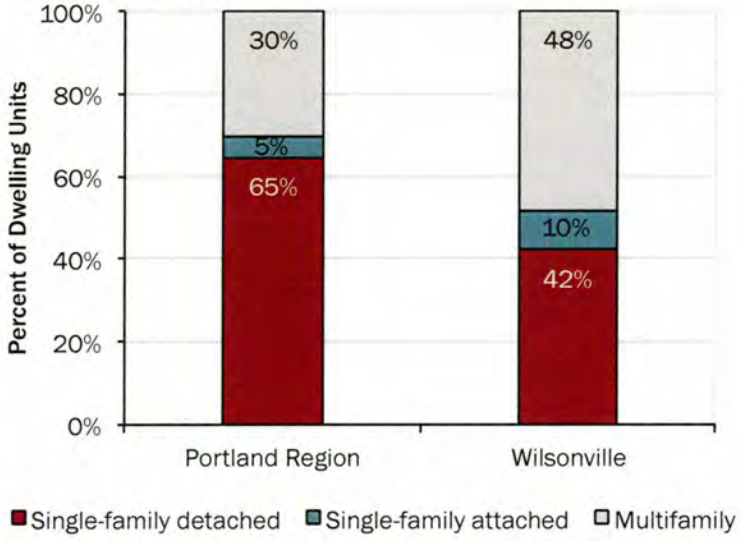
For example, Wilsonville's current Comprehensive Plan includes the following policy: "The City of Wilsonville shall provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville." The implementation measure for this policy states that Wilsonville encourages "...the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall,

manufactured homes, mobile homes, modular homes, and condominiums in various structural forms."[7]

Based on the City's Comprehensive Plan and Zoning policies, the City has met the requirement of OAR 660-007-0030. Additionally, development is effectively implementing the adopted policies.

To put Wilsonville's housing mix in the regional context, Figure 3-3 shows unit type for the Portland Region[8] and Wilsonville in 2007-2011. Relative to the region, Wilsonville has a high percentage of multifamily units and a low percentage of single-family detached units.

Figure 3-3. Dwelling units by type, all housing stock, Portland Region and Wilsonville, 2007-2011



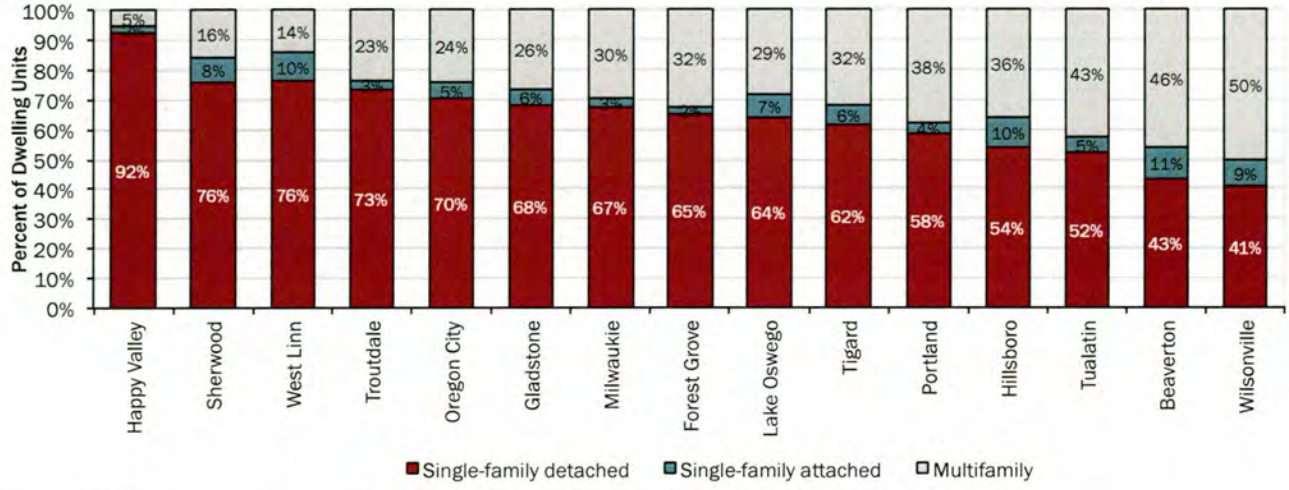
Source: 2007-2011 American Community Survey B25032

[7] Comprehensive Plan Policy 4.1.4 and Implementation Measure 4.1.4.d.

[8] In this report, the Portland Region is defined as Clackamas, Multnomah, and Washington Counties in Oregon.

Figure 3-4 shows the housing mix of all housing stock for fifteen cities in the Metro UGB in 2007-2011. Wilsonville had the highest percentage of multifamily housing of the cities shown.

Figure 3-4. Dwelling units by type, all housing stock, selected cities in the Portland Region, 2007-2011



Source: 2007-2011 American Community Survey B25024

Trends in homeownership

This section describes homeownership trends, nationally as well as in the Portland Region and Wilsonville.

National trends in homeownership

Census data shows that the majority of housing in the U.S. is owner-occupied. According to analysis by the Joint Center for Housing Studies of Harvard University, the long-term market outlook shows that homeownership is still the preferred tenure, despite decreases in homeownership rates since 2006. The Urban Land Institute forecasts that homeownership will decline to the low 60 percent range by 2015.[9] In the longer-run, additional increases in homeownership rates depend, in part, on the potential owners' ability to purchase homes in the future, as well as whether the conditions that have led to homeownership growth can be sustained.

The Joint Center for Housing Studies indicates that demand for new homes could total as many as 17 million units nationally between 2010 and 2020. The location of these homes may be different than recent trends, which favored lower-density development on the urban fringe and suburban areas. The Urban Land Institute identifies the markets that have the most growth potential are "global gateway, 24-hour markets," which are primary coastal cities with international airport hubs (e.g., Washington D.C., New York City, or San Francisco). Development in these areas may be nearer city centers, with denser infill types of development.[10]

Local and regional trends in homeownership

Figure 3-5 shows changes in Wilsonville's tenure, which is the rate of homeownership and renting, for occupied units from 2000 to 2010. Wilsonville's tenure shifted over the period, with an 8% decrease in homeownership. About 54% of occupied housing in Wilsonville was renter-occupied in 2010, up from 46% in 2000.

The change in homeownership rates is the result of changes in the local, regional, and national housing markets, including changes in lending practices and broader economic conditions. The previous section described the changes in national homeownership rates. Wilsonville's change in homeownership rates is also a reflection of the mix of housing in Wilsonville.

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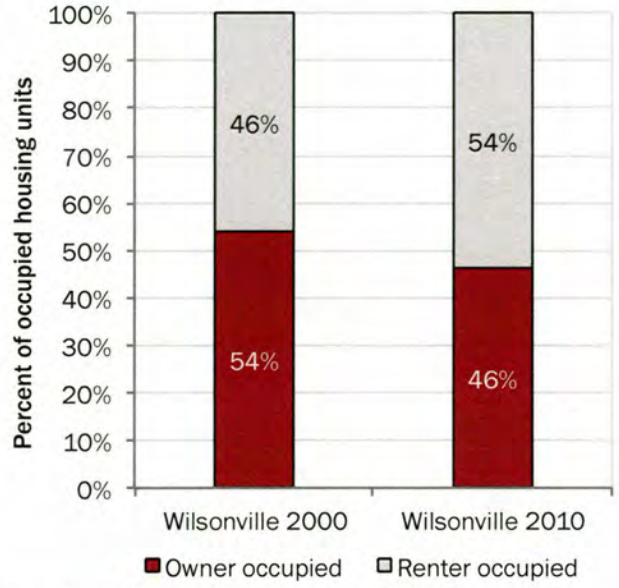
[9] John McIlwain, "Housing in America: The Next Decade," Urban Land Institute

[10] Urban Land Institute, "2011 Emerging Trends in Real Estate"

Figure 3-2 shows that the share of single-family housing, which is most frequently owner-occupied, decreased between 1999 and 2012.

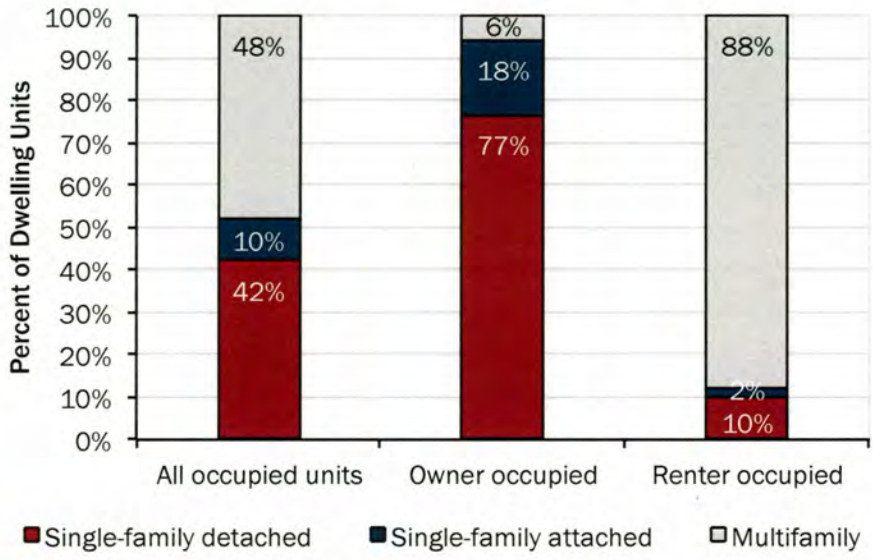
Figure 3-5. Change in tenure, occupied units, Wilsonville, 2000 and 2010



Source: 2000 Census SF1 H004, 2010 Census SF1 H4.

Figure 3-6 shows type of dwelling by tenure (owner or renter-occupied) in Wilsonville for the 2007-2011 period. Single-family housing (both attached and detached) was primarily owner-occupied, while multifamily housing was primarily renter-occupied. The homeownership rate for households in single-family detached housing was 88% and 6% for multifamily structures.

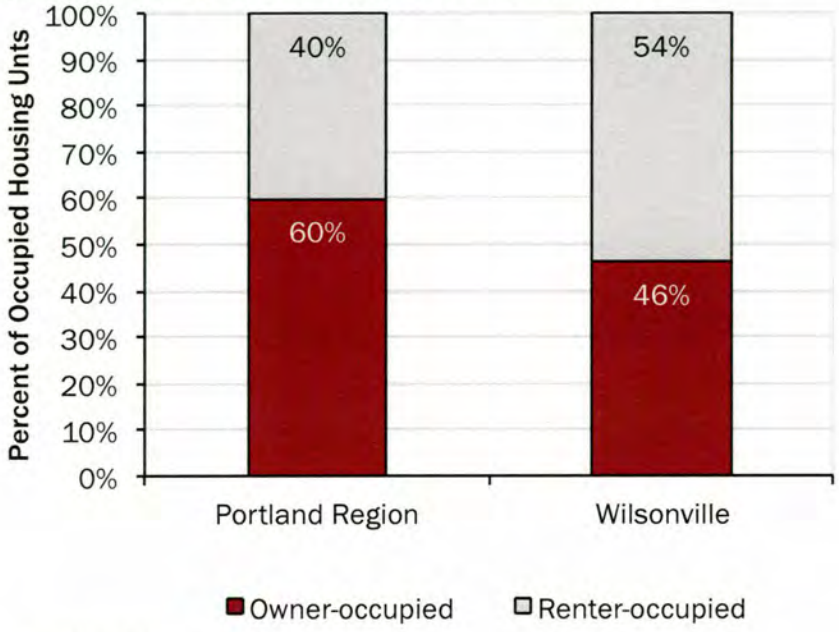
Figure 3-6. Tenure by housing type, Wilsonville, 2007-2011



Source: 2007-2011 American Community Survey, B25032.

Figure 3-7 shows tenure in 2010 for the Portland Region and Wilsonville. The 2010 homeownership rate in Wilsonville was 46%, lower than Clackamas County (69%), Washington County (61%), or the Portland Region (60%). More than half of Wilsonville's dwelling units are renter-occupied.

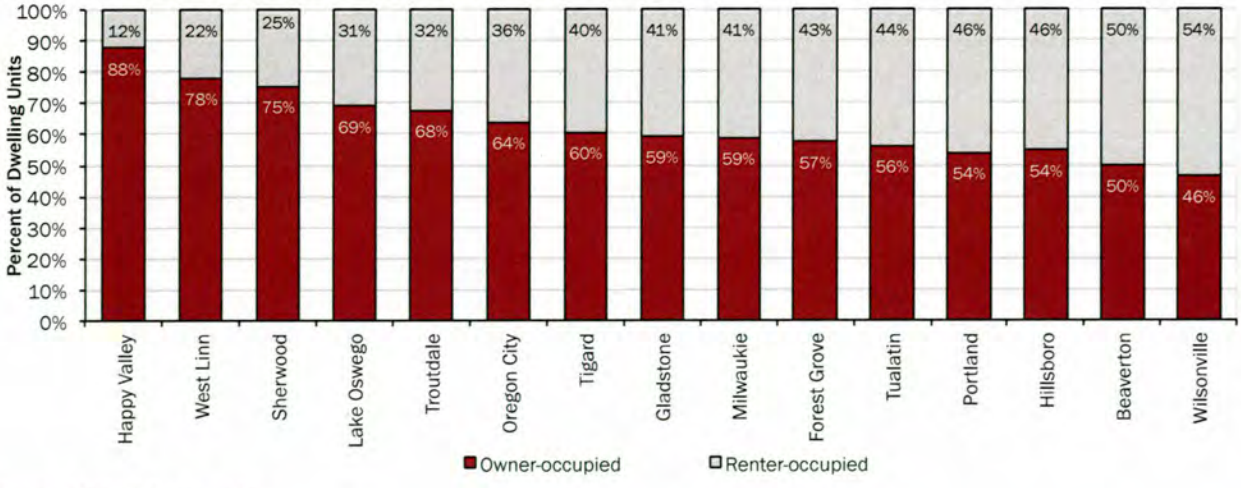
Figure 3-7. Tenure, Portland Region and Wilsonville, 2010



Source: 2010 US Census, H14

Figure 3-8 shows tenure for 15 cities in the Portland Metro UGB. In 2010, Wilsonville had the lowest homeownership rate of the cities shown.

Figure 3-8. Tenure, selected cities in the Metro UGB, 2010



Source: 2010 US Census, H14

Residential development density in Wilsonville

Housing density is the density of housing by structure type, expressed in dwelling units per net or gross acre.[11] Housing needs analysis commonly include an analysis of historical residential densities to provide factual information to estimate future residential densities.

Table 3-4 and Table 3-5 show residential density in Wilsonville, based on development between 2000 and 2012.[12] The density analysis is based on building permit, Comprehensive Plan Designations, and tax lot information. This analysis considers density based on residential land in lots, excluding land in that was developable minus constraints (e.g., land in Wilsonville's Significant Resource Overlay Zone (SROZ)), public rights-of-way, and land in public open space.

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[11] OAR 660-024-0010(6) uses the following definition of net buildable acre. "Net Buildable Acre" consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

[12] Though the text of the Comprehensive Plan does not specify whether the assigned densities are per gross or net acre, to the best knowledge of Planning staff and the City Attorney, it has always been interpreted by the City as being "gross". The 1971 General Plan specifically described density as number of units per gross acre, but the Comprehensive Plans since have not been clear. From 1980 through 1999, the Development Code included a policy about how to calculate the density of PDR sites, and this policy describes inclusion of streets, open space, dedications, etc., which amounts to "gross acreage". In 1997, when the City first submitted to Metro its planned capacity for housing, the estimates were derived from the Comprehensive Plan density designations, and described as being per gross acre. That 1997 capacity estimate set Wilsonville's long-term capacity for housing development with respect to regional requirements. All PDR applications since 2000 that staff has reviewed interpret the Comprehensive Plan density ranges as being per gross acre.

Table 3-4 shows Wilsonville's residential development density by Comprehensive Plan Designations for the 2000 to 2012 period:

- Development density in the **Residential** Plan Designation was 10.8 dwelling units per net acre.
- Development density in the **Village** Plan Designation was 18.0 dwelling units per net acre.[13]
- Development density in the **Industrial** Plan Designation was 8.5 dwelling units per net acre.
- Development density in the **Commercial** Plan Designation was 56.3 dwelling units per net acre.[14]

Table 3-4. Residential development density by Plan Designation, Wilsonville, 2000 to 2012

Plan Designation	Dwelling units	Net Acres	Net Density
Residential	1,810	168	10.8
Village	909	50	18.0
Industrial	91	11	8.5
Commercial	52	1	56.3
Total	**2,862**	**230**	**12.4**

Source: City of Wilsonville Building Permit Database 2012 and Comprehensive Plan and Zoning designations; Analysis by ECONorthwest
Note: The actual number of acres of land in Commercial was 0.92, which is rounded up to one acre in Table 3-4

Table 3-5 shows density of residential development constructed in Wilsonville for the 2000 to 2012 period:

- The **average** density of housing developed during the 13-year period was 12.4 dwelling units per net acre.[15]
- The average density of **Single-family** housing (including single-family detached and attached housing) was 7.6 dwelling units per net acre.

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[13] The Villebois Master Plan and subsequent development applications calculate net densities differently than does this analysis. The net density calculations for Villebois include the parcels with dwelling units and also alleys (e.g., private rights-of-way) in the net area, resulting in an average built density of 13 dwelling units per net acre. The density calculation for this study did not include or private rights-of-way in net acreage.

[14] Note: The actual number of acres of land in Commercial was 0.92, which is rounded up to one acre in Table 3-4.

[15] Density was calculated by dividing acres by the number of dwelling units. For example, the calculation for single-family density is 982 dwelling units divided by 129 net acres equals 7.6 dwelling units per net acre.

- The average density of **Multifamily** housing was 18.5 dwelling units per net acre.

Table 3-5. Residential development density by housing type, Wilsonville, 2000 to 2012

Housing Type	Dwelling units	Net Acres	Net Density
Single-family	982	129	7.6
Multifamily	1,880	102	18.5
Total	**2,862**	**230**	**12.4**

Source: City of Wilsonville Building Permit Database 2012 and Comprehensive Plan and Zoning designations; Analysis by ECONorthwest
Note: Single-family includes single-family detached, single-family attached, and manufactured homes.
Note: The analysis of density did not include SROZ areas

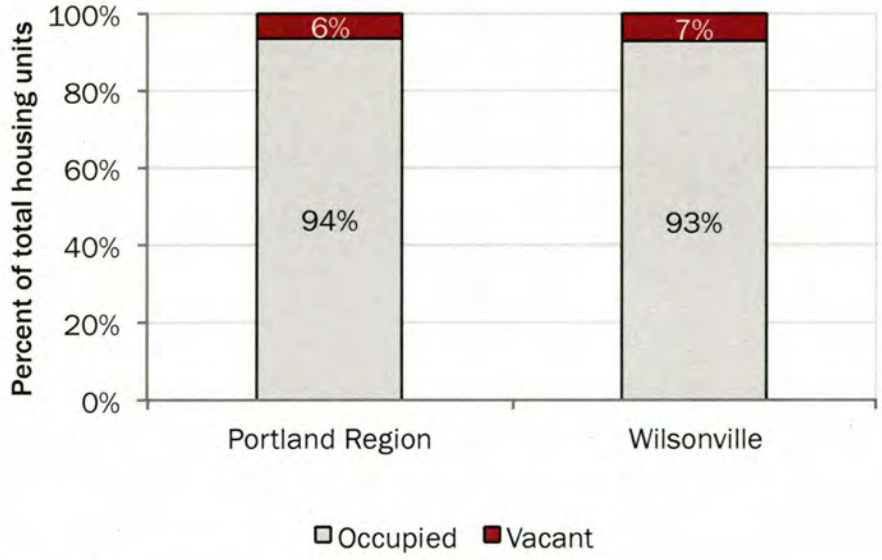
OAR 660-007-0035 sets specific density targets for cities in the Metro UGB. OAR 660-007 requires that Wilsonville "provide for an overall density of eight or more dwelling units per net buildable acre." The City's achieved density over the 2000 to 2012 period exceeds this requirement.

Vacancy rates

Vacancy rates are cyclical and represent the lag between demand and the market's response to demand in additional dwelling units. Vacancy rates for rental and multiple family units are typically higher than those for owner-occupied and single-family dwelling units.

Figure 3-9 shows vacancy rates in the Portland Region and Wilsonville in 2010. Wilsonville's 2010 vacancy rate was higher than rates in the Portland Region.

Figure 3-9. Vacancy rates for Portland Region and Wilsonville, 2010

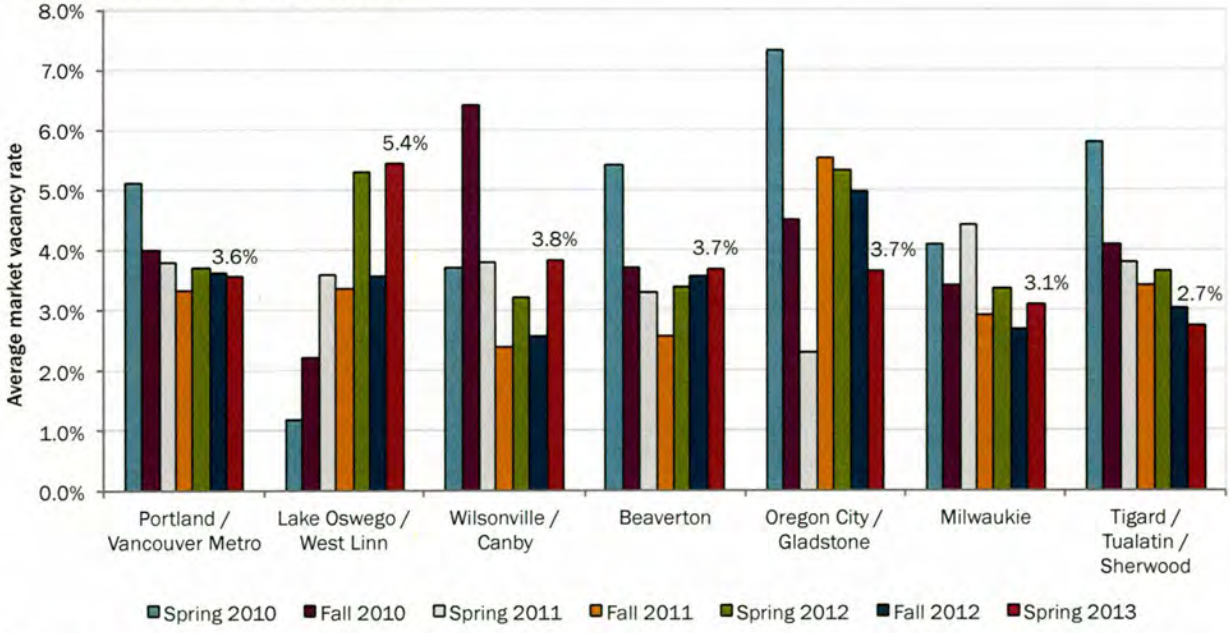


Source: U.S. Census 2010 QT-H1

Multifamily NW tracks trends in the Portland area rental market and publishes a semi-annual report. Figure 3-10 shows average market vacancy rates for apartments for the Portland/Vancouver region and selected submarkets in the south-central Portland Region. According to the Spring 2013 Apartment Report, the vacancy rate for apartments in Wilsonville was 3.8%, slightly higher than the regional average of 3.6%.

Multifamily vacancy rates vary, in part, as a result of building new multifamily developments. When a new multifamily development comes on the market, it may take months (or longer) for the new units to be absorbed into the housing market through rental of new units. During this absorption period, the vacancy rate will generally increase for multifamily housing.

Figure 3-10. Average market vacancy rates for apartments, Portland/Vancouver Metro area and selected submarkets, 2010-2013



Multifamily NW Apartment Reports, Spring 2010 - Spring 2013.

Chapter 4. Demographic and Other Factors Affecting Residential Development in Wilsonville

Demographic trends are important to a thorough understanding of the dynamics of the Wilsonville housing market. Wilsonville exists in a regional economy; trends in the region impact the local housing market. This chapter documents national, state, and regional demographic, socioeconomic, and other trends relevant to Wilsonville.

Demographic trends provide a broader context for growth in a region; factors such as age, income, migration and other trends show how communities have grown and shape future growth. To provide context, we compare Wilsonville to Clackamas and Washington Counties and the Portland Region (defined here as Clackamas, Multnomah, and Washington Counties) where appropriate. Characteristics such as age and ethnicity are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

SUMMARY OF THE FACTORS THAT AFFECT RESIDENTIAL DEVELOPMENT

Key findings

Demographic trends over the 2000 to 2010 period

- **Wilsonville's population grew at a faster rate than the Region or counties.** Wilsonville nearly tripled in size between 1990 and 2012, growing from 7,100 people in 1990 to over 20,500 in 2012. Between 1990 and 2012, Wilsonville grew at an average annual rate of 4.9%.

- **Wilsonville's population was younger that the Region's population.** Median age in Wilsonville was 36 in 2010, younger than Clackamas County (median age: 41) and slightly older than Washington County (median age: 35).

- **People over 60 years are forecast to have the fastest growth in the Region.** In the Portland Region, the percentage of population that is 60 years and older is projected to increase from 14% of the population in 2000 to 23% in 2040.

- **The Hispanic population is growing faster in Wilsonville than other racial or ethnic groups.** Between 2000 and 2010, Wilsonville's Hispanic

population grew by 143%, compared with 74% growth in Clackamas County and 67% growth in Washington County.

- **The Hispanic population is projected to continue to be the fastest growing group in the nation over the next decades.** The U.S. Census forecasts that Hispanics will account for 25% of the nation's population by 2050.

Household composition in Wilsonville

- **Wilsonville had smaller household sizes than the Regional average.** The average household size in Wilsonville was approximately 2.3 persons per household in 2010; in Clackamas and Washington Counties, it was 2.6 and in the Portland Region it was 2.5.

- **Wilsonville had a larger percentage of single-person households than Clackamas or Washington counties.** In 2010, 33% of Wilsonville's households were single-person, compared with 24% of Clackamas County's households and 25% of Washington County's households. Wilsonville's percentage of single-person households increased from 28% in 2000 to 33% in 2010.

Commuting trends

- **Residents of Wilsonville typically had shorter commutes than the regional average.** Thirty-five percent of Wilsonville residents commute less than 15 minutes, compared to 27% of Clackamas County residents, 27% of Washington County residents, or 25% of Portland Region residents.

- **Wilsonville imports workers from the Portland Region.** About 16,000 people commute to Wilsonville to work, mostly from Clackamas and Washington County.

- **Relatively few people live and work in Wilsonville.** About 1,000 people live and work in Wilsonville.

- **The majority of Wilsonville's workers commute to work in other parts of the Portland Region.** About 5,100 workers commute from Wilsonville to work across the Portland Region.

Changes in housing costs

- **Sales prices for single-family dwellings in Wilsonville increased over the 2000 to 2012 period but at a slower rate than the Regional average.** Between 2000 and 2012, average sales prices in Wilsonville increased by $75,000 (31%), compared to a 54% increase in Portland Region and Washington County and 36% in Clackamas County.

- **Home sales price in Wilsonville peaked above the Regional average.** Average sales price in Wilsonville was about $473,300 in 2007, compared with the average of $354,700 in the Portland Region.

- **Rental costs in 2013 in Wilsonville were lower than the Regional average.** Average rent in the Wilsonville/Canby submarket was $0.94 per square foot in Spring 2013, lower than the regional average of $1.04 per square foot.

Trends in income and housing affordability

- **Residents of Wilsonville had lower incomes than the average for residents of Clackamas County and Washington County.** The median household income in Wilsonville was $55,316, lower than Clackamas County ($63,790) or Washington County ($63,814). Wilsonville's median household income was higher than cities such as Beaverton, Portland, and Milwaukie. Wilsonville's median household income was lower than cities such as Happy Valley, West Linn, and Lake Oswego.

- **Wilsonville's households were cost burdened at about the same rate as all households in the Region.**[16] The percentage of Wilsonville households who were cost burdened (41% of households) was similar to the average for the Portland Region and slightly above the percentages in Washington County (38%) and Clackamas County (40%).

- **Renters were more likely to be cost burdened in Wilsonville and in the Region.** The rate of cost burden was much higher for renters (48%) than for homeowners (31%) in Wilsonville. In comparison, 40% of Clackamas County households and 38% of Washington County households were cost burdened in 2007-2011.

- **Homeownership costs increased faster than incomes in Wilsonville and in the Region.** The ratio of housing value to household income in Wilsonville increased from 4.1 in 2000 to 6.7 during 2007-2011. In Clackamas County, the ratio increased from 4.7 to 5.1. In Washington County, the ratio increased from 3.5 to 4.4.

Implications for housing need in Wilsonville

Studies and data analysis have shown a clear linkage between demographic characteristics and housing choice. This is more typically referred to as the linkage between life-cycle and housing choice and is documented in detail in

[16] HUD guidelines indicate that households paying more than 30% of their income on housing are "cost burdened."

several publications. Analysis of data from the Public Use Microsample (PUMS) in the 2000 Census helps to describe the relationship between selected demographic characteristics and housing choice. Key relationships identified through this data include:

- Homeownership rates increase as income increases;
- Homeownership rates increase as age increases;
- Choice of single-family detached housing types increases as income increases;
- Renters are much more likely to choose multiple family housing types than single-family; and
- Income is a stronger determinate of tenure and housing type choice for all age categories.

Demographic information about the Wilsonville and the region that will affect the housing needs for the city include the following:

- *Age*. Wilsonville's households are aging, consistent with Regional and national trends. However, Wilsonville's households are, on average, younger than the Regional average. It is unclear from the data whether Wilsonville is attracting more younger people because Wilsonville has a larger share of affordable multifamily housing or whether they are attracted to Wilsonville for other reasons (e.g., high quality of life). What is clear is that most people who live in Wilsonville work someplace else. While we have no strong data on causation, people clearly find Wilsonville attractive as a place of residence. Potential factors could include location; age, type or configuration of housing (e.g., urban villages such as Villebois), cost of housing (probably a stronger factor for renters); and community amenities such as access to the Willamette River, recreation facilities, or shopping.

  If Wilsonville continues to attract younger households, the City will continue to have demand for lower-cost housing, such as for multifamily renters. The biggest question, with implications for Wilsonville's future housing needs, is whether younger people who move to Wilsonville for rental opportunities will continue to live in Wilsonville if they are ready to become homeowners. The high quality of life and high quality school system in Wilsonville may make the City attractive to young would-be homeowners, if affordable owner housing is available.

- *Household size and composition.* Wilsonville's average household size is smaller than the Regional average. This is attributable, in part, to the fact that Wilsonville has a larger share of younger working aged people, as well as people over 70 years old. In addition, Wilsonville has a comparatively

large share of single-person households. These factors suggest demand for smaller housing, both for renters and owners.

- *Ethnicity*. Wilsonville's population has become more ethnically diverse over the last decade, consistent with Regional and national trends. It is likely that Wilsonville's Hispanic population will continue to grow, as is forecasted for the nation.

  If this is the case, there will be implications for the City's housing needs by increasing demand for larger rental units, both multifamily and single-family housing types, as well as affordable housing suitable for families.

- *Income*. Wilsonville's incomes are lower, on average, than the Region's incomes. This suggests that Wilsonville has and will continue to have substantial demand for lower cost housing and/or smaller units, both for renters and owners.

- *Affordability*. Wilsonville's housing sales prices are slightly higher than the Regional average but higher than the averages in some nearby cities (e.g., Hillsboro, Oregon City, or Milwaukie). Housing costs are growing faster than income, making homeownership less affordable in Wilsonville, as well as the Portland region.

Wilsonville's housing market and the demographics of the people living there have implications for economic development efforts in Wilsonville. Two of the key factors that businesses consider when locating in a city are (1) availability of skilled and educated labor, and (2) housing affordability. Wilsonville's residents are generally younger and more educated than the Regional average. Housing prices in Wilsonville are around the Regional averages, with rents a little lower than some nearby cities.

Currently, the majority of Wilsonville's residents commute outside the City for work and the majority of people employed at businesses in Wilsonville commute into the City for work. Reasons for commuting are complex and are related to the local housing market (type, quality, and affordability of housing), household characteristics (e.g., composition of the household), and employment status. This trend existed in 1980 and continues today—underscoring how challenging it is to entice households to live and work in the same community. Implementation strategies that encourage jobs-housing balance are an important step, but ultimately, the factors that affect location choices are largely independent of local policy.

In short, Wilsonville's housing policy alone is unlikely to substantially affect commuting patterns in the southern Portland Region or in Wilsonville. But the City's residential policies can provide opportunities for production of housing that is affordable to a range of households. These policies ensure that, if broader market factors make people less willing to commute (i.e., substantial increases in

gasoline prices or increases in traffic congestion), Wilsonville will be positioned to provide housing for workers at local businesses. They can also create the type of community development patterns that are desirable to individuals who work in Wilsonville.

DEMOGRAPHIC AND SOCIOECONOMIC FACTORS AFFECTING HOUSING CHOICE

Analysts typically describe housing demand as the *preferences* for different types of housing (i.e., single-family detached or apartment), and *the ability to pay* for that housing (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

Metro, the agency responsible for regional planning within the Portland metropolitan UGB, uses a decision support tool called Metroscope to model changes in measures of economic, demographic, land use, and transportation activity. Metroscope includes a residential location model, which projects the locations of future households based on factors such as land availability and capacity, cost of development, changes in demographics, changes in employment, and changes in transportation and transit infrastructure. The housing needs analysis in Chapter 5 of this report is based on the Metroscope forecast of household growth in Wilsonville over the next 25 years.

Many demographic and socioeconomic variables affect housing choice. However, the literature about housing markets finds that age of the householder, size of the household, and income are most strongly correlated with housing choice.[17]

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person

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[17] The research in this chapter is based on numerous articles and sources of information about housing, including:

The Case for Multi-family Housing. Urban Land Institute. 2003

E. Zietz. *Multi-family Housing: A Review of Theory and Evidence*. Journal of Real Estate Research, Volume 25, Number 2. 2003.

C. Rombouts. *Changing Demographics of Homebuyers and Renters*. Multi-family Trends. Winter 2004.

J. McIlwain. *Housing in America: The New Decade*. Urban Land Institute. 2010.

D. Myers and S. Ryu. *Aging Baby Boomers and the Generational Housing Bubble*. Journal of the American Planning Association. Winter 2008.

M. Riche. *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities*. The Brookings Institution Center on Urban and Metropolitan Policy. March 2001.

L. Lachman and D. Brett. *Generation Y: America's New Housing Wave*. Urban Land Institute. 2010.

households. People in their middle years are more likely to live in multiple person households (often with children).

- **Income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own).

This chapter focuses on these factors, presenting data that suggests how changes to these factors may affect housing need in Wilsonville over the next 20 years.

NATIONAL AND STATE DEMOGRAPHIC AND SOCIOECONOMIC TRENDS

National trends

The following evaluation of housing trends that follows is based on previous research conducted by ECONorthwest for other housing needs studies as well as new research. This evaluation is based, in part, on conclusions from The State of the Nation's Housing, a 2012 report from the Joint Center for Housing Studies of Harvard University.

- Despite decades of growth and the recent decline in vacancy rates, rents have failed to keep pace with inflation. Between the peak in late 2008 and 2011, inflation-adjusted rents fell by more than 4%.
- House prices declined since the height of the housing bubble. Between October 2005 and March 2010, the median house price decreased by 26%. The price declines were about 50% greater than price declines at the high end of the housing market. The median home sales price dropped from 4.7 times the median household income in 2005 to 3.4 times the median household income in 2009.
- In 2011, for the first time since the early 1970's, monthly housing costs for mortgages on the typical home were less costly than the average rental unit.
- In 2010, more than one-third of American households spent more than 30% of income on housing, and 18% spent upwards of 50%.[18] The number of severely cost-burdened households (spending more than 50% of income on housing) increased by 6.4 million households from 2001 to 2010, to a total of nearly 20.2 million households in 2010. In 2010, there

[18] 2010 American Community Survey, Table B25091 and Table B25070.

was a 5.1 million unit gap between supply and demand for affordable housing units.

- Immigration will play a key role in accelerating household growth over the next 10 years. About 40% of the fall-off in household growth between 2007 and 2011 was due to a drop in immigration. Immigrants have traditionally comprised a growing percent of young adults and children in the United States.
- The largest generation of people in the U.S. is the Echo Boomers, with about 85 million people in 2010.[19] The Echo Boom generation is likely to grow even larger as new immigrants arrive. The oldest Echo Boomers turned 25 in 2010 and are beginning to form households. Echo Boomers will be the primary driver of growth in new households over the next twenty years.
- An aging population, baby boomers in particular, will drive changes in the age distribution of households in all age groups over 55 years. Second home demand among upper-income homebuyers of all ages also continues to grow, many of whom may be younger baby boomers. The ability to purchase second homes may be negatively affected by diminished earnings and lack of equity in primary homes. A recent survey of baby boomers showed that more than a quarter plan to relocate into larger homes and 5% plan to move to smaller homes.
- The younger baby boomers face challenges resulting from the decrease in housing values, which has left many households with mortgages that are higher than the worth of the house. It may take years for the value of these houses to equal or exceed the value of the mortgage.

[19] Echo Boomers are generally people born between the mid-1980's and the early 2000's. This group is sometimes referred to as Generation Y or the Millennials.

State Demographic Trends

Oregon's Draft *2011-2015 Consolidated Plan* includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide.[20] The plan concludes that "Oregon's changing population demographics are having a significant impact on its housing market." It identified the following population and demographic trends that influence housing need statewide. Oregon is:

- Growing more slowly than the national average since 2007
- Facing housing cost increases, higher unemployment, and lower wages, when compared to the nation
- Having higher foreclosure rates since 2005, compared with the previous two decades
- Losing federal subsidies on about 8% of federally subsidized Section 8 housing units
- Losing housing value in some markets within Oregon
- Losing manufactured housing parks, with a 25% decrease in the number of manufactured home parks between 2003 and 2010
- Increasingly older, more diverse, and less affluent households[21]

The US Census shows demographic changes taking place in Oregon. Oregon's minority population grew quickly over the last decade. Minorities made up 16.5% of the population in 2000 and 21.5% of the population in 2010, a 46% increase. Hispanics and Latinos make up a large percentage of that population. The Hispanic population grew rapidly in Oregon during the 2000's. The growth rate of Oregon's non-Hispanic population between 2000 and 2010 was 7.5% compared to 63.5% for Hispanics and Latinos. However, Hispanic per capita income in 2010 was only 47% of white per capita income.

Growth in the Hispanic population slowed after 2007 as the Great Recession took hold and employment opportunities dwindled. If the economy rebounds, the Hispanic population may return to more typical growth during the second half of the 2010's.

The Hispanic population has different housing preferences and homeownership trends than the population as a whole. These include:

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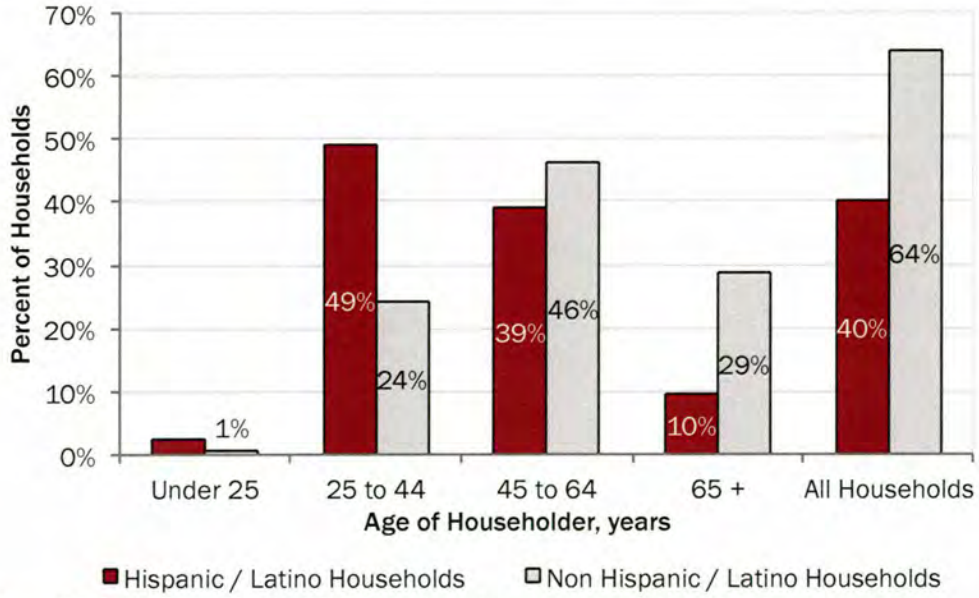
[20] http://www.ohcs.oregon.gov/OHCS/HRS_Consolidated_Plan_5yearplan.shtml

[21] State of Oregon *Draft Consolidated Plan 2011 to 2015*

- **A lower total level of homeownership.** Figure 4-1 shows that a smaller percentage of Hispanic households were homeowners (40%) in 2010, compared with non-Hispanic households (64%).
- **Higher levels of homeownership among young households.** 49% of Hispanic households aged 25 to 44 years were homeowners, compared with 24% of non-Hispanic households.
- **Higher fertility rates than non-Hispanic residents.** In 2010, for Oregon, white non-Hispanic women between the ages of 15 and 50 had 49 births per 1,000, lower than black non-Hispanics (59 per 1,000), and Hispanic (78 per 1,000).

If these trends continue and the Hispanic population grows, there will be more young households (possibly with young children) in the market for purchasing a home. This has implications for the types of housing needed to meet the needs of these households.

Figure 4-1. Homeownership distribution by age of householder and Hispanic origin, Oregon, 2010



Source: U.S. Census 2010 SF1 H17, H17H. Table shows the age of the head of household for owner occupied housing units.

REGIONAL AND LOCAL DEMOGRAPHIC TRENDS

Regional demographic trends largely follow the statewide trends discussed above, but provide additional insight into how demographic trends might affect housing in Wilsonville. Demographic trends that might affect the key assumptions used in the baseline analysis of housing need are: (1) the aging population, (2) changes in household size and composition, and (3) increases in diversity. This section describes those trends.

Population Growth

Table 4-1 shows population growth for Wilsonville and other areas from 1990 to 2012. Wilsonville grew at a faster rate than the Region or counties, growing from 7,100 people in 1990 to over 20,500 in 2012. Wilsonville grew at an average annual rate of 4.9% between 1990 and 2012 and 3.2% between 2000 and 2012.

Table 4-1. Population change, 1990-2012

					Change 1990 to 2012		
	1990	2000	2010	2012	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	308,745,538	313,914,040	65,204,167	26%	1.1%
Oregon	2,842,337	3,421,399	3,831,074	3,883,735	1,041,398	37%	1.4%
Portland Region	1,174,291	1,444,219	1,641,036	1,672,970	498,679	42%	1.6%
Washington County	311,554	445,342	529,710	542,845	231,291	74%	2.6%
Clackamas County	278,850	338,391	375,992	381,680	102,830	37%	1.4%
Wilsonville	7,106	13,991	19,509	20,515	13,409	189%	4.9%

Source: US Decennial Census 1990, 2000, 2010. PSU Population Research Center 2012. US Census Population Estimates 2012.

Population in-migration (i.e., people moving from other regions, states, and countries) accounts for the majority of population growth in Oregon. Between 1990 and 2012, 71% of Oregon's population growth was the result of in-migration. Over the same period, 69% of Clackamas County and 72% of Washington County's population growth was the result of in-migration.[22]

Between 2010 and 2020, about two-thirds of Oregon's total population growth is projected to be from net migration (in-migration minus out-migration), with the remaining one-third from natural increase (births minus deaths).[23] This is similar to the rates of in-migration during the 1990's when 70% of population growth was from net migration.

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[22] Portland State University's Population Research Center reports net migration in their *Annual Oregon Population Report*.

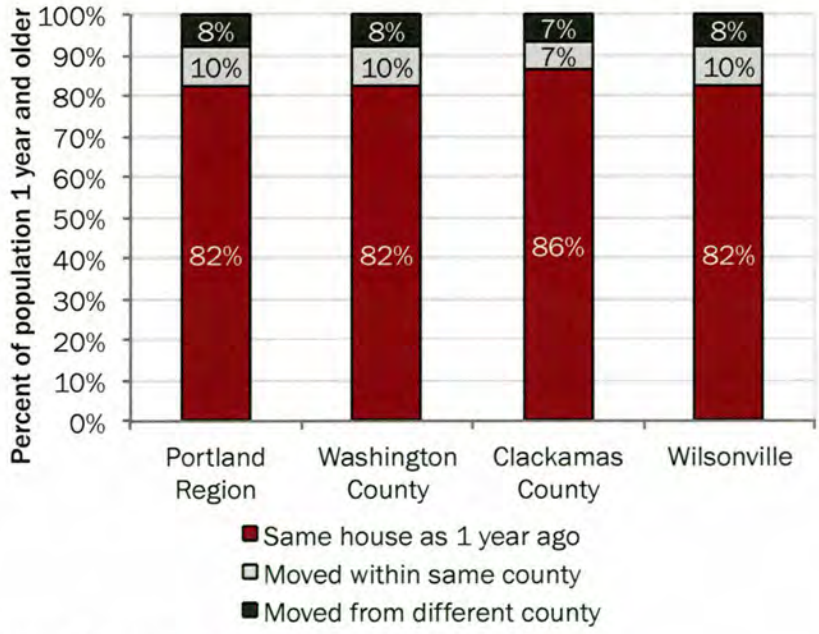
[23] Office of Economic Analysis "Short-Term State Population Forecast through 2020." http://www.oregon.gov/DAS/OEA/docs/economic/appendixc.pdf

Migrants to Oregon tend to have many characteristics in common with existing residents, with some differences. Recent in-migrants to Oregon are, on average, younger and more educated, and are more likely to hold professional or managerial jobs, compared to Oregon's existing population. The race and ethnicity of in-migrants generally mirrors Oregon's established pattern, with one exception: Hispanics make up more than 19% of in-migrants but only 11% of the state's population.[24]

Census data show that residents of Wilsonville were similarly mobile to residents of the Portland Region, Washington County, and Clackamas County. Figure 4-2 shows that for 2007-2011, 82% of Wilsonville residents lived in the same house in the year before, compared to 82% of residents of Washington County and the Portland Region and 86% of residents of Clackamas County.

Residents of Wilsonville who moved were similarly likely to have lived in a different county as residents of the Portland Region, Washington County, and Clackamas County. The implication is that Wilsonville experienced a similar percentage of its growth from migration as the region.

Figure 4-2. Place of residence in the previous year, Portland Region, Washington County, Clackamas County, and Wilsonville, 2007-2011



Source: U.S. Census American Community Survey 2007-2011, B07003

[24] US Census, American Community Survey, 2006-2010.

Age Changes

Table 4-2 shows the change in median age for Oregon, Washington County, Clackamas County, and Wilsonville between 2000 and 2010. The data show that median age increased in nearly all areas over the 10-year period. Between 2000 and 2010, Wilsonville's median age increased by 1.2 years, less than the increases in most surrounding cities. In 2010, the median age in Wilsonville was 36.2, younger than the state median and the Clackamas County median.

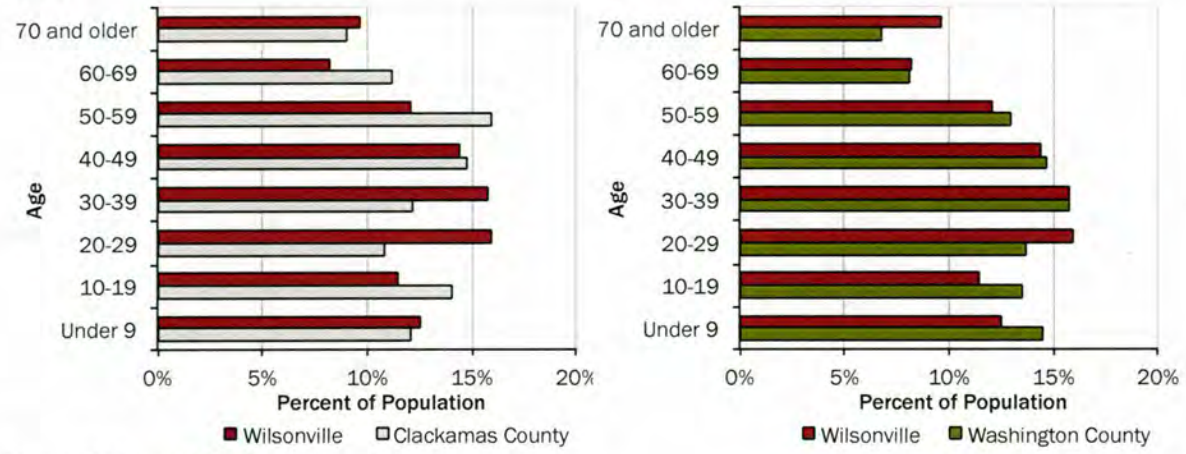
Table 4-2. Change in median age, Oregon, Washington County, Clackamas County, selected cities in the Portland Region, 2000-2010

			Change 2000-2010	
	2000	2010	Amount	Percent
Oregon	36.3	38.4	2.1	6%
Washington County	33.0	35.3	2.3	7%
Clackamas County	37.5	40.6	3.1	8%
Hillsboro	29.7	32.0	2.3	8%
Forest Grove	31.3	32.7	1.4	4%
Troutdale	31.8	34.0	2.2	7%
Sherwood	31.4	34.3	2.9	9%
Tualatin	31.9	34.6	2.7	8%
Beaverton	32.6	34.7	2.1	6%
Portland	35.2	35.8	0.6	2%
Wilsonville	**35.0**	**36.2**	**1.2**	**3%**
Oregon City	32.7	36.3	3.6	11%
Happy Valley	37.1	37.0	-0.1	0%
Tigard	34.5	37.4	2.9	8%
Gladstone	35.5	39.2	3.7	10%
Milwaukie	37.7	39.9	2.2	6%
West Linn	38.1	41.5	3.4	9%
Lake Oswego	41.2	45.8	4.6	11%

Source: US Census 2000 and 2010, P13

Figure 4-3 shows the age distributions of Wilsonville compared with Clackamas County and Washington County for 2010. Compared with the Clackamas County, Wilsonville had a larger percentage of young, working-age residents (20-39) and a smaller percentage of people aged 50-69. Compared with Washington County, Wilsonville had larger shares of residents over 70 and residents in their twenties. Both Washington and Clackamas Counties had a larger share of children than did Wilsonville.

Figure 4-3. Population distribution by age, Clackamas County, Washington County, and Wilsonville, 2010



Source: U.S. Census 2010, P12

Table 4-3 shows change in age distribution in Wilsonville between 2000 and 2010. The data show that Wilsonville grew by over 5,500 people between 2000 and 2010, an increase of 39%. The age breakdown shows that Wilsonville experienced an increase in population for all age groups. The fastest growing age groups were working age populations between 25 and 64 years old.

Table 4-3. Age distribution, Wilsonville, 2000-2010

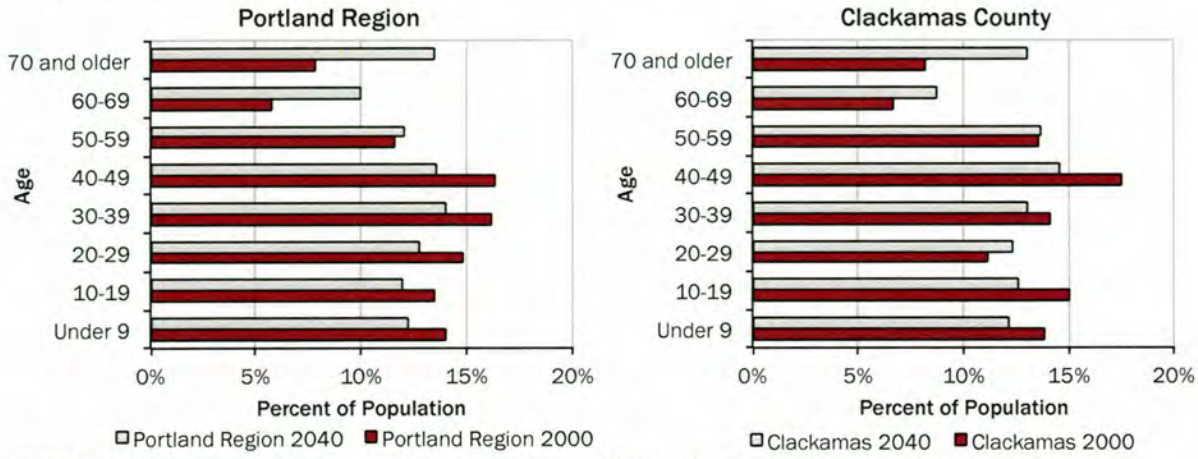
	2000		2010		Change 2000-2010		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	1,059	8%	1,216	6%	157	15%	-1%
5-17	2,377	17%	3,067	16%	690	29%	-1%
18-24	1,318	9%	1,737	9%	419	32%	-1%
25-44	4,397	31%	6,272	32%	1,875	43%	1%
45-64	2,820	20%	4,620	24%	1,800	64%	4%
65 and over	2,020	14%	2,597	13%	577	29%	-1%
Total	**13,991**	**100%**	**19,509**	**100%**	**5,518**	**39%**	**0%**

Source: U.S. Census 2000 and 2010, P12

Figure 4-4 shows the Office of Economic Analysis's (OEA) forecast of population by age group for 2000 to 2040 for the Portland Region and Clackamas County. The OEA forecasts that the Portland Region and Clackamas County will experience growth in all age groups.

The fastest growing age group is people 60 years and older, which is projected to grow from 14% of the population in 2000 to 23% in 2040 for the Portland region. Similar growth is projected in Clackamas County for this age group.

Figure 4-4. Change in population distribution by age, Portland Region and Clackamas County, 2000 and 2040

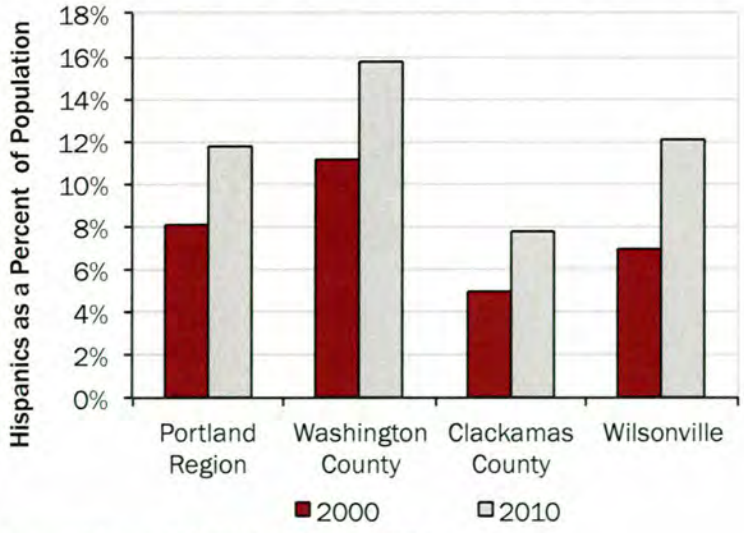


Source: Oregon Office of Economic Analysis. http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls

Ethnicity Trends

Wilsonville grew more ethnically diverse since 2000. Figure 4-5 shows change in the number of persons of Hispanic or Latino origin in 2000 and 2010. The Hispanic population grew at a faster rate than all of the population in the Portland Region, including in Wilsonville. The Hispanic population in Wilsonville increased from 6.9% of total population in 2000 to 12.1% in 2010. Wilsonville had 971 Hispanic residents in 2000 and 2,360 Hispanic residents in 2010, an increase of 143%.

Figure 4-5. Persons of Hispanic or Latino origin, Portland Region, Washington County, Clackamas County, and Wilsonville, 2000 and 2010



Source: US Census 2000 P008, US Census 2010 P5.

Household Composition and Size

The average household size decreased statewide over the past four decades. In Oregon, the average household size was 2.60 in 1980, 2.52 in 1990, 2.51 in 2000 and 2.47 in 2010. Households with three or more people accounted for 39% of households in 1990, decreasing to 35% in 2011. Even if the population were not growing, the impact of decreasing household size on housing demand is that there will be more households, which translates to a need for more housing units.

Table 4-4 shows that Wilsonville had an average of 2.34 persons per household in 2000, decreasing to an average of 2.28 persons per household in 2010. Wilsonville's decrease in household size is consistent with regional and state trends. In most places, this decrease is attributable to: (1) the increase in single-person households, (2) a decrease in the percent of households with children, and (3) a decrease in the number of children per household (for households with children).

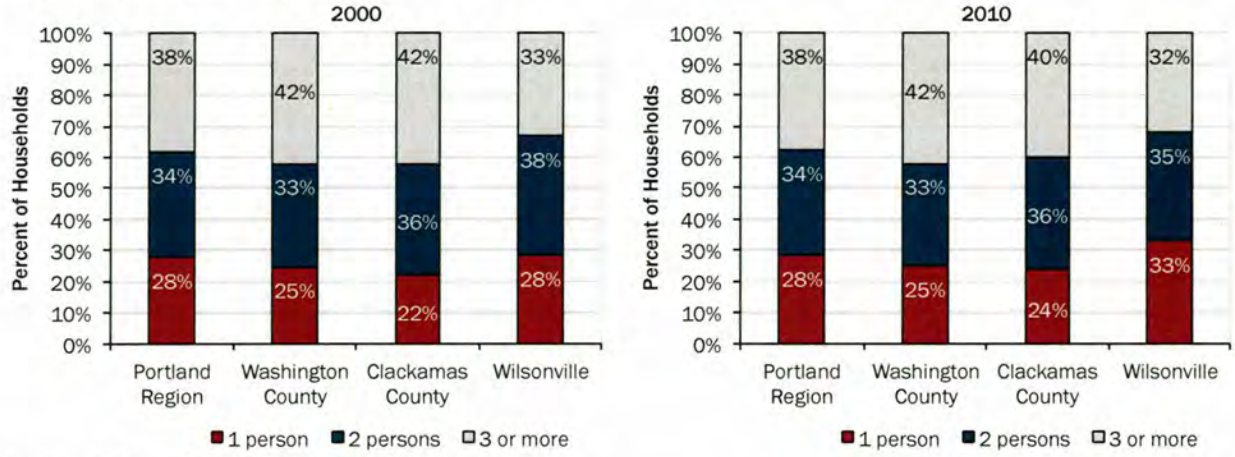
Table 4-4. Average household size, Washington County, Clackamas County, and Wilsonville, 2000 and 2010

	Washington County	Clackamas County	Wilsonville
2000			
Average household size	2.61	2.62	2.34
Owner-occupied units	2.75	2.73	2.47
Renter-occupied units	2.39	2.34	2.18
2010			
Average household size	2.6	2.56	2.28
Owner-occupied units	2.71	2.66	2.48
Renter-occupied units	2.44	2.33	2.11
Change 2000 to 2010			
Average household size	-0.01	-0.06	-0.06
Owner-occupied units	-0.04	-0.07	0.01
Renter-occupied units	0.05	-0.01	-0.07

Source: U.S. Census 2000 and 2010 H12

Figure 4-6 shows that the percent of one-person households in Wilsonville increased from 28% in 2000 to 33% in 2010, a larger change than in Clackamas County, Washington County, or the Portland Region. These changes are consistent with the decrease in average household size shown in Table 4-4.

Figure 4-6. Household size, Portland Region, Washington County, Clackamas County, and Wilsonville, 2000 and 2010



Source: U.S. Census 2000 H015, U.S. Census 2010 H16

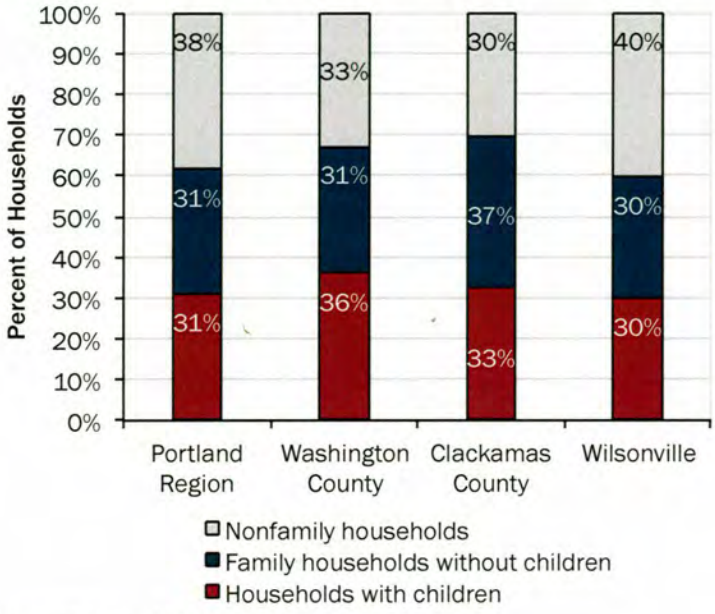
The historical change in household size in Wilsonville over the last quarter-century has been a relatively slow decrease: from 2000 to 2010 the average annual rate of decrease was on the order of 0.25% per year. It is unclear whether Wilsonville's household size will continue to decrease. Several trends may affect household future household size in Wilsonville:

- **Aging of the population.** Householders 45 years and older are more likely to live in single-person households and the OEA forecasts the greatest growth for people 60 years and older in Clackamas County over the next 20 years. The implication is that household size may decrease as a result of the aging of the population.
- **Growth in Hispanic population.** Average household size for Hispanic households in Clackamas County was 3.6 persons per household in 2010, compared with the County average of 2.6 persons per household. Hispanic households generally have larger household sizes than the national average for first, second, and third generation immigrants.[25]

[25] Pew Research Center. *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2012

Figure 4-7 shows that Wilsonville had a larger percentage of nonfamily households (40%) than the Portland Region, Clackamas County or Washington County.

Figure 4-7. Household composition, Portland Region, Washington County, Clackamas County, and Wilsonville, 2010



Source: US Census 2010, P20

Income

Income is one of the key determinants in housing choice and households' ability to afford housing. Table 4-5 shows that median household income in Wilsonville was $55,316, 13% less than median household income in Clackamas County ($63,790) and Washington County ($63,814). Wilsonville's median household income in 2007-2011 was higher than five cities in the Portland Region and lower than other cities in the Region.

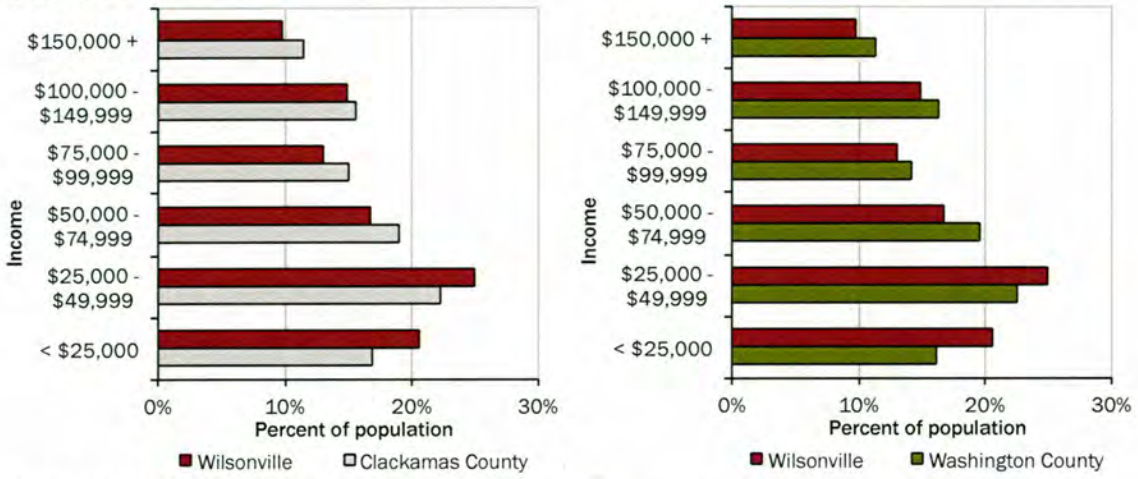
Table 4-5. Median household income, nominal dollars Washington County, Clackamas County, selected cities in the Portland Region, 2010 and 2007-2011

	1999	2007-2011
Washington County	$52,054	$63,814
Clackamas County	$51,680	$63,790
Gladstone	$45,753	$48,876
Forest Grove	$38,100	$49,034
Portland	$40,227	$50,177
Milwaukie	$43,466	$52,625
Beaverton	$47,752	$55,115
Wilsonville	**$51,648**	**$55,316**
Oregon City	$45,024	$57,618
Tualatin	$55,735	$60,818
Troutdale	$57,238	$62,429
Tigard	$51,641	$62,521
Hillsboro	$51,575	$64,197
Sherwood	$62,663	$79,209
Lake Oswego	$71,724	$81,669
West Linn	$72,526	$92,342
Happy Valley	$90,978	$100,647

Source: US Census 2000 SF 3, HCT012. American Community Survey 2007-2011, B19001.
Note: For the 2007-2011 data, respondents were polled between 2007 and 2011 and were asked to report their income for the previous year.

Figure 4-8 shows distribution of annual household income for Wilsonville. Wilsonville had a larger percentage of households with income of under $25,000 than either Clackamas County or Washington County.

Figure 4-8. Distribution of household income, Wilsonville, Clackamas County, Washington County, 2007-2011

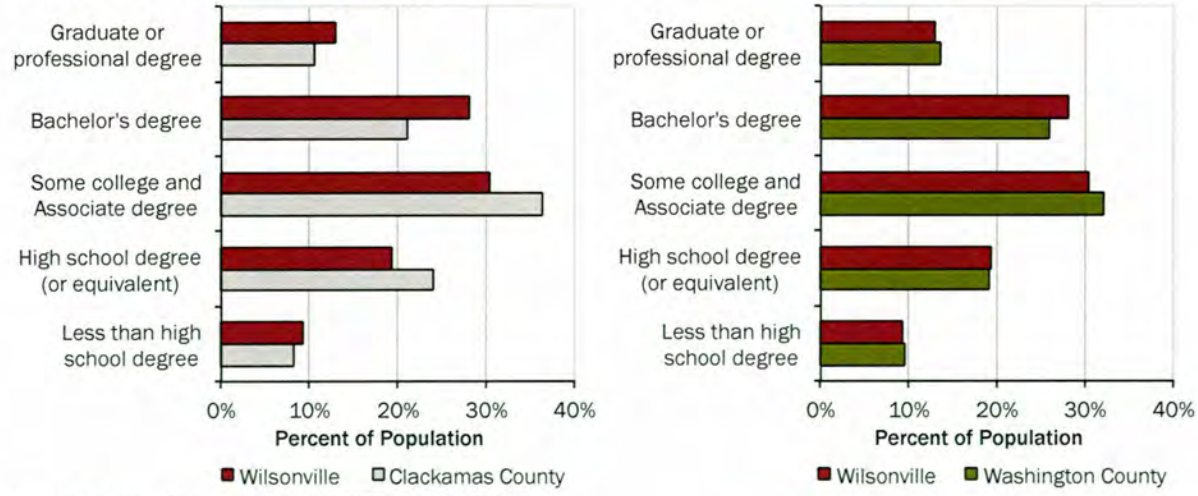


Source: American Community Survey 2007-2011, B19001.
Note: The income data was gathered in 2007-2011. Respondents were asked to report their income for the previous year. All incomes are reported in 2011 dollars.

Educational Attainment

Figure 4-9 shows that educational attainment levels for residents of Wilsonville were similar to those of all residents in Clackamas County and Washington County. More than 70% of Wilsonville's residents had at least some college and 47% had a Bachelor's degree or higher.

Figure 4-9. Educational attainment of residents 25 years and older for Wilsonville, Clackamas County, and Washington County, 2007-2011



Source: American Community Survey 2007-2011 B15002

Commuting Trends

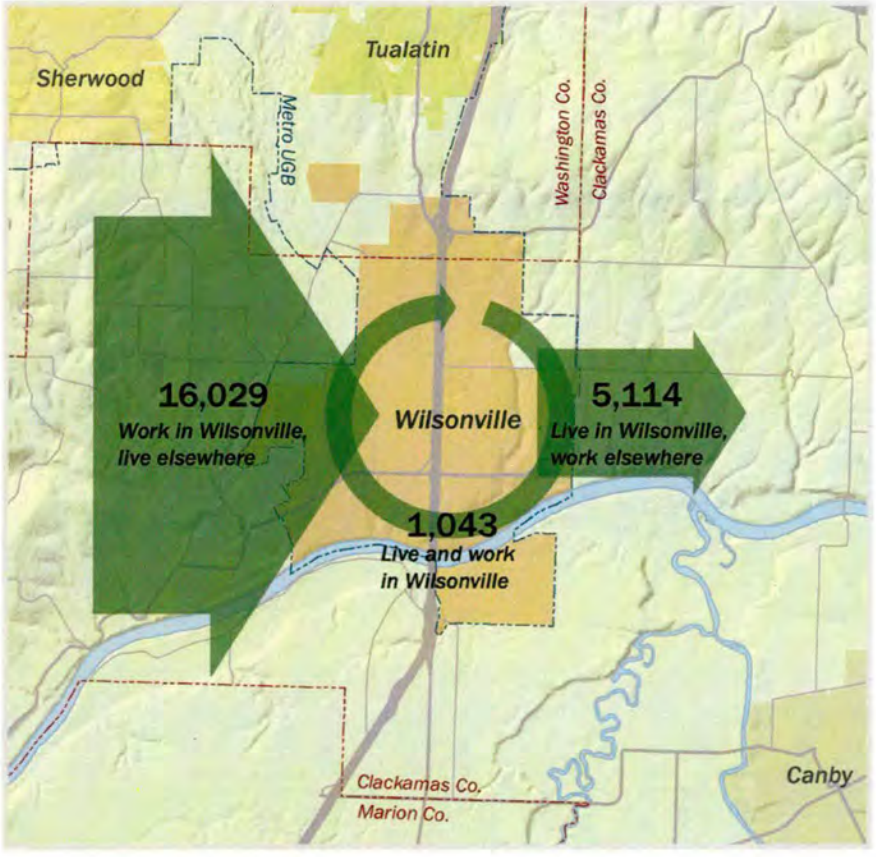
According the 2007-2011 American Community Survey and 2010 data from the Local Employment Dynamics program of the US Census, residents of Wilsonville worked across the Portland Region.

Workers from across the Portland Region commute to work in Wilsonville. Figure 4-10 shows employment inflow and outflow for Wilsonville in 2010. Over 17,000 people had their primary job in Wilsonville in 2010; of those, only about 1,000 (6.5%) lived in Wilsonville.

About 16,000 people work in Wilsonville and live elsewhere. Table 4-6 shows that more than half of these workers live in Washington or Clackamas County.

In addition, more than 5,000 people living in Wilsonville commute to other places for work. Table 4-7 shows that more than three-quarters of these residents of Wilsonville worked in the Portland Region.

Figure 4-10. Employment inflow and outflow, Wilsonville, 2010



Source: ECONorthwest, with data from U.S. Census Bureau, Center for Economic Studies, OnTheMap. http://onthemap.ces.census.gov/. (April 22, 2013)

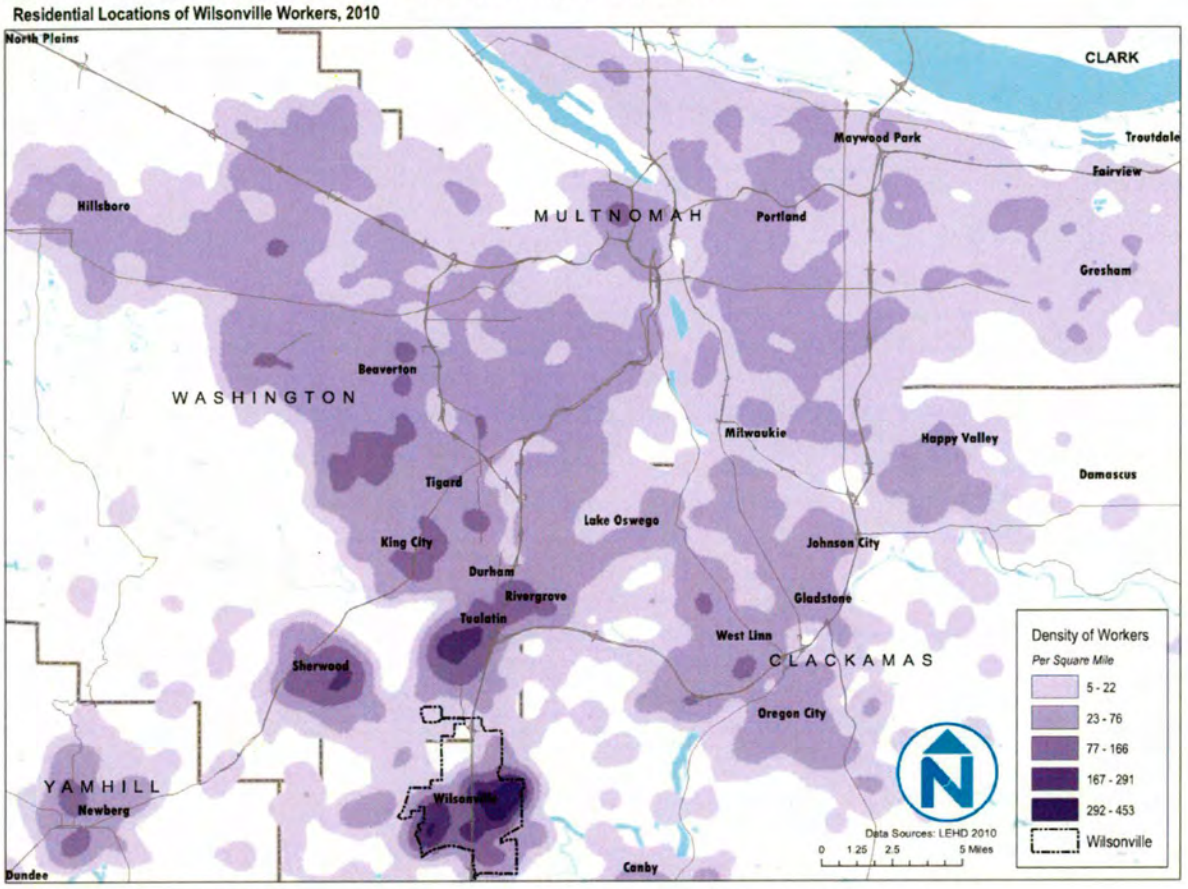
Figure 4-11 and Table 4-6 show where employees of firms located in Wilsonville lived in 2010. More than half of workers employed in Wilsonville lived in either Clackamas or Washington County; each county accounted for about 27% of workers employed in Wilsonville. Fourteen percent of workers in Wilsonville lived in Multnomah County. About 6% of workers employed in Wilsonville also lived in Wilsonville.

Table 4-6. Places where workers in Wilsonville lived, 2010

Location	Number	Percent
Clackamas County	4,678	27%
Wilsonville	1,043	6%
West Linn	447	3%
Washington County	4,556	27%
Beaverton	741	4%
Tualatin*	657	4%
Tigard	609	4%
Hillsboro	437	3%
Sherwood	408	2%
Multnomah County	2,468	14%
Portland	2,039	12%
Marion County	1,874	11%
Salem	588	3%
Woodburn	397	2%
Other locations in Oregon	2,730	16%
Out of state	766	4%
Total	**17,072**	**100%**

Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap. http://onthemap.ces.census.gov/ (April 22, 2013)
*Note: Tualatin is in multiple counties.

Figure 4-11. Places where workers in Wilsonville lived, 2010



Map by Nelson\Nygaard 2013. Data from US Census Bureau, Center for Economic Studies, OnTheMap, 2010.

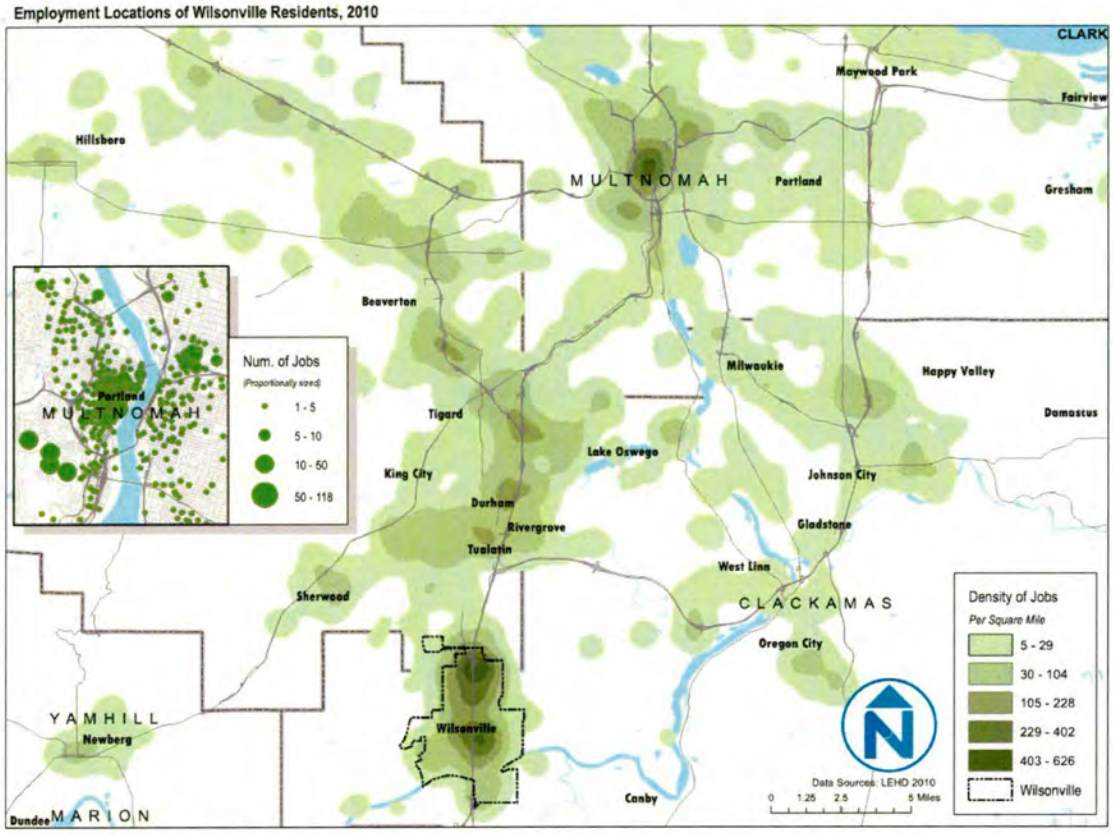
Figure 4-12 and Table 4-7 show where residents of Wilsonville worked in 2010. The data show that Wilsonville residents worked throughout the Portland metropolitan area, with the largest concentrations in Portland, Wilsonville, and Tualatin. Seventeen percent of workers who live in Wilsonville also work in Wilsonville.

Table 4-7. Places where residents of Wilsonville were employed, 2010

Location	Number	Percent
Clackamas County	2,014	33%
Wilsonville	1,043	17%
Lake Oswego*	250	4%
Washington County	1,663	27%
Tualatin*	378	6%
Tigard	371	6%
Beaverton	294	5%
Hillsboro	199	3%
Multnomah County	1,494	24%
Portland	1,383	22%
Gresham	81	1%
Marion County	449	7%
Salem	152	2%
Woodburn	100	2%
Other locations in Oregon	421	7%
Out of state	116	2%
Total	**6,157**	**100%**

Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap. http://onthemap.ces.census.gov/ (April 22, 2013)
*Note: Lake Oswego and Tualatin are in multiple counties.

Figure 4-12. Places where residents of Wilsonville were employed, 2010



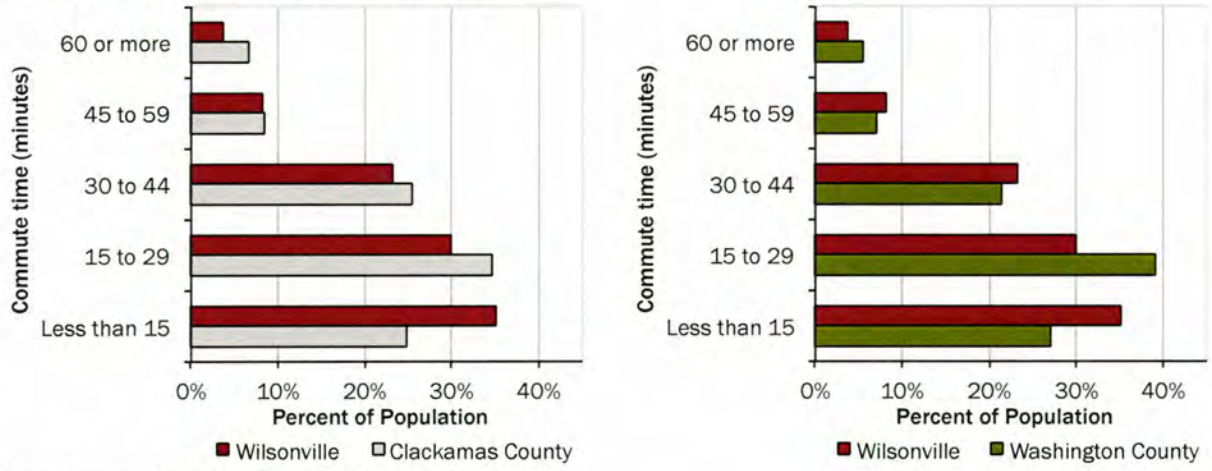
Map by Nelson\Nygaard 2013. Data from US Census Bureau, Center for Economic Studies, OnTheMap, 2010.

According to the 2007-2011 American Community Survey, the average commute time for a Wilsonville resident was just under 23 minutes, compared with 24 minutes for Washington County residents and 26 minutes for Clackamas County residents.

Figure 4-13 shows commute time for residents of Wilsonville who do not work at home. Residents of Wilsonville typically had shorter commutes than the regional average. Thirty-five percent of Wilsonville residents commute less than 15 minutes, compared to 27% of Clackamas County residents, 27% of Washington County residents, or 25% of Portland Region residents.

In 2007-2011, 8.1% of Wilsonville residents worked at home, a higher percentage than in Clackamas County (7.8%), Washington County (5.0%), or the Portland Region (6.3%)[26].

Figure 4-13. Commute times for residents who do not work at home, Wilsonville, Clackamas County, and Washington County, 2007-2011



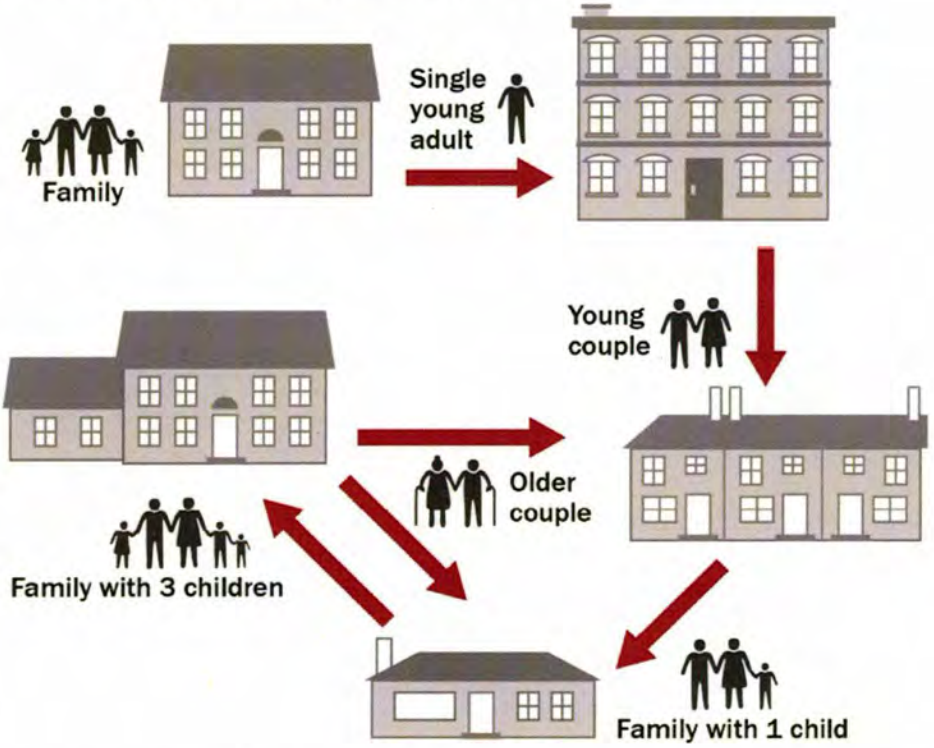
Source: American Community Survey 2007-2011 B08303

[26] 2007-2011 American Community Survey, B08130

Key factors affecting housing choice

The preceding sections describe information about the key factors that affect housing choice for Wilsonville: population growth, age, household composition, and income. Figure 4-14 illustrates one example of the effect of housing life cycle based on demographic changes. Housing needs and preferences change in predictable ways over time, with changes in marital status and size of family. Families of different sizes need different types of housing.

Figure 4-14. Effect of demographic changes on housing need



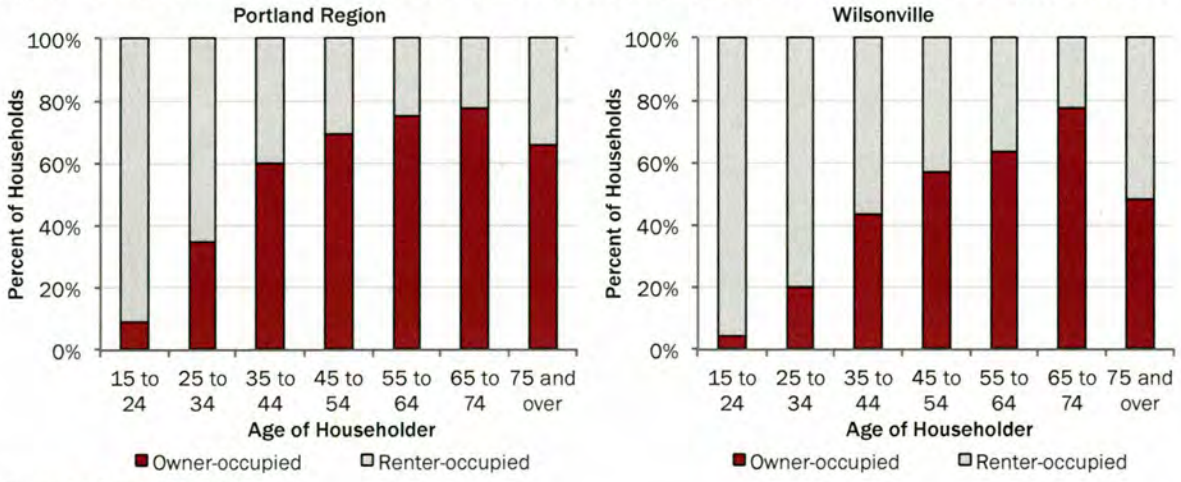
Source: ECONorthwest, adapted from Clark, Willam A.V. and Frans M. Dieleman. 1996. *Households and Housing*. New Brunswick, NJ: Center for Urban Policy Research.

Figures 4-2 through 4-7 show the relationships between age, household size, tenure characteristics, and income for Wilsonville and the Portland Region.

Figure 4-15 shows households by tenure and age of householder in the Portland Region and Wilsonville in 2010. Younger people typically have greater mobility and less income than people who are older. As a result, people in these age groups are more likely to be renters. Homeownership rates increase with the age until age 75, when homeownership rates begin to decrease.

The information in Figure 4-15 suggests that people over 65 prefer to continue being homeowners past traditional retirement ages in the Portland Region. In Wilsonville, homeownership rates decline from about 77% of households to 48% for households 75 years and older.

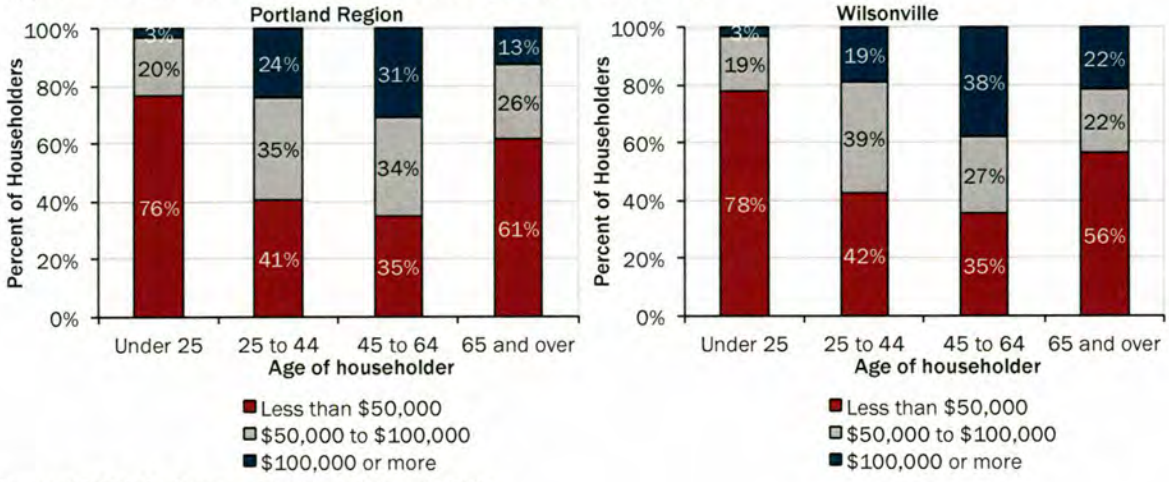
Figure 4-15. Households by tenure and age of householder, Portland Region and Wilsonville, 2010



Source: US Census 2010 H17

Figure 4-16 shows that household income generally increases with household age until retirement, when it declines. In the Portland Region and Wilsonville, households headed by a person under 25 years old were more likely than other age groups to make less than $50,000 a year. Householders in the 45 to 64 age group were the most likely to make over $100,000 a year.

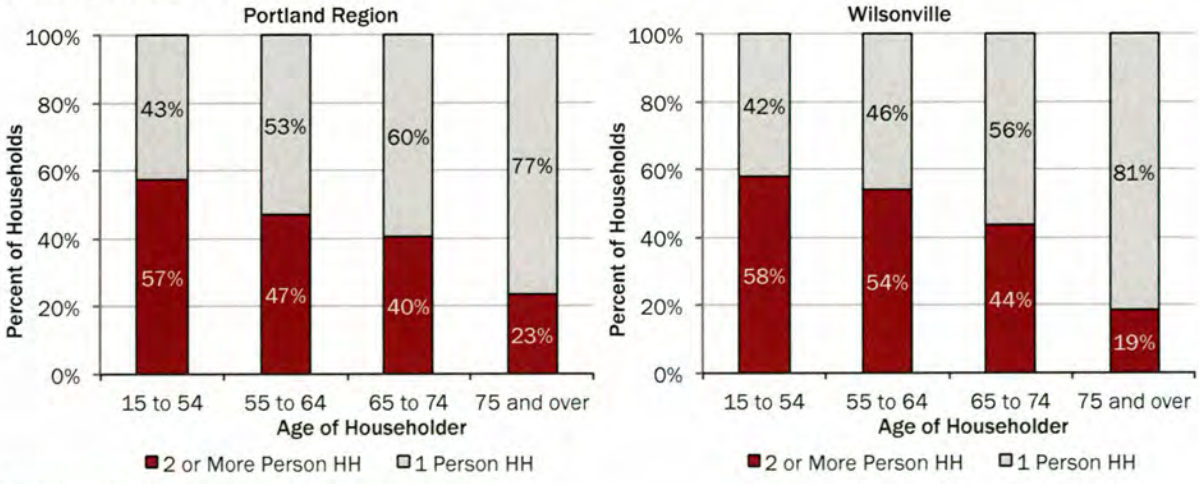
Figure 4-16. Households by income and age of householder



Source: 2007-2011 American Community Survey B19037

Figure 4-17 shows that householders age 54 and younger are most likely to live in households with two or more people. Householders 55 years and older are more likely to live in single-person households. More than three-quarters of householders age 75 years and older live in single-person households.

Figure 4-17. Households by household size and age of householder, Portland Region and Wilsonville, 2007-2011

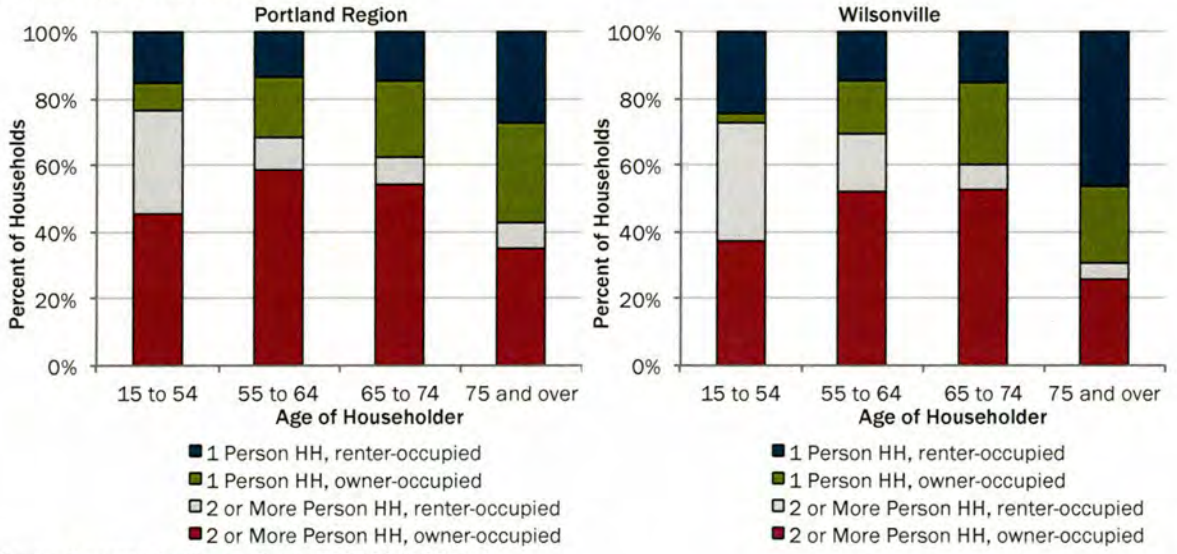


Source: American Community Survey 2007-2011 B25116

Figure 4-18 shows households by tenure, size, and age of householder in the Portland Region and Wilsonville. Figure 4-18 shows that the following information for both Wilsonville and the Portland Region:

- **Younger households were larger and more likely to be renters.** Householders 54 years and younger were more likely to live in households with 2 or more persons. In Wilsonville, more than 60% of these households were renters, compared to less than half of these households in the Portland Region.
- **Older households were likely to be homeowners.** Householders age 55 years and older were more likely to be homeowners.
- **Older households were smaller and more likely to be renters.** In Wilsonville, householders 75 years and older were more likely to be renters with one-person households than other age groups.

Figure 4-18. Households by household size, tenure, and age of householder, Portland Region and Wilsonville, 2007-2011

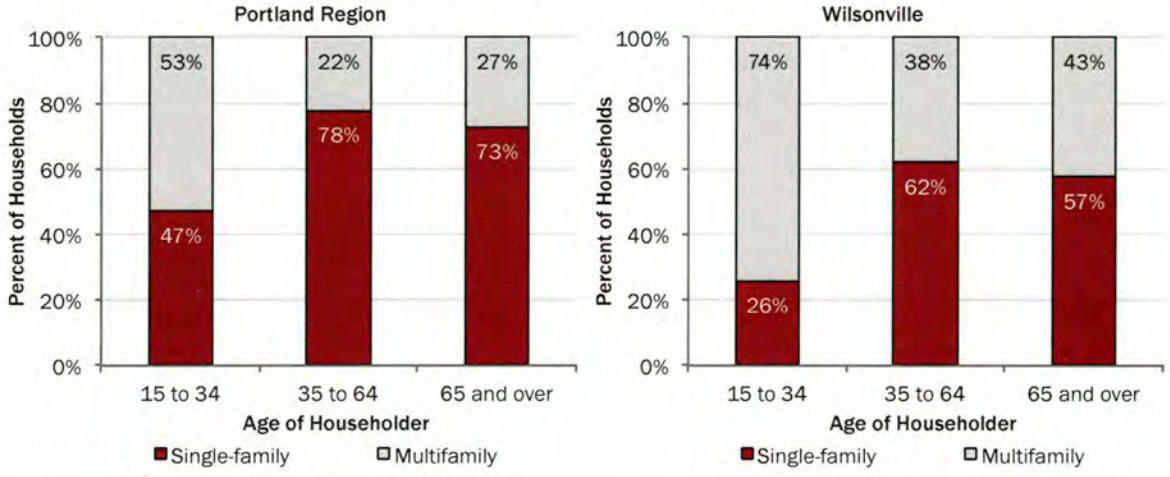


Source: American Community Survey 2007-2011 B25116

Figure 4-19 illustrates the relationship between age and housing type in the Portland Region and Wilsonville in 2007-2011. Younger householders are more likely to rent and renters are more likely to live in multifamily housing. Residence in single-family housing types is greatest for people ages 35 to 64. After age 65, the likelihood of owning a multifamily unit increases.

Figure 4-19 shows these general patterns but also shows that these patterns are not absolute. Residence in multifamily housing types was most common among householders aged 15 to 34. Householders between the ages of 35 and 64 were the most likely to live in single-family housing types.

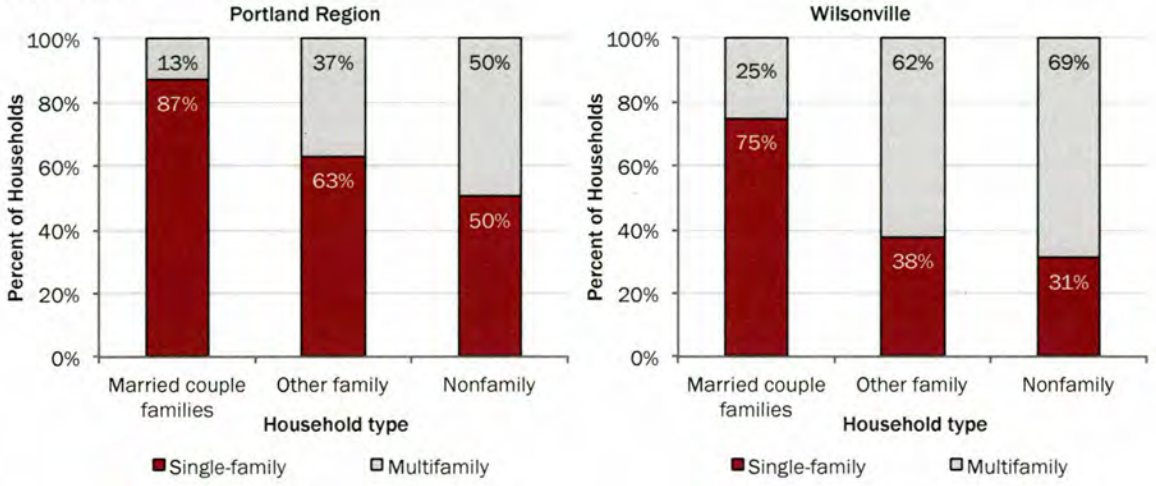
Figure 4-19. Households by age of householder and housing type, Portland Region and Wilsonville, 2007-2011



Source: American Community Survey 2007-2011 B25125

Figure 4-20 illustrates the relationship between household type and housing structure. Nonfamily households are more likely to live in multifamily housing types than families. In Wilsonville, three-quarters of married couple families lived in single-family housing types in 2007-2011, compared to 31% of nonfamily households.

Figure 4-20. Households by household type and structure, Portland Region and Wilsonville, 2007-2011



Source: American Community Survey 2007-2011 B11011

Figure 4-15 through Figure 4-20 illustrate that demographic relationships are helpful when estimating future housing demands because housing life cycle and housing choice interact in predictable ways. The age of the household head is related with household size and income, which affect housing preferences. Income affects the ability of a household to afford their preferred housing type.

Other trends potentially affecting regional housing choice

Metro's *Urban Growth Report 2009-2030 Employment and Residential* (January 2010) describes macro trends that may influence future housing preferences within the Portland metropolitan region. Those trends are summarized briefly below from the *Urban Growth Report*:

- **Climate change** may affect the region's precipitation, water storage, and hydroelectric generation. These changes have implications for sustainable population growth and housing demand within the region. For example, higher water prices could increase demand for smaller lots, which typically require less irrigation for landscaping. In addition, new government regulations of greenhouse gas emissions may affect housing or transportation costs, changing where households locate within the region. It is unclear how climate change will affect housing demand in the Portland Region over the 20-year planning period.
- **Lending practices** affect regional housing demand. One result of the recent housing market decline was changes in lending practices, which made borrowing for homeownership more difficult. If lending practices continue to limit borrowing opportunities, fewer households may be able to afford homeownership or may be forced to wait longer to become homeowners. It is unclear how lending practices will affect housing demand in the Portland Region over the 20-year planning period.
- **Growth in traffic congestion and increased costs of automotive fuel** may affect the locational preferences for households within the Portland Region. For example, households may choose to live closer to work, rather than commuting across the Region.
- **Infrastructure funding deficiencies** may result in increases in new housing costs through increases in local fees or charges for new residential development (e.g., increases in systems development charges). The result will be shifting infrastructure costs to homebuyers, which would favor development locations and patterns with lower infrastructure costs.

REGIONAL AND LOCAL TRENDS IN HOUSING COSTS AND AFFORDABILITY

Changes in housing costs

This section describes changes in housing values, sales prices, and rents in Wilsonville and the Portland Region since 2000.

Housing values

Table 4-8 shows change in median housing value in Washington County, Clackamas County, and selected cities for the 2000 to 2007-2011 period. Median housing prices increased by nearly 75% between 2000 and 2007-2011 in Wilsonville, from $213,600 in 2000 to $371,200 in 2007-2011. Washington County's median housing prices increased by almost $120,000 or 66% over the same period. In Clackamas County, median housing prices increased by $132,600 or 68% over the same period.

Wilsonville's median housing values were higher than 11 other cities in the Region but below housing values in West Linn, Happy Valley, and Lake Oswego.

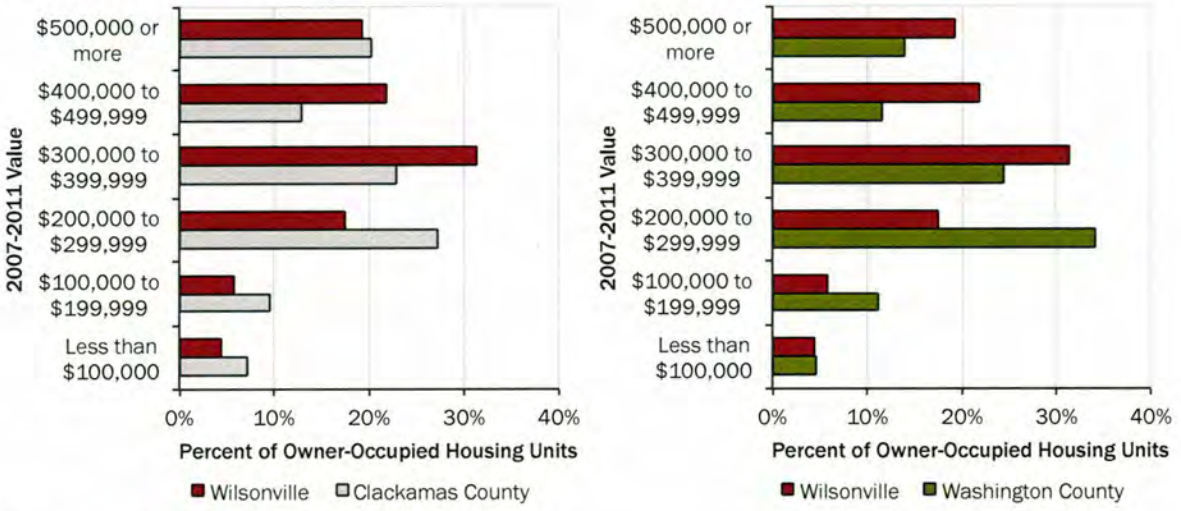
Table 4-8. Median housing value, nominal dollars, owner-occupied housing units, Washington County, Clackamas County, and selected cities, 2000 to 2007-2011

			Change 2000 to 2007-2011	
	2000	2007-2011	Amount	Percent
Washington County	$180,400	$300,200	$119,800	66%
Clackamas County	$193,700	$326,300	$132,600	68%
Forest Grove	$144,800	$233,600	$88,800	61%
Milwaukie	$153,800	$243,200	$89,400	58%
Troutdale	$162,400	$245,300	$82,900	51%
Gladstone	$162,900	$252,200	$89,300	55%
Hillsboro	$163,200	$262,800	$99,600	61%
Oregon City	$161,900	$284,200	$122,300	76%
Portland	$154,700	$292,800	$138,100	89%
Beaverton	$186,100	$297,600	$111,500	60%
Sherwood	$181,500	$324,000	$142,500	79%
Tigard	$187,100	$324,000	$136,900	73%
Tualatin	$190,900	$335,800	$144,900	76%
Wilsonville	**$213,600**	**$371,200**	**$157,600**	**74%**
West Linn	$244,700	$406,700	$162,000	66%
Happy Valley	$302,800	$464,700	$161,900	53%
Lake Oswego	$286,900	$507,800	$220,900	77%

Source: U.S. Census 2000 SF3 H85, U.S. Census American Community Survey 2007-2011 B25077

Figure 4-21 shows a comparison of housing value for owner-occupied housing units in Wilsonville and Clackamas and Washington Counties for the 2007-2011 period. Wilsonville had a smaller percentage of housing valued less than $200,000 (10%) than Clackamas County (17%) or Washington County (16%). Wilsonville had a larger percentage of housing valued more than $400,000 (41%) than Clackamas County (33%) or Washington County (26%). In comparison, 27% of owner-occupied housing in the Portland Region was valued over $400,000 in 2007-2011.

Figure 4-21. Housing value, owner-occupied housing units, Wilsonville, Clackamas County, and Washington County, 2007-2011



Source: American Community Survey, 2007-2011; Table B25075

Table 4-9 and Figure 4-22 show change in the average sales price by housing type for Wilsonville, based on sales recorded in the Metro Regional Land Information System for houses sold in 2000, 2007, and 2012. Table 4-9 shows that single-family prices increased substantially in Wilsonville between 2000 and 2007 and declined between 2007 and 2012. These changes are consistent with county and Regional trends.

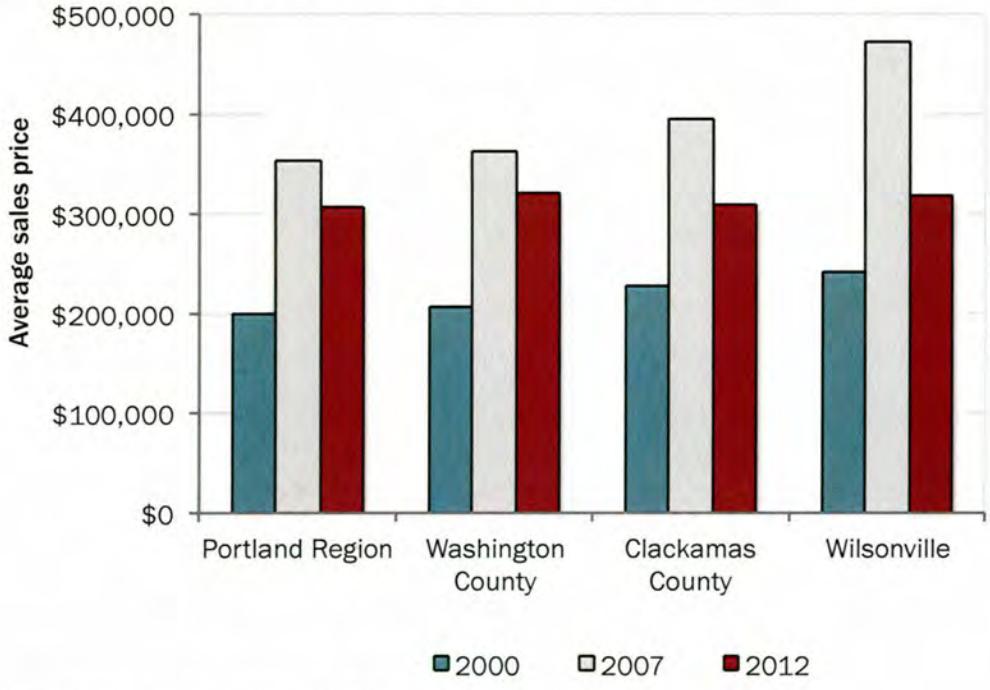
Despite the substantial decrease in sales price between 2007 and 2012, sales prices for single-family dwellings increased (in nominal dollars) over the 13-year period. Between 2000 and 2012, average sales prices in Wilsonville increased by $75,000 (31%) and median sales prices increased by $58,000 (25%). In comparison, average sales prices in the Portland Region and Washington County increased by 54% and 36% in Clackamas County.

Table 4-9. Average sales and median price, single family, nominal dollars, Portland Region, Washington County, Clackamas County, and Wilsonville, 2000, 2007, and 2012

				Change 2000 to 2012		Change 2007 to 2012	
	2000	2007	2012	Amount	Percent	Amount	Percent
Average Sales Price							
Portland Region	$200,580	$354,705	$308,125	$107,545	54%	-$46,580	-13%
Washington County	$208,131	$362,249	$321,045	$112,914	54%	-$41,205	-11%
Clackamas County	$227,445	$394,907	$308,691	$81,246	36%	-$86,216	-22%
Wilsonville	$242,800	$473,268	$318,107	$75,306	31%	-$155,162	-33%
Median Sales Price							
Portland Region	$169,500	$299,900	$244,590	$75,090	44%	-$55,310	-18%
Wilsonville	$232,000	$421,500	$290,000	$58,000	25%	-$131,500	-31%

Source: Metro Regional Land Information System, May 2013 release
Note: This table only includes sales of single-family units with a sales price of $10,000 or more

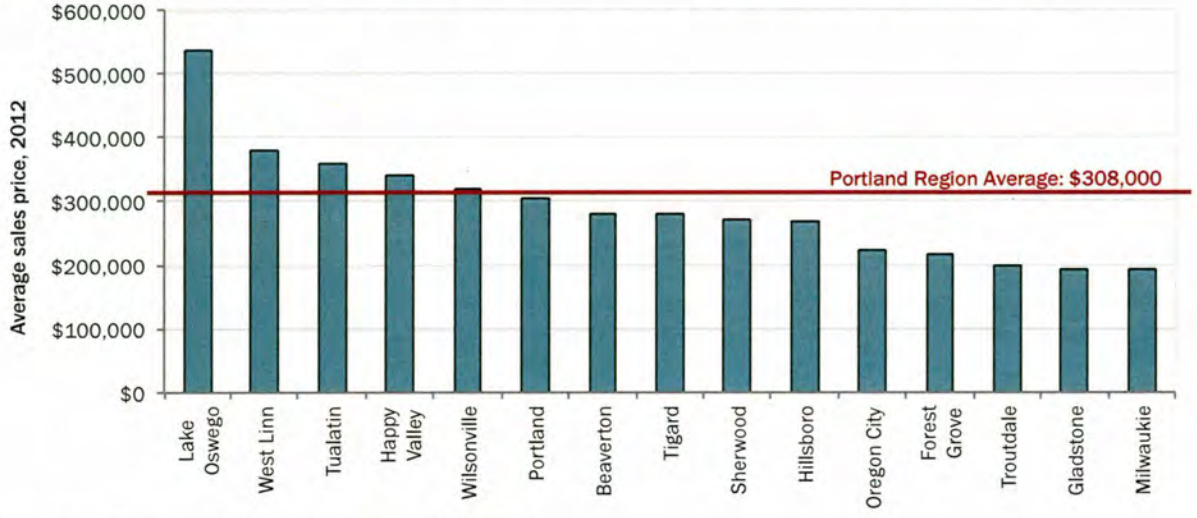
Figure 4-22. Average sales, single family, Portland Region, Washington County, Clackamas County, and Wilsonville, 2000, 2007, and 2012



Source: Metro Regional Land Information System, May 2013 release
Note: This table only includes sales of single-family units with a sales price of $10,000 or more

Figure 4-23 shows average sales prices for single-family dwellings in selected cities within the Portland Region. The average sales price in the Region in 2012 was $308,000. Wilsonville's average sales price ($318,100) higher than 10 other cities in the region but below four cities with higher average sales prices.

Figure 4-23. Average single-family unit sales, Portland Region and selected cities, 2012



Source: Metro Regional Land Information System, May 2013 release
Note: This table only includes sales of single-family units with a sales price of $10,000 or more

Housing rental costs

Table 4-10 shows that the median contract rent in Wilsonville was $792, similar to Clackamas County's ($790) and lower than in Washington County ($808).

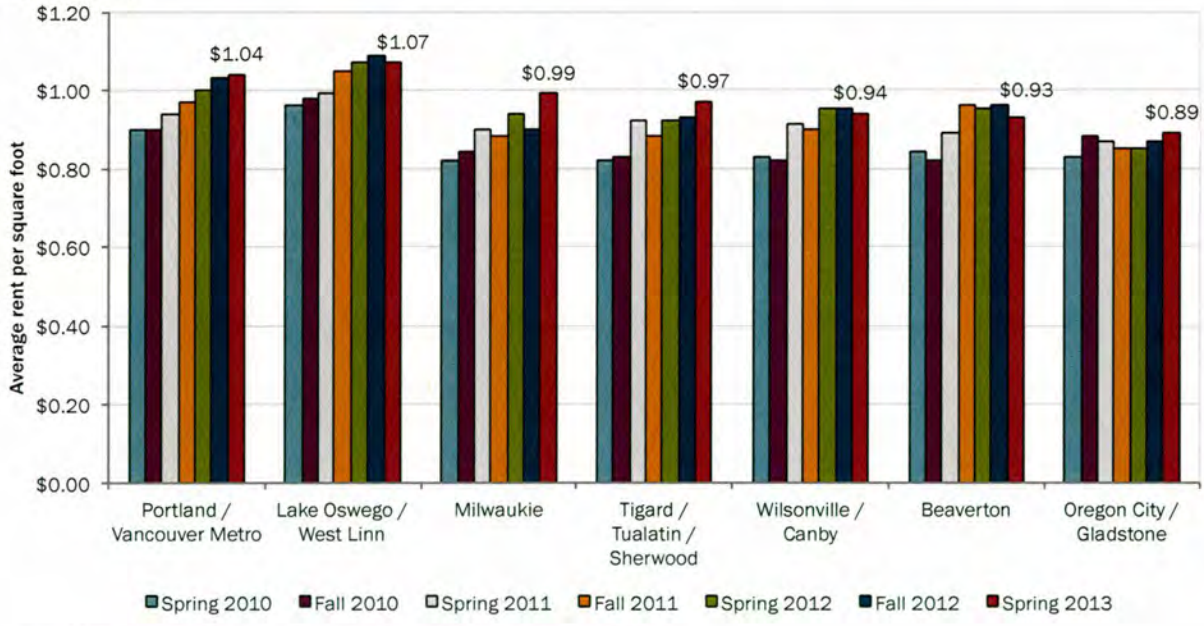
Table 4-10. Median contract rent, 2007-2011

Location	Rent
Portland Region	$752 - $808
Washington County	$808
Clackamas County	$790
Wilsonville	$792

Source: U.S. American Community Survey 2007-2011 B25058

Figure 4-24 shows average rent per square foot for apartments in the Portland/Vancouver Metro region and selected submarkets, according to Multifamily NW data between 2010 and 2013. Average rent in the Wilsonville/Canby submarket was $0.94 per square foot in Spring 2013, lower than the regional average of $1.04 per square foot. Between Spring 2010 and Spring 2013, average rent in Wilsonville/Canby increased by 13%. Between 2010 and 2013, average rent prices in Wilsonville/Canby were most similar to Beaverton and Tigard/Tualatin/Sherwood.

Figure 4-24. Average rent per square foot, Portland/Vancouver Metro and selected submarkets, 2010-2013



Source: Multifamily NW Apartment Reports, Spring 2010 through Spring 2013.
Note: The average rent price shown on the graph is for Spring 2013

Implication of changes in housing costs for housing affordability

The implication of the information about housing costs and income is that ownership costs increased much faster than rents and incomes, even given the decline in housing sales prices since 2007.

Table 4-11 underscores this trend for Wilsonville. Between 2000 and 2007-2011, incomes increased about 5% while the median value of an owner-occupied home increased 74% and rents increased 22%. The data show that the median owner value was 4.3 times median household income in 2000—a figure that increased to 6.7 in 2007-2011. This trend is consistent with decreases in the affordability of homeownership across the Portland Region and in most U.S. metropolitan areas.

For comparison, the ratio of income to housing value increased from 3.5 in 2000 to 4.4 in 2011 Washington County. In Clackamas County, the ratio of income to housing value increased from 4.7 in 2000 to 5.1 in 2011. The data show that homeownership became less affordable between 2000 and 2011 in both counties but that homeownership was less affordable in Clackamas County.

Table 4-11. Comparison of income, housing value, and gross rent, nominal dollars, Wilsonville, 2000 and 2007-2011

Indicator	2000	2007-2011	Change
Median HH Income	$52,515	$55,316	5%
Median Owner Value	$213,600	$371,200	74%
Median Gross Rent	$746	$912	22%
Ratio of Housing Value to Income			
Median HH Income	4.1	6.7	

Source: U.S. Census 2000 SF1 P53, SF3 H63 H85, American Community Survey 2007-2011 B19013 B25064 B25077
Note: Data for 2007-2011 are inflation adjusted to 2011 dollars.

Housing affordability

Housing affordability is an important issue for Metro and the Portland Region. "Affordable Housing Needs Study for the Portland Metropolitan Area" provided a comprehensive analysis of future affordable housing needs of the Metro region for the 2005 to 2035 period, based on household and demographic data from the *Metroscope* model.[27] The study made the following conclusions and recommendations:

- Cost burden will increase from 43% of households in 2005 to 48.6% of households in the Metro region in 2035. Cost burden in Wilsonville and unincorporated Clackamas County will decrease from 24.2% of households in 2005 to 16.6% of households in 2035.
- Cost burden will be greatest among renters, increasing from 51.5% in 2005 to 57.2% in 2035 region-wide. Cost burden will increase for renters in Wilsonville and unincorporated Clackamas County from 42.0% in 2005 to 50.4% in 2035.
- The households most affected by increased cost burden will be single-person households (under 25 years and over 65 years old) and working class households, especially single-parent families with children.
- Single-family rental units (detached and attached) will become less available over time. The groups most likely to rent single-family units, low-income families, will increasingly depend on multifamily units.

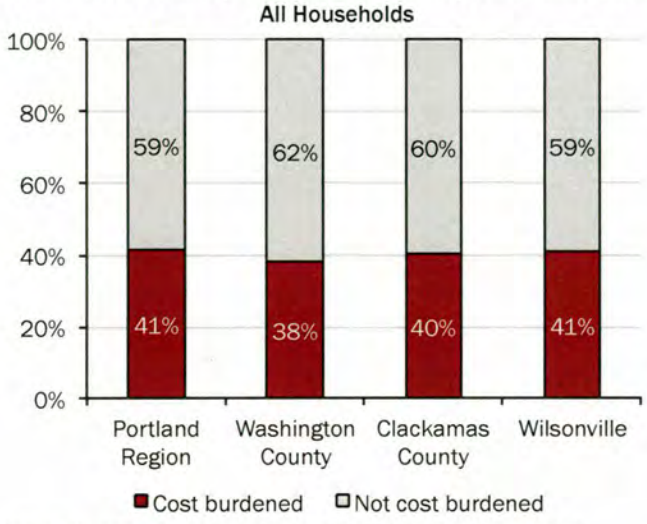
Cost burden

The percentage of income relative to the total amount a household spends on housing is referred to as cost burden. Total housing expenses are generally defined to include payments and interest or rent, utilities, and insurance. HUD guidelines indicate that households paying more than 30% of their income on housing experience "cost burden" and households paying more than 50% of their income on housing experience "severe cost burden." Using cost burden as an indicator is consistent with the Goal 10 requirement of providing housing that is affordable to all households in a community.

[27] Institute of Portland Metropolitan Studies, "Affordable Housing Needs Study for the Portland Metropolitan Area", draft final report, November 20, 2007.

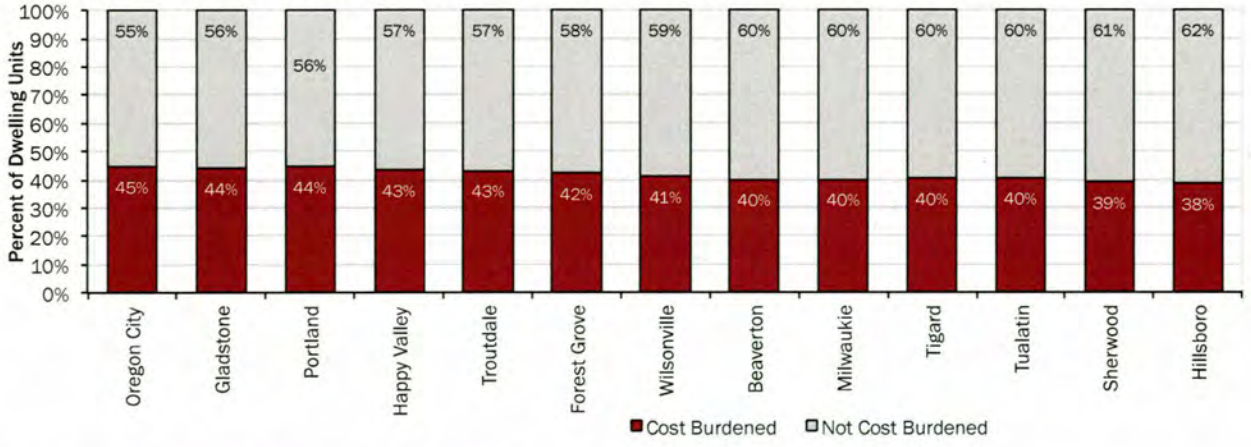
Figure 4-25 show that the percentage of Wilsonville households who were cost burdened was similar to the average for the Portland Region. Figure 4-26 shows that cost burden among fifteen cities in the Region ranged from 45% of households (Oregon City) to 38% (Hillsboro). The percent of Wilsonville households that were cost burdened fell approximately in the middle.

Figure 4-25. Cost burden among all households, Portland Region, Washington County, Clackamas County, and Wilsonville, 2007-2011



Source: American Community Survey 2007-2011, B25091, B25070

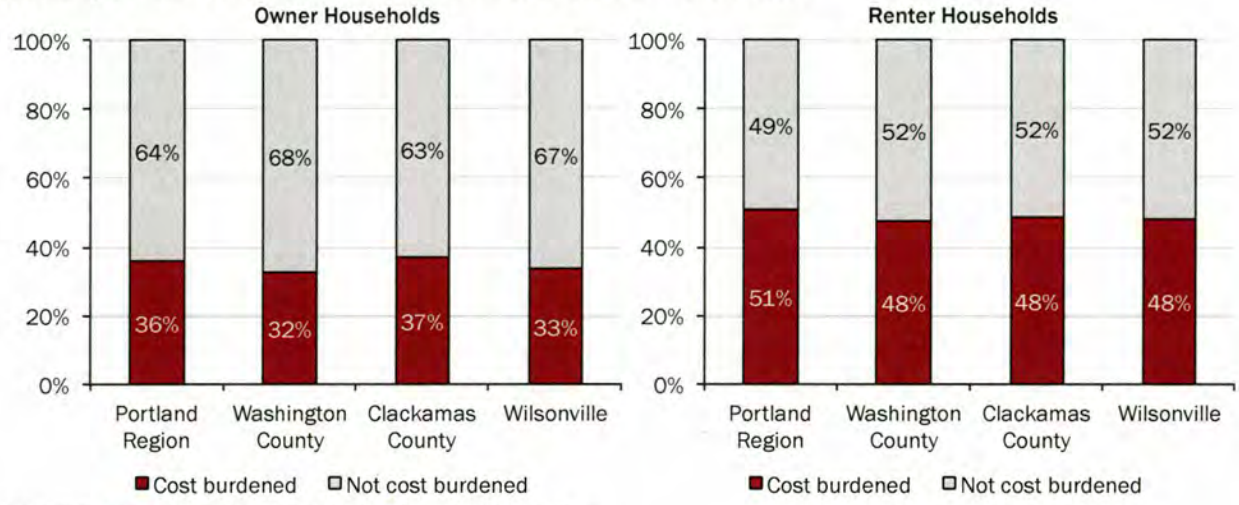
Figure 4-26. Cost burden among all households, selected cities in the Portland UGB, 2007-2011



Source: American Community Survey 2007-2011, B25091

Figure 4-27 shows cost burden for owner households and renter households. The rate of cost burden was much higher for renters (48%) than for homeowners (31%) in Wilsonville.

Figure 4-27. Cost burden among owner households and renter households, Portland Region, Washington County, Clackamas County, and Wilsonville, 2007-2011



Source: American Community Survey 2007-2011, B25091, B25070

While cost burden is a common measure of housing affordability, it does have some limitations. Two important limitations are:

- A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on non-discretionary expenses, such as food or medical care, and on discretionary expenses. Households with higher income may be able to pay more than 30% of their income on housing without impacting the household's ability to pay for necessary non-discretionary expenses.
- Cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household can afford to pay for housing does not include the impact of accumulated wealth on a household's ability to pay for housing. For example, a household with retired people may have relatively low income but may have accumulated assets (such as profits from selling another house) that allow them to purchase a house that would be considered unaffordable to them based on the cost burden indicator.

Cost burden describes the amount that a household pays for shelter. Households have other necessary expenses, such as food, transportation, clothing, utilities, health care, other necessities, as well as optional expenses, such as recreation. Cost burden decreases the amount of income available to pay for necessary

expenses. The cost of necessities varies throughout Oregon and affects a household's ability to live in a given city.

Estimates of housing affordability

Table 4-5 presents information about median household income in Wilsonville, Clackamas County, and Washington County. This section presents information about housing affordability in Wilsonville, Clackamas County, and Washington County in the context of the broader region.

One way of exploring the issue of financial need is to review wage rates together with measures of housing affordability. Table 4-12 shows an analysis of affordable housing wage and rent gap for households in Clackamas County at different percentages of median family income (MFI). The data are for a typical family of four.

The results indicate that a household must earn $17.07 an hour to afford a two-bedroom unit according to HUD's market rate rent estimate of $891 per month. Households earning minimum wage or 30% of MFI are unable to afford a two-bedroom unit at HUD's Fair Market Rent.

Table 4-12. Analysis of affordable housing wage and rent gap by HUD income categories, Clackamas County, 2012

Value	Minimum Wage	30% MFI	50% MFI	80% MFI	100% MFI	120% MFI
Annual Hours	2088	2088	2088	2088	2088	2088
Derived Hourly Wage	$8.80	$10.49	$17.48	$27.97	$34.96	$41.95
Annual Wage At Minimum Wage	$18,374	$21,900	$36,500	$58,400	$73,000	$87,600
Annual Affordable Rent	$5,512	$6,570	$10,950	$17,520	$21,900	$26,280
Monthly Affordable Rent	$459	$548	$913	$1,460	$1,825	$2,190
HUD Fair Market Rent (2 Bedroom)	$891	$891	$891	$891	$891	$891
Is HUD Fair Market Rent Higher Than The Monthly Affordable Rent?	Yes	Yes	Yes	No	No	No
Rent Paid Monthly OVER 30% of Income	$432	$344	na	na	na	na
Rent Paid Annually OVER 30% of Income	$5,180	$4,122	na	na	na	na
Percentage of Income Paid OVER 30% of Income for Rent	28%	19%	na	na	na	na
Total Spent on Housing	58%	49%	29%	18%	15%	12%
For this area what would the "Affordable Housing Wage" be?	$17.07	$17.07	$17.07	$17.07	$17.07	$17.07
The Affordable Housing Wage Gap IS:	**$8.27**	**$6.58**	**na**	**na**	**na**	**na**

Source: HUD, analysis by ECONorthwest.
Notes: MFI is Median family income. Oregon minimum wage in 2012 was $8.80.

Table 4-13 shows a rough estimate of affordable housing cost and units by income levels for Wilsonville in 2012. When interpreting this data, keep in mind:

- The affordability guidelines are based on median family income (determined by HUD) and provide a rough estimate of financial need but may mask other barriers to affordable housing such as move-in costs, competition for housing from higher income households, and availability of suitable units. They also ignore other important factors such as accumulated assets, real estate purchased as investment, and the effect of down payments and interest rates on housing affordability.

- Households compete for housing in the marketplace. In other words, affordable housing units are not necessarily available to low income households. For example, if an area has a total of 50 dwelling units that are affordable to households earning 30% of median family income, half of those units may already be occupied by households that earn more than 30% of median family income.

The data in Table 4-13 indicate that in 2012:

- About 20% of Wilsonville's households could not afford a studio apartment according to HUD's estimate of $665 fair market rent.
- About 30% of Wilsonville's households could not afford a two-bedroom apartment according to HUD's estimate of $891 fair market rent.
- A household earning a median family income ($73,000) could afford a home valued up to $182,500.

Table 4-13. Rough estimate of housing affordability, Wilsonville, 2012

Income Level	Number of HH	Percent	Affordable Monthly Housing Cost	Crude Estimate of Affordable Purchase Owner-Occupied Unit	Est. Number of Owner Units	Est. Number of Renter Units	Surplus (Deficit)	HUD Fair Market Rent (FMR) in 2012
Less than $10,000	669	9%	$0 to $250	$0 to $25,000	81	46	(543)	
$10,000 to $14,999	259	3%	$250 to $375	$25,000 to $37,000	36	22	(201)	
$15,000 to $24,999	623	8%	$375 to $625	$37,500 to $62,500	49	105	(469)	
$25,000 to $34,999	717	10%	$625 to $875	$62,500 to $87,500	0	1,459	742	Studio: $665 1 bdrm: $771
$35,000 to $49,999	1,163	15%	$875 to $1,250	$87,500 to $125,000	30	1,472	339	2 bdrm: $891 3 bdrm: $1,297
$50,000 to $74,999	1,264	17%	$1,250 to $1,875	$125,000 to $187,500	147	477	(640)	4 bdrm: $1,558
Clackamas County 2012 MFI: $73,000			$1,825	$182,500				
$75,000 to $99,999	983	13%	$1,875 to $2,450	$187,500 to $245,000	309	138	(536)	
$100,000 to $149,999	1,122	15%	$2,450 to $3,750	$245,000 to $375,000	1,277	37	192	
$150,000 or more	734	10%	More than $3,750	More than $375,000	1,839	12	1,117	
Total	7,534	100%			3,767	3,767	0	

Source: American Community Survey, U.S. Census, 2010, U.S. Department of Housing and Urban Development, and Oregon Housing & Community Services. Notes FMR- Fair Market Rent and MFI – Median Family Income

As a final step in the housing affordability analysis, ECONorthwest performed a rough correlation of income with needed housing types as defined by ORS 195.303. This analysis is also consistent with guidance provided in the DLCD Planning for Residential Lands Workbook.[28] Table 4-14 shows ECONorthwest's evaluation for market segments, incomes, and financially attainable housing products. The tables use the 2012 HUD income guidelines as the market segments and the most recent American Community Survey data from the Census for the income distribution.

Table 4-14 provides an estimate of financially attainable housing types by income and tenure for Wilsonville households. The data shown in Table 4-14 suggest that Wilsonville has an existing need for about 2,364 housing units that are affordable for households with income less than $36,500.

Table 4-14. Financially attainable housing type by income range, Wilsonville, 2007-2011

Market Segment by Income	Income Range	Number of households	Percent of Households	Financially Attainable Products	
				Owner-occupied	Renter-occupied
High (120% or more of MFI)	$87,600 or more	2348	31%	All housing types; higher prices	All housing types; higher prices
Upper Middle (80%-120% of MFI)	$58,400 to $87,600	1210	16%	All housing types; lower values	All housing types; lower values
Lower Middle (50%-80% of MFI)	$36,500 to $58,400	1613	22%	Single-family attached; condominiums; duplexes; manufactured on lots	Single-family attached; detatched; manufactured on lots; apartments
Lower (30%-50% of less of MFI)	$21,900 to $36,500	907	12%	Manufactured in parks	Apartments; manufactured in parks; duplexes
Very Low (Less than 30% of MFI)	Less than $21,900	1457	19%	None	Apartments; new and used government assisted housing

Source: Estimates by ECONorthwest based on HUD 2012 Median Family Income for Clackamas County and 2007-2011 American Community Survey for Wilsonville income data.

[28] Specifically, Step 4, page 29 and the figure on page C-11.

Summary of government subsidized housing in Wilsonville

There are a number of government subsidized affordable housing programs in Clackamas County and Wilsonville that are designed to address the housing affordability problems described above. Governmental agencies and nonprofit organizations offer a range of housing assistance to low- and moderate-income households in renting or purchasing a home include:

- **Housing Choice Voucher program** (formerly known as Section 8) allows very low-income families (including elderly and disabled) to choose where they want to live by providing rental certificates that limit tenants' rent to 30% of their monthly income.
- **Public housing** is government-provided low cost housing in multi-unit complexes that are available to low-income, mostly elderly or disabled, residents. Managed by local housing authorities, they typically require tenants to pay no more than 30% of their monthly income for rent.
- **HUD landlord subsidies** give funds directly to apartment owners, who lower the rents they charge low-income tenants.
- **Section 202** provides housing for low-income senior citizens and often includes services such as meals, transportation, and accommodations for the disabled.
- **Subsidized mortgage programs** are state-sponsored programs that reduce the interest rate for homes purchased within the state to qualified low-income first-time homebuyers. Other programs that offer low interest rate loans include:
    - **Veteran's Affairs loans** are home loans offered to eligible veterans, some military personnel, and certain surviving spouses.
    - **Other homeownership assistance** include a variety of down payment assistance programs run by states, counties, cities, business organizations, and non-profit organizations for low-income families.

Nonprofit organizations also provide a wide variety of housing assistance to low-income households and individuals. Nonprofits provide assistance with renting or purchasing housing, as well as services (such as emergency food, low-cost medical services, or transportation assistance).

The City of Wilsonville has a variety of publicly and privately assisted housing options, including housing for people with physical and mental disabilities. The Housing Authority of Clackamas County (HACC) is the public housing authority for Wilsonville and Clackamas County, and HACC administers the Housing Choice Voucher program for the county. As of 2013, HACC provided 1,493 Housing Choice vouchers to households throughout Clackamas County.

As of May 2013, the waiting list for the Housing Choice Voucher program was closed, and HACC estimated that the waiting list was seven years or longer.

Table 4-15 shows affordable housing developments existing within Wilsonville in 2013. Wilsonville has seven low cost apartment complexes for low-income residents, with a total of 474 units. The units are a mixture of 1-, 2-, and 3-bedroom units. While some developments have low or no vacancies, some developments have available units.

Table 4-15. Low cost apartment complexes, Wilsonville, 2013

Name of development	Number of units	Population segment served
Autumn Park Apartments	144	Low-income families, seniors, people with disabilities
Charleston Apartments	51	Low-income households
Creekside Woods	84	Low-income seniors
Montebello Apartments	84	Low-income families, seniors, people with disabilities
Rain Garden Apartments	29	Low-income people needing health and supportive services
Wiedmann Apartments	58	Low-income seniors
Wilsonville Heights Apartments	24	Low-income families, seniors, people with disabilities

Source: ECONorthwest

The City of Wilsonville supports the development and operations of affordable housing through exempting low-income housing from property taxes. Five of the seven apartment complexes in Table 4-15 were exempted from property taxes in 2013. The City estimates the tax exemptions will lower rent at these five complexes by a total of $277,000 over a twelve-month period.[29]

Other regional or countywide efforts to address housing affordability issues include:

- **Clackamas County Ten-Year Plan and Policy to Address Homelessness** is a 2007 report published by the Clackamas County Coordinating Council for Homeless Programs. The plan describes Clackamas County's housing affordability problems and proposes action steps to end homelessness in Clackamas County. These action steps go beyond issues that can be addressed through land use planning, including expansion of mental health services, de-criminalization of homelessness, and increased support services for homeless children.

  The actions steps that are directly related to residential land use policies include: (1) preservation and expansion of affordable housing stock and (2) adoption of housing policies that encourage the development of affordable housing, such as through property tax exemptions, foreclosure regulations, or mobile home park protection.

[29] Wilsonville City Council Meeting Staff Report, April 15, 2013.

- **Northwest Housing Alternatives** (NHA) is a non-profit that builds and renovates affordable housing in 17 Oregon counties, including Clackamas County. NHA has helped develop three apartment complexes in Wilsonville: Autumn Park Apartments, Creekside Woods (a seniors-only facility), and The Charleston.
- **Proud Ground** is a non-profit community land trust committed to providing affordable homeownership opportunities for people in Clackamas, Washington and Multnomah Counties. Proud Ground subsidizes the purchase price of homes for qualifying first-time homeowners, and participants agree to resale provisions that ensure that the home will remain affordable for the next homebuyer.

Chapter 5. Housing Need in Wilsonville

This chapter presents the analysis of housing needs in Wilsonville over the 2014 to 2034 period. It uses population growth assumptions combined with other assumptions (e.g., household size and vacancy rates) to estimate the total number of needed units (what Goal 10 calls the "Housing Needs Projection"). It then provides estimates of needed units by structure type and by density range.

Chapter 2 described the framework for conducting a housing "needs" analysis. The specific steps in conducting a housing needs analysis are:

1. Project number of new housing units needed in the next 20 years.
2. Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix.
3. Describe the demographic characteristics of the population and, if possible, housing trends that relate to demand for different types of housing.
4. Determine the types of housing that are likely to be affordable to the projected households based on household income.
5. Estimate the number of additional needed units by structure type.
6. Determine the needed density ranges for each plan designation and the average needed net density for all structure types.

This chapter focuses on Steps 1, 4, 5, and 6, based on the framework described in Chapter 2 and the information presented in Chapters 3 and 4.

SUMMARY OF WILSONVILLE'S HOUSING NEEDS

- Metro forecasts that Wilsonville will grow by 3,749 dwelling units over the 2014 to 2034 period. Metro's forecast results in 1.8% average annual growth. In comparison, Wilsonville average annual population growth between 1990 and 2012 was nearly 5% and 3.2% between 2000 and 2012.
- Wilsonville's assumed housing mix meets the requirement of OAR 660-007-0030 to "designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing."
- Wilsonville's housing need projection (e.g., needed mix of housing) is for: 50% single-family detached (1,875 dwelling units), 10% single-family attached (375 dwelling units), and 40% multifamily housing (1,499 dwelling units).
- Wilsonville's assumed average housing density is 7.1 dwelling units per *gross* acre, which is an average of about 8.7 dwelling units per *net* acre.
- Wilsonville's assumed average density of 8.7 dwelling units per net acre meets the requirements of OAR 660-007-0035 to "provide for an overall density of eight or more dwelling units per net buildable acre".
- The assumptions used to determine Wilsonville's needed housing mix and density were discussed with Wilsonville decision makers and are based, in part, on the results of the capacity analysis for Wilsonville's residential land base, presented in Chapter 6.

PROJECT NEW HOUSING UNITS NEEDED IN THE NEXT 20 YEARS

The results of the housing needs analysis are based on: (1) the Metro forecast for new dwelling units in Wilsonville over the 20-year planning period, (2) information about Wilsonville's housing market relative to the Portland Region, (3) the demographic composition of Wilsonville's existing population and expected long-term changes in the demographics of the Portland Region, and (4) input from discussions with the Planning Commission and City Council.

Metro's forecast for household growth

The housing needs analysis in this chapter is based on a coordinated population forecast from Metro (the November 2012 "Gamma" forecast), which is a necessary prerequisite to estimate housing needs. The projection of

household growth includes areas currently within the city limits, as well as areas currently outside the city limits that the City expects to annex for residential uses (most notably Frog Pond). We call these areas combined the "Wilsonville planning area."[30]

Table 5-1 presents Metro's forecast for population growth and new housing development in the Wilsonville planning area for the 2010 to 2035 period. The table shows Metro's forecast for the Wilsonville city limits, areas currently outside the city limits that are expected to be annexed by 2035, which are together the Wilsonville planning area. Table 5-1 shows Metro's forecast for the number of households in each of the following years:

- **2010.** Metro's forecast uses an estimate of the number of households in 2010 as the starting point of the forecast.
- **2025.** As part of the forecasting process, Metro developed a forecast of households for 2025 to allow jurisdictions an opportunity to review and comment on the forecast for growth between 2010 and 2025.
- **2035.** Metro's forecast estimates household growth of 57% by 2035. Part of the forecasting process was providing jurisdictions an opportunity to review and comment on the forecast for growth through 2035.

Table 5-1. Metro forecast for housing growth, Wilsonville planning area, 2010 to 2035

Year	Wilsonville City Limits	Areas Currently Outside City Limits	Wilsonville Planning Area
2010	7,980	47	8,027
2025	10,944	753	11,697
2035	11,508	1,063	12,571
Change 2010 to 2035			
Households	3,528	1,016	4,544
Percent	44%	2162%	57%
AAGR	1.5%	13.3%	1.8%

Source: Metro Gamma Forecast, November 2012
Note: The Wilsonville City Limits are the following Metro Transportation Analysis Zones (TAZs): 965, 966, 967, 968, 969, 970, 971, 974, 975, 978, and 979
The "areas currently outside city limits" are TAZ 973 and 976, which are areas that the City plans to annex by 2035 with residential growth.

[30] Metro forecasts household growth by Transportation Analysis Zone (TAZ) areas. The Wilsonville planning area includes TAZs within the city limits (TAZs: 965, 966, 967, 968, 969, 970, 971, 974, 975, 978, and 979) and areas currently outside the city limits that are expected to be annexed by 2035 (TAZ 973 and 976).

Wilsonville's housing needs analysis must be based on a 20-year period but Metro's forecast describes growth over a 25-year period. Table 5-2 shows an extrapolation of Metro's forecast for the 2014 to 2034 period. ECONorthwest extrapolated Metro's forecast (Table 5-1) using the following assumptions:

- **Households in 2014.** ECONorthwest estimated the number of households in the Wilsonville planning area using the number of households in 2010 and the growth rate in the forecast between 2010 and 2025.

  For example, in 2010 Metro estimated that there were 7,980 households within the Wilsonville city limits and would be 10,944 households in 2025. Between 2010 and 2025, the average annual growth rate for households within the city limits was 2.13%. Assuming that household growth in Wilsonville was 2.13% per year, there would be 8,682 households in Wilsonville in 2014.

- **Households in 2034.** ECONorthwest estimated the number of households in the Wilsonville planning area using the number of households in 2025 and the growth rate in the forecast between 2025 and 2035.

  For example, in 2025 Metro estimates that there would be 10,944 households within the Wilsonville city limits and would be 11,508 households in 2035. Between 2025 and 2035, the average annual growth rate for households within the city limits was 0.50%. Assuming that household growth in Wilsonville was 0.50% per year, there would be 11,451 households in Wilsonville in 2034.

Table 5-2 shows that the Wilsonville planning area will add 3,749 new households between 2014 and 2034, with 2,769 new households inside the existing city limits and 980 new households in outside the current city limits.

Table 5-2. Extrapolated Metro forecast for housing growth, Wilsonville planning area, 2014 to 2034

Year	Wilsonville City Limits	Areas Currently Outside City Limits	Wilsonville Planning Area
2014	8,682	47	8,729
2034	11,451	1,027	12,478
Change 2014-2034			
Households	2,769	980	3,749
Percent	32%	2085%	43%
AAGR	1.4%	16.7%	1.8%

Source: Metro Gamma Forecast, November 2012

Metro's forecast shows that Wilsonville will grow at an average annual growth rate (AAGR) of 1.8% over the next 20-years. Table 4-1 shows that Wilsonville's population grew at 4.9% between 1990 and 2012. The implication of these figures is that Wilsonville may grow faster than the Metro forecast (and the assumptions used in this study).

New housing units needed over the next 20 years

Table 5-3 shows a forecast of needed housing in the Wilsonville planning area during the 2014 to 2034 period. The projection is based on the following assumptions:

- Metro's forecast for population and housing growth shows that Wilsonville will add 3,749 new households over the 20-year period.
- The assumptions about the mix of housing in Table 5-3 are:
  - Fifty percent of new housing will be single-family detached, a category which includes manufactured housing.
  - Ten percent of new housing will be single-family attached. This assumption is consistent with information from the American Community Survey that shows that about 10% of Wilsonville's existing housing stock is single-family attached.
  - Forty percent of new housing will be multifamily.

Table 5-3. Forecast for new needed housing units, Wilsonville planning area, 2014-2034

	Needed New Housing Units (2014-2034)	
	Percent of new dwellings	Number of new dwellings
New dwelling units		
Single-family detached	50%	1,875
Single-family attached	10%	375
Multifamily	40%	1,499
Total new dwelling units	**100%**	**3,749**
Average new du developed annually		**187**

Source: Metro forecast of housing units; Calculations by ECONorthwest
Note: Dwelling units needed annually is derived by dividing total needed dwellings by 20. Actual rates of development will vary from year to year.

The housing mix presented in Table 5-3 meets the requirements of OAR 660-007 "to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing." Under OAR 660-007, a city can justify an alternative housing mix based on changing circumstances.

The forecast of new units does not include dwellings that will be demolished and replaced. This analysis does not factor those units in; it assumes they will be replaced at the same site and will not create additional demand for residential land.

Needed housing by density range by plan designation

Table 5-4 shows the forecast of needed housing units by density in Wilsonville based on the total estimate of housing need shown in Table 5-3. The forecast in Table 5-4 assumes:

- The overall density of housing in Wilsonville will be 7.1 dwelling units per *gross* acre, which is an average of about 8.7 dwelling units per *net* acre.
  - Single-family detached housing will develop at about 5 dwelling units per gross acre.
  - Single-family attached housing will develop at 10 dwelling units per gross acre.
  - Multifamily housing will develop at 13 dwelling units per gross acre.

Table 5-4. Forecast of needed housing units by mix and density, Wilsonville planning area, 2014-2034

Housing Type	New Dwelling Units (DU)	Percent	Density (DU/gross acre)	Gross Acres
Single-family detached	1,875	50%	5.0	375
Single-family attached	375	10%	10.0	38
Multifamily	1,499	40%	13.0	115
Total	**3,749**	**100%**	**7.1**	**528**

Source: ECONorthwest

The assumed housing mix meets the requirement of OAR 660-007-0030 to "designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing." The forecast in Table 5-4 results in an average density of 8.7 dwelling units per net acre. This housing density meets the requirements of OAR 660-007-0035 to "provide for an overall density of eight or more dwelling units per net buildable acre."

Needed housing by income level

Step four of the housing needs analysis is to develop an estimate of need for housing by income and housing type. This requires an estimate of the income distribution of current and future households in the community. These estimates presented in this section are based on (1) secondary data from the Census, and (2) analysis by ECONorthwest.

The analysis in Table 5-5 is based on American Community Survey data about income levels in Wilsonville, using information shown in Figure 4-8. Income is categorized into market segments consistent with HUD income level

categories, using Clackamas County's 2012 Median Family Income (MFI) of $73,000. Table 5-5 is based on current household income distribution, assuming approximately that the same percentage of households will be in each market segment in the future.

Based on Wilsonville's current household income distribution, Table 5-5 shows that about 31% of households in Wilsonville could be considered low or very low income, 22% are low-middle income households and 47% are high or upper-middle income.

Table 5-5. Estimate of needed new dwelling units by income level, Wilsonville, 2014-2034

Market Segment by Income	Income Range	Number of households	Percent of Households	Commonly Financially Attainable Housing Products	
				Owner-occupied	Renter-occupied
High (120% or more of MFI)	$87,600 or more	1,162	31%	All housing types; higher prices	All housing types; higher prices
Upper Middle (80%-120% of MFI)	$58,400 to $87,600	600	16%	All housing types; lower values	All housing types; lower values
Lower Middle (50%-80% of MFI)	$36,500 to $58,400	825	22%	Single-family attached; condominiums; duplexes; manufactured on lots	Single-family attached; detatched; manufactured on lots; apartments
Lower (30%-50% of less of MFI)	$21,900 to $36,500	450	12%	Manufactured in parks	Apartments; manufactured in parks; duplexes
Very Low (Less than 30% of MFI)	Less than $21,900	712	19%	None	Apartments; new and used government assisted housing

Source: ECONorthwest
MFI is Median Family Income

Wilsonville will have an on-going need for housing affordable to lower-income households. The housing need analysis, and the related policy review, demonstrate that the City is meeting its obligation to plan for needed housing types (as required by ORS 197.303) for households at all income levels. These policies include those that allow for development of a range of housing types (e.g., duplexes, manufactured housing, and apartments) and policies that support government-subsidized housing. This conclusion is supported by the fact that Metro's 2012 *Compliance Report* concluded that Wilsonville was in compliance for the City's Title 1 (Housing Capacity) and Title 7 (Housing Choice) responsibilities.

Need for government assisted and manufactured housing

ORS 197.303 requires cities to plan for government-assisted housing, manufactured housing on lots, and manufactured housing in parks.

- **Government-subsidized housing.** Government-subsidies can apply to all housing types (e.g., single family detached, apartments, etc.). Wilsonville allows development of government-assisted housing in all Residential zones, with the same development standards for market-rate housing. This analysis assumes that Wilsonville will continue to allow government housing in all its Residential zones. Because government assisted housing is similar in character to other housing (with the exception the subsidies), it is not necessary to develop separate forecasts for government-subsidized housing.
- **Manufactured housing on lots.** Wilsonville considers manufactured homes on lots as "dwellings" and are considered the same as on-site construction.[31] As manufactured homes are subject to the same siting requirements as site-built homes, it is not necessary to develop separate forecasts for manufactured housing on lots.
- **Manufactured housing in parks.** OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial or high density residential development. According to the Oregon Housing and Community Services' Manufactured Dwelling Park Directory,[32] Wilsonville has two manufactured dwelling parks:
    - Oakleaf Park with 63 spaces, all occupied
    - Walnut Mobile Home Park with 57 spaces, all occupied[33]

  ORS 197.480(2) requires Wilsonville to project need for mobile home or manufactured dwelling parks based on: (1) population projections, (2) household income levels, (3) housing market trends, and (4) an inventory of manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial or high density residential.

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[31] Section 4.001 of the Wilsonville Planning and Land Development Ordinance

[32] Oregon Housing and Community Services, Oregon Manufactured Dwelling Park Directory, http://o.hcs.state.or.us/MDPCRParks/ParkDirQuery.jsp

[33] The Walnut Mobile Home Park is in the RA-H zone on land with a Comprehensive Plan Designation of Industrial.

- Table 5-3 shows that the Wilsonville planning area will grow by 3,749 dwelling units over the 2014 to 2034 period.
- Analysis of housing affordability (in Table 5-5) shows that about 30% of Wilsonville's new households will be low income, earning 50% or less of the County's median family income. One type of housing affordable to these households is manufactured housing.
- Manufactured housing in parks accounts for about 1.3% (120 dwelling units) of Wilsonville's current housing stock.
- National, state, and regional trends during the 2000 to 2010 period showed that manufactured housing parks were closing, rather than being created. For example, between 2003 and 2010, Oregon had a statewide decrease of 25% in the number of manufactured home parks. Since 2000, two manufactured parks with a total of about 300 manufactured home spaces closed in Wilsonville.
- The longer-term trend for closing manufactured home parks is the result of manufactured home park landowners selling or redeveloping their land for uses with higher rates of return, rather than lack of demand for spaces in manufactured home parks. Manufactured home parks contribute to the supply of lower-cost affordable housing options, especially for affordable home ownership. The trend in closure of manufactured home parks increases the shortage of manufactured home park spaces. Without some form of public investment to encourage continued operation of existing manufactured home parks and construction of new manufactured home parks, this shortage will continue.

Table 5-5 shows that the households most likely to live in manufactured homes in parks are those with incomes between $21,900 and $36,500 (30 to 50% of median family income). Assuming that about 1% to 1.5% of Wilsonville's new households (3,749 new dwellings) choose to live in manufactured housing parks, the City may need 37 to 56 new manufactured home spaces. At an average of 8 dwelling units per net acre, this results in demand for 4.7 to 7.0 acres of land.

The City allows development of manufactured housing parks in PDR zones, where the City has 103 vacant suitable buildable acres of land. Development of a new manufactured home park in Wilsonville over the planning period seems unlikely, given the closing of two parks in Wilsonville. The land needed for development of a manufactured housing park is part of the forecast in Table 5-4.

Chapter 6. Residential Land Sufficiency within Wilsonville

This chapter presents a summary of Wilsonville's buildable residential land and an estimate of capacity for new housing on buildable residential land. The inventory was prepared by City staff (see Appendix A). The chapter concludes with comparison between of the capacity of Wilsonville's residential land with the demand for new housing in Wilsonville over the 2014 to 2034 period. In short, the analysis answers the question: "Does Wilsonville have enough residential land to accommodate forecast housing needs?"

SUMMARY OF WILSONVILLE'S RESIDENTIAL LAND SUFFICIENCY

- As of July 2013, Wilsonville had 477 gross acres of suitable buildable land. About 102 gross acres are in Residential Designations, 148 gross acres are in Frog Pond, 206 gross acres are in the Village Designation, and 22 gross acres are in Commercial Designations.
- Wilsonville has capacity to accommodate between 3,390 (under the low capacity scenario) to 4,229 (under the high capacity scenario) dwelling units at an average density of between 7.1 to 8.9 dwelling units per gross acre.
- The residential capacity analysis shows that, based on existing policies, Wilsonville has designated sufficient buildable land to provide opportunity for 48% single-family detached and 52% single-family attached and multifamily housing. This planned capacity is consistent with the requirement of OAR 660-007-0030(1).
- Under the low capacity estimate, with an average density of 7.1 dwelling units per gross acre, Wilsonville has a small deficit of housing capacity (359 dwelling unit deficit). Wilsonville's residential land deficit is about 51 gross acres of suitable buildable land necessary to accommodate Metro's forecast for new dwelling units dwelling units.
- If the City grows faster than Metro's housing forecast (1.8% average annual growth), then Wilsonville will consume residential land sooner than the forecast in this housing needs analysis. Given that the City's historical population growth rate between 1990 and 2012 was nearly 5% annually, and the City grew faster than 3% annually over the past

decade, it seems possible that the City will grow faster than Metro's forecast.

SUMMARY OF BUILDABLE RESIDENTIAL LAND IN WILSONVILLE

Appendix A presents Wilsonville's residential buildable lands inventory, which was prepared by City staff. Table 6-1 presents a summary of the buildable lands inventory. Wilsonville had about 479 gross acres of developable residential land in Wilsonville in 2013. The inventory identified 251 gross acres of vacant buildable land and 228 gross acres of land that is partially vacant or likely to redevelop.

Appendix A presents the full description of the methodology for the buildable lands inventory. In short, the City identified buildable residential land using the following methods:

- **Vacant land.** The City identified land that is fully vacant using information in Metro's RLIS GIS database and refining the results through comparison with current aerial photography, field checks, and local records. Staff identified and removed unbuildable land (e.g., publicly owned land or land in the Significant Resource Overlay Zone) from the inventory of vacant land.
- **Partially vacant land or land likely to redevelop.** The City identified land as partially vacant or likely to redevelop over the next twenty years based on improvement value, land value, and site size. Staff identified and removed unbuildable land from the inventory of partially vacant or likely to redevelop land.
    - **Partially vacant land** is land with one (or possibly two) dwelling units on a parcel that could be divided and accommodate additional dwellings. For example, a two-acre parcel within the Wilsonville city limits could reasonably be expected to be partitioned to be able to accommodate new residential development. The existing dwelling on a partially vacant parcel may remain in place, with new dwellings built around it, or may be demolished and replaced with all new development.
    - **Land that is likely to redevelop** is land with existing development that is relatively likely to redevelop over the 20-year planning period. Redevelopment will result in demolition of existing structures and development of new structures.

Estimating the amount of suitable buildable land in Wilsonville requires accounting for land in partially vacant parcels where the existing dwelling is likely to be preserved. This area is included in Table 6-1 in the column headed "Partially Vacant Land not Available for Future Development," which shows Wilsonville has 2.7 gross acres of partially vacant parcels (in 24 parcels) where the existing dwelling is likely to be preserved.

Table 6-1 Suitable residential land, Wilsonville, gross acres, 2013

Comprehensive Plan Designation	Amount of land in the Buildable Lands Inventory			Partially Vacant Land not Available for Future Development	Total Suitable Buildable Land
	Vacant	Partially Vacant or Likely to Redevelop	Total Vacant and Partially Vacant or Likely to Redevelop		
Residential	**66.1**	**36.6**	**102.7**	**1.0**	**101.7**
0-1 du/ac	0.0	2.2	2.2		2.2
2-3 du/ac	0.3	4.3	4.6	0.67	3.9
4-5 du/ac	3.4	13.4	16.8	0.29	16.5
6-7 du/ac	12.2	8.1	20.3		20.3
6-7/10-12 du/ac*	20.5	0.0	20.5		20.5
10-12 du/ac	29.6	8.6	38.2	0.08	38.1
16-20 du/ac	0.1	0.0	0.1		0.1
Residential, Area of Special Concern L (Frog Pond)**	**23.0**	**126.4**	**149.4**	**1.63**	**147.8**
Village	**143.4**	**62.8**	**206.2**		**206.2**
Commercial	**16.9**	**4.8**	**21.7**		**21.7**
PDC-TC	13.2		13.2		13.2
PDC	3.7	4.8	8.5		8.5
Total	**249.4**	**230.6**	**480.0**	**2.7**	**477.3**

Source: Buildable Land Inventory by the City of Wilsonville; Estimate of Partially Vacant Land not Available for Future Development by ECONorthwest
*Note: The 6-7/10-12 du/ac Designation is one split-zoned property.
**Note: Frog Pond is located within the Metro UGB but outside of Wilsonville's city limits.

RESIDENTIAL LAND CAPACITY IN WILSONVILLE

The capacity analysis estimates the number of new dwelling units that can be accommodated on Wilsonville's residential land supply.[34] The capacity analysis evaluates ways that vacant suitable residential land may build out by applying different assumptions.

In short, land capacity is a function of buildable land, housing mix (as determined by plan designation or zoning), and density. The basic form of any method to estimate capacity requires (1) an estimate of *buildable* land (e.g., land that is developable minus constraints such as Wilsonville's Significant Resource Overlay Zone (SROZ)), and (2) assumptions about density. The arithmetic is straightforward:

Buildable Land (ac) * Density (du/ac) = Capacity (in dwelling units)

For example:

100 acres * 8 du/ac = 800 dwelling units of capacity

The example is a simplification of the method, which skips some of the nuances that can be incorporated into an analysis of capacity (e.g., different densities and housing mixes in different Comprehensive Plan Designations).

The capacity analysis modeled two scenarios of potential housing capacity: (1) a low capacity scenario, and (2) a high capacity scenario. The scenarios are based on existing policies (where available) and use the following information and assumptions:

- **Suitable buildable land** by Comprehensive Plan Designation summarized in Table 6-1, based on the analysis presented in Appendix A.
- **Planned density** for Residential land shown in Table 6-2. For Residential land within Wilsonville's city limits, the density assumptions are based on assigned densities in the Comprehensive Plan.
- **Potential density** for residential development on the Residential land in the Area of Special Concern L (a.k.a. Frog Pond), which is located

[34] In this report, the term *"capacity analysis" is used as shorthand for* estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate.

within the Metro urban growth boundary but not within Wilsonville's city limits.

- **Planned density** for the Village designation. The adopted Villebois Master Plan describes the amount and type of housing yet to be built in Villebois, summarized in Table 6-4.
- **Commercial land** residential capacity, shown in Table 6-5, based on analysis of low and high residential development capacity on commercial land developed by City of Wilsonville staff.

Density Assumptions

Estimating the capacity of vacant residential land to accommodate new dwelling units requires assumptions about the number of units allowed per acre, or density. Table 6-2 presents a range of density assumptions (from low to high) by Comprehensive Plan Designation for Residential land. This section does not present assumptions about capacity in the Village designation because the Villebois Master Plan describes the number of units planned for Villebois.

- **Residential Designations within the city limits.** The density assumptions for the Residential Designations are based on the low and high density allowed in the designation. For example, in the 4-5 du/ac designation, we assume a low density of 4.0 dwelling units per gross acre and a high of 5.0 dwelling units per gross acre.

Frog Pond.[35] Frog Pond is unincorporated, not yet master planned, and does not have a set density range. Table 6-2 presents a range of housing densities that illustrates Frog Pond's potential capacity.

The low estimate assumes that Frog Pond will have a minimum of 5.0 dwelling units per gross acre (about 6.0 dwelling units per net acre). The low density estimates that Frog Pond will be developed predominantly with single-family detached housing, with lot sizes averaging about 7,250 square feet.

The high estimate assumes that Frog Pond will have a minimum of 8.5 dwelling units per gross acre (about 10.5 dwelling units per net acre). The high density estimate assumes that Frog Pond will be developed with a

[35] In this report, we refer to land in the Residential Area of Special Concern L as Frog Pond. This area is within the Metro UGB but outside of Wilsonville's city limits.

mix of housing types but predominantly single-family detached and attached housing, with lot sizes averaging about 4,150 square feet.

Table 6-2. Density assumptions

Comprehensive Plan Designation	Density Assumptions (gross acres)	
	Low	High
Residential within the city limits		
0-1 du/ac	1.0	1.0
2-3 du/ac	2.0	3.0
4-5 du/ac	4.0	5.0
6-7 du/ac	6.0	7.0
6-7/10-12 du/ac	6.0	12.0
10-12 du/ac	10.0	12.0
16-20 du/ac	16.0	20.0
Frog Pond	5.0	8.5

Source: Wilsonville Comprehensive Plan and ECONorthwest
Note: Frog Pond refers to the Residential Area of Special Concern L.

Housing capacity estimates

Table 6-3 shows the results of the estimate of housing capacity potential on land designated Residential and in Frog Pond.

- **Residential Designations within the city limits.** Collectively, the land currently within the city limits that is designated as Residential has capacity for between 701 to 942 dwelling units, at the adopted densities.
- **Frog Pond.** The Frog Pond area can accommodate between 738 and 1,256 new dwelling units, assuming densities from 5.0 to 8.5 dwelling units per gross acre.

Table 6-3. Estimate of capacity in the Residential Plan Designation, new dwelling units, Wilsonville

Comprehensive Plan Designation	Suitable Buildable Land (gross acres)	Capacity (dwelling units)	
		Low	High
Residential within the city limits	**101.7**	**701**	**942**
0-1 du/ac	2.2	2	2
2-3 du/ac	3.9	7	11
4-5 du/ac	16.5	66	82
6-7 du/ac	20.3	121	142
6-7/10-12 du/ac	20.5	123	246
10-12 du/ac	38.1	381	457
16-20 du/ac	0.1	1	2
Frog Pond	**147.8**	**738**	**1,256**

Source ECONorthwest
Note: Frog Pond refers to the Residential Area of Special Concern L.

The 2003 Villebois Master Plan calls for a minimum of 2,300 dwelling units in Villebois. The most recent refinement to the Villebois Master Plan (adopted in July 2013) results in addition of 232 additional dwelling units.[36] The Villebois Master Plan included an area labeled "Future Study Area", with the assumption that housing units would be planned at a later date. Based on recent proposals to develop this area, it is assumed that this area has capacity for about 113 single-family detached units.

Table 6-4 shows that Villebois has total capacity for 2,645 dwelling units,[37] based on the refinements to the Master Plan. As of the end of 2012, the City had approved building permits for development of 909 dwelling units in Villebois. The Villebois master plan allows for an additional 1,736 new units in Villebois. The planned capacity for new units is 656 single-family detached units and 1,080 multifamily and single-family attached units.

[36] Planning Case File DB13-0021 includes this finding in "Subsection 4.125 (.18) J. 1. a. v. SAP Refinements: Density".

[37] The capacity for dwelling units in Villebois is as follows: 2,300 dwelling units described in the unmodified Master Plan, plus the refinements to the Master Plan to add 232 more units, and plus the proposed refinement to the Master Plan to add 113 units on the Future Study Area site. That results in 2,645 dwelling units.

Table 6-4. Villebois capacity

	Units
Units planned	2,645
Units permitted through 2012	909
Single-family detached	470
Multifamily	439
Units left to build	1,736
Single-family detached	656
Multifamily	1,080

Source: Villebois Master Plan; Wilsonville building permit database; analysis by ECONorthwest
Note: Multifamily includes single-family attached

Table 6-5 shows that Wilsonville has about 22 acres of land zoned for commercial use that the City has identified as having capacity for residential development. About 13 acres of this land is in Town Center and the remaining land is zoned PDC.

- **Town Center (PDC-TC).** City staff estimated the capacity in the Town Center designation ranges from 200 to 270 dwelling units based on assumptions about the type of development expected to locate in Town Center.
- **PDC.** City staff estimated the capacity in the Commercial designation ranges from 15 to 25 dwelling units.

Table 6-5. Capacity on commercial land

Comprehensive Plan Designation	Suitable Buildable Land (gross acres)	Capacity (dwelling units)	
		Low	High
Commercial	**21.7**	**215**	**295**
PDC-TC	13.2	200	270
PDC	8.5	15	25

Source City of Wilsonville staff

Capacity Summary

Table 6-6 shows that Wilsonville's 477 acres of suitable buildable residential land base has capacity to accommodate between 3,390 and 4,229 new dwelling units.

- The **low** capacity scenario results in an overall density of 7.1 dwelling units per gross acre or 8.7 dwelling units per net acre.
- The **high** capacity scenario results in an overall density of 8.9 dwelling units per gross acre or 10.9 dwelling units per net acre.

Table 6-6. Summary of housing capacity on suitable buildable land, Wilsonville

Comprehensive Plan Designation	Low Capacity (dwelling units)	High Capacity (dwelling units)	Average Development Densities (dwelling units per gross acre (du/ga)) Suitable Buildable Land (gross acres)	Low Capacity (du/ga)	High Capacity (du/ga)
Residential	701	942	102	6.9	9.3
Residential, Area of Special Concern L (Frog Pond)**	738	1,256	148	5.0	8.5
Villebois	1,736	1,736	206	8.4	8.4
Commercial	215	295	22	9.9	13.6
Total	3,390	4,229	477	7.1	8.9

Source ECONorthwest
**Note: Frog Pond is located within the Metro UGB but outside of Wilsonville's city limits.

The conclusions of the capacity analysis are that:

- Both scenarios exceed the State requirement (OAR 660-007-0035(2)) to "provide for an overall density of eight or more dwelling units per net buildable acre." The low capacity scenario results in an average density of 8.7 dwelling units per net acre and the high capacity scenario results in an average density of 10.9 dwelling units per net acre.
- Both scenarios result in an average density lower than the 12.4 dwelling units per net acre of residential development constructed in Wilsonville over the 2000 to 2012 period.

Estimate of housing mix based on capacity analysis

The planned density assumptions for Residential Designations presented in Table 6-2, the capacity estimates for housing in Villebois (Table 6-4), and Commercial (Table 6-5) have implications for the types of housing likely to be built in Wilsonville. This section describes the probable housing mix likely to be developed in Wilsonville as a result of the City's existing residential development policies and the assumptions of future densities in Frog Pond.

Table 6-7 shows an estimate of the mix of housing (single-family detached housing compared to single-family attached and multifamily housing) on Wilsonville's suitable buildable residential land. We estimated the type of housing in each area based on the following assumptions:

- **Residential.** Table 6-2 shows the low and high density assumptions in each Residential Designation, based on the densities allowed in the Comprehensive Plan. The analysis in Table 6-7 makes the following assumptions about housing mix for both the low and high capacity scenarios:
  - In Comprehensive Plan Designations with a density of 7 dwelling units per acre or lower, all new housing is assumed to be single-family detached housing.
  - In the 6-7/10-12 dwelling unit per acre Comprehensive Plan Designation, 55% of dwelling units are assumed to be single-family detached housing and 45% are assumed be single-family attached and multifamily housing.
  - In the 10-12 dwelling unit per acre Comprehensive Plan Designation, 10% of dwelling units are assumed to be single-family detached housing and 90% are assumed be single-family attached and multifamily housing.
  - In the 16-20 dwelling unit per acre Comprehensive Plan Designation, all new housing is assumed to be single-family attached and multifamily housing.
- **Frog Pond.** Table 6-7 assumes a different housing mix based on the different average density assumptions in the low and high capacity scenarios.
  - In the low capacity scenario, Table 6-2 assumes an average density of 5.0 dwelling units per gross acre. Table 6-7 assumes that 90% of housing will be single-family detached and 10% will be single-family attached.

- In the high capacity scenario, Table 6-2 assumes an average density of 8.5 dwelling units per gross acre. Table 6-7 assumes that 75% of housing will be single-family detached and 25% will be single-family attached.

- **Villebois.** Table 6-7 uses the housing mix shown in Table 6-4.
- **Commercial.** Table 6-7 assumes that all housing on Commercial land will be single-family attached or multifamily because housing is only allowed in Commercial as part of a mixed-use development.

Both the low and high capacity scenarios in Table 6-7 result in a housing mix of 48% single-family detached and 52% single-family attached and multifamily for new construction, city-wide. Both scenarios exceed the State requirement (OAR 660-007-0030(1)) to "to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances."

Table 6-7. Estimated housing mix on Wilsonville's buildable residential land based on existing development densities

	Low Capacity (dwelling units)		High Capacity (dwelling units)	
Comprehensive Plan Designation	Single-family detached	Single-family attached and multifamily	Single-family detached	Single-family attached and multifamily
Residential	302	399	418	524
Residential, Area of Special Concern L (Frog Pond)**	664	74	942	314
Villebois	656	1,080	656	1,080
Commercial	0	215	0	295
Total Units	1,622	1,768	2,016	2,213
Percent of Total	48%	52%	48%	52%

Source ECONorthwest
**Note: Frog Pond is located within the Metro UGB but outside of Wilsonville's city limits.

RESIDENTIAL LAND SUFFICIENCY

Table 6-8 compares the capacity of buildable residential land to accommodate new housing (Table 6-7) with demand for new housing (Table 5-4). Table 6-8 shows:

- Wilsonville has capacity to accommodate between 3,390 and 4,229 new dwelling units.
- Metro forecasts 3,749 new dwelling units for the 2014-2034 period.
- Wilsonville's buildable residential land has capacity to accommodate more housing than Metro's forecast for new housing in Wilsonville over the 2014 to 2034 period.
    - Under the **low capacity scenario** and density assumptions, Wilsonville does not have enough land to accommodate new housing over the 20-year period. Wilsonville has a deficit of land to accommodate 359 new dwelling units, 253 of which are single-family detached and 106 of which are attached single-family or multifamily.
    - Under the **high capacity scenario** and density assumptions, Wilsonville has enough land to accommodate new housing over the 20-year period. Under this scenario, Wilsonville can accommodate 480 dwelling units more than the Metro forecast projects over the 20-year period.

Table 6-8. Comparison of the Capacity of Buildable Residential Land to accommodate new housing with demand for new housing, Wilsonville, 2014 to 2034

	Capacity on Buildable Residential Land (dwelling units)		Demand for New Housing (dwelling units)	Comparison Capacity *minus* Demand (dwelling units)	
	Low Capacity	High Capacity		Low Capacity	High Capacity
Single-family detached	1,622	2,016	1,875	-253	141
Single-family attached and multifamily	1,768	2,213	1,874	-106	339
Total	3,390	4,229	3,749	-359	480

Source ECONorthwest

A comparison of Wilsonville's supply 477 gross acres of residential land (Table 6-1) with the City's demand for 528 gross acres residential land (Table 5-4) shows that Wilsonville has a deficit about 51 gross acres of residential land for housing over the 20-year period.

CONCLUSIONS AND RECOMMENDATIONS

The key findings of the residential land study are that:

- **Wilsonville's Comprehensive Plan and Development Code meet state requirements.** The City's primarily obligations are to (1) designate land in a way that 50% of new housing could be either multifamily or single-family attached housing (e.g., townhouses); (2) achieve an average density of eight dwelling units per net acre; and (3) provide enough land to accommodate forecasted housing needs for the next 20 years.
- **Wilsonville's existing housing stock is 50% multifamily, 41% single-family detached, and 9% single-family attached.** Within these broad housing types, Wilsonville's housing stock is a mixture of housing types. For example, Wilsonville's single-family detached housing ranges from mobile and manufactured housing to more affordable single-family detached housing to higher-amenity single-family detached housing. Wilsonville's multifamily housing stock includes condominiums, duplexes, tri- and quad-plexes, government-subsidized affordable housing, housing targeted at seniors, and apartments with a wide range of amenities (e.g., swimming pools, patios, or internet service).
- **Wilsonville could attain a more balanced housing portfolio on the remaining buildable land.** The densities planned in the City's Comprehensive Plan allow for a development mix of 50% single-family detached and 50% single-family attached or multifamily housing, if Frog Pond is planned exclusively for single-family detached housing. When planning for future development in Frog Pond, the community has latitude (though not complete autonomy) for local decision making about the type and density of housing.
- **Wilsonville is planning for a complete, balanced community.** The Wilsonville Comprehensive Plan calls for a balanced portfolio of different housing types that are well-designed and will be developed across the community to serve different people at different points in their lives.
- **Wilsonville is meeting its obligation to plan for needed housing types for households at all income levels.** Wilsonville's residential development policies include those that allow for development of a range of housing types (e.g., duplexes, manufactured housing, and apartments) and that support government-subsidized housing. This conclusion is supported by the fact that Metro's 2012 *Compliance Report*

concluded that Wilsonville was in compliance with Metro Functional Plan and Title 7 (Housing Choice). Wilsonville will have an on-going need for housing affordable to lower-income households.

- **Wilsonville's decision makers want to provide more opportunities for the development of more single-family detached housing.** Discussions with Wilsonville's Planning Commission and City Council revealed that these bodies want to provide opportunities for development of a larger percentage single-family detached housing than recent development trends have produced. The low-capacity scenario for future growth would provide more single-family detached housing, as part of the housing mix. Based on these discussions, ECONorthwest recommends that the City use the low-capacity scenario to determine whether Wilsonville has enough land to accommodate Metro's forecast for housing growth.
- **Wilsonville's primary opportunity for development of a larger percentage of single-family detached housing is in Frog Pond.** Aside from opportunities for additional single-family detached housing in Frog Pond, the City has a few policy-making options to influence the amount of single-family detached housing developed in Wilsonville.

  The primary way the City influences development of single-family housing is through zoning. However, the capacity analysis shows that build-out of Wilsonville's residential land base under the adopted zoning and designations in the Comprehensive Plan will result in a new-housing mix of 48% single-family detached and 52% single-family attached and multifamily housing. Getting a larger percentage of new single-family detached housing would require downzoning land within the City that has long been planned for higher densities or changing the adopted Villebois Master Plan.

  Additionally, the City has discretion to make decisions on specific applications for approval of zone changes and density bonuses, or otherwise incentivize certain forms of housing. The City can choose to decrease the use of density bonuses or public investments that decrease the costs of production of single-family detached housing.
- **Wilsonville cannot accommodate Metro's forecast for growth on existing residential land.** Metro forecasts growth of about 3,749 new households in the Wilsonville Planning Area. Under the low capacity scenario, Wilsonville has capacity for 3,390 new dwellings and will consume its residential land supply by about 2032.

The key conclusion, that Wilsonville does not have sufficient residential land to accommodate forecasted growth over the 20-year period, might be

exacerbated if Wilsonville grows faster than Metro's forecast for the 2014 to 2034 period.

- **Wilsonville has historically grown faster than Metro's growth forecasts.** Between 2000 and 2012, Wilsonville added 6,500 new people—an increase of 47%. This growth has continued throughout the economic recovery: between July 2012 and July 2013, Wilsonville added more than 1,000 new residents. In addition, Wilsonville's households grew at 2.8% average annual growth rate over the 2000 to 2012 period.
- **Wilsonville and surrounding areas are expecting substantial employment growth in the next 20 years.** Three major regional employment areas (Coffee Creek, Basalt Creek, and West Railroad) will be within or adjacent to Wilsonville. Metro forecasts growth of nearly 5,000 employees in these areas. In addition, Metro forecasts growth of 9,000 new jobs in the Wilsonville planning area. Much of this employment growth in and around Wilsonville is expected to be in higher-than-average wage jobs, such as manufacturing.

  This job growth will drive increased demand for housing in the southern Portland metropolitan area. The 5,000 new jobs in the regional employment areas may generate growth of more than 4,500 households in the southern Portland metropolitan area.[38]
- **Wilsonville's decision makers are concerned about potential pressure that additional employment growth and commuting may place on the regional transportation system.** Many people who work in Wilsonville live in other communities. Additional job growth in and around Wilsonville has the potential to increase pressure on regional transportation facilities, especially if people continue to live in other communities and commute to Wilsonville for work.

  City policy is to attract more Wilsonville workers to live in the City. Providing housing options in close proximity to employment centers could reduce pressures on the transportation system and reduce household commuting costs.
- **Wilsonville is likely to grow at a faster rate than Metro's forecasts predict.** Metro projects 1.8% average annual growth of households in

[38] This estimate is based on American Community Survey data, which shows that Washington and Clackamas Counties combined have a household to jobs ratio of 0.93 households per job.

the Wilsonville planning area. Wilsonville's higher historical growth rates, combined with forecasts for employment growth of 5,000 employees in and around Wilsonville, suggest that Wilsonville is likely to grow faster than Metro's forecast.

The implication of a faster growth rate is that the City needs to plan to accommodate housing demand beyond land in the Wilsonville Planning Area (which includes Frog Pond). The following section describes ECONorthwest's conclusions and recommendations for Wilsonville to plan for expected and potential housing growth.

Policy recommendations for accommodating residential growth

A key objective of the Wilsonville Residential Land Study is to inform policy choices related to residential development. Wilsonville's key residential policy choices are on the topics of planning for growth areas in Frog Pond and Advance Road, residential development in Town Center, monitoring development activity, and removing barriers to needed housing types in the city development code.

Frog Pond

Information in the Residential Land Study will inform the Frog Pond Concept Plan and subsequent Master Plan. The City would like to develop strategies to determine desired densities and housing types for the Frog Pond Concept Plan. Given the City's experience with implementing the Villebois Master Plan, the adoption of a Frog Pond Concept Plan will provide a sufficient regulatory framework for developing certainty about achieving a specific mix and density of housing.

The land capacity analysis considered two density and mix scenarios for Frog Pond:

- **Low Capacity:** this scenario assumed a housing mix of 90% single-family detached and 10% multifamily and/or single-family attached housing with an average density of 5.0 dwelling units per gross residential acre.
- **High Capacity:** this scenario assumed a housing mix of 75% single-family detached and 25% multifamily and/or single-family attached housing with an average density of 8.5 dwelling units per gross residential acre.

Based on discussions with Wilsonville's decision makers about their desire to achieve a more balanced housing mix and the results of the housing needs

analysis, ECONorthwest recommends that Wilsonville plan for predominantly single-family detached housing in Wilsonville.

While this study does not set the densities or other development assumptions for Frog Pond, it provides a reasonable place to begin discussions about residential development at Frog Pond. ECONorthwest recommends that the density and mix assumptions eventually built into the Frog Pond Concept Plan consider the results of the housing needs analysis, comply with the density and mix requirements of OAR 660-007, and consider the context of overall housing need in Wilsonville.

Advance Road

The Residential Land Study concludes that Wilsonville may have need for additional residential land, by 2032 or sooner. Advance Road was identified as an Urban Reserve area for residential uses. The City is beginning to plan for development of Advance Road, through the Concept Planning process for Frog Pond and Advance Road.

ECONorthwest recommends that City staff use information from Wilsonville's residential growth monitoring program to inform regional discussions with Metro about expansion of the UGB, which happen on a five-year cycle. City staff can provide Metro with information about population and housing growth, as well as residential development and land consumption, to inform UGB expansion discussions.

Given the amount of time it takes to get a new area to be development-ready (i.e., brought into the UGB, planned, and services extended to the area), Wilsonville should begin discussions about bringing Advance Road into the UGB as part of the next cycle of UGB expansion discussions.

Town Center

City staff estimated the capacity in the Town Center zone ranges from 200 to 270 dwelling units. Town Center may be able to accommodate more housing, depending on the community's vision for development. The issue of how much housing to encourage in the Town Center is beyond the scope of this study.

ECONorthwest recommends that the City update the vision and master plan for Town Center, as part of a future planning process. This update should determine the potential market for housing in the Town Center, the amount and types of housing that the community wants in Town Center, Town Center's relationship to other residential areas, and how housing will relate to commercial development in Town Center.

Monitoring development activity

The determination of residential land sufficiency (page 19) is based on dwelling unit forecasts prepared by Metro. The Metro forecasts show new housing units increasing at a rate of 1.8% annually between 2014 and 2034 in the Wilsonville Planning Area. Under this forecast, Wilsonville will run out of residential land by about 2032.

If Wilsonville grows faster than Metro's forecast predicts, the city will run out of residential land sooner. For example, Wilsonville's household growth over the 2000-2012 period averaged about 2.8% annually. If Wilsonville continues to grow at this rate, the city will consume the available residential land by about 2025.

ECONorthwest recommends that City staff develop a monitoring program that will allow Wilsonville to understand how fast land is developing. The monitoring program will inform Metro's UGB planning process by providing more detailed information about housing growth and development capacity in Wilsonville. This information can help City staff and decision-makers make the case to Metro staff and decision-makers about the need for residential expansion areas.

A monitoring program will allow Wilsonville to understand how fast land is developing and to provide data to Metro at least a year in advance of when an Urban Growth Report is issued. In short, the data can help inform Metro's UGB planning process. We recommend using the following metrics to monitor residential growth:

- **Population**. The City already routinely monitors population growth by using the annual population estimates prepared by the Center for Population Research at Portland State University.
- **Building permits**. The Residential Lands Study included a review of building permits by dwelling type, plan designation, zone, and net density. Because the City is already collecting this data, we recommend that city staff update this analysis on an annual basis. The City already reports building permit data by dwelling type on a quarterly basis, but including the zone and net density will enable the City to understand the type, density, and location of housing that is being developed.
- **Subdivision and partition activity**. This metric is intended to measure the rate and density of land divisions in Wilsonville. It may also be useful in determining right-of-way and open space dedications. Specific data to include with subdivision and partition activity are the area of the parent lot, the area in child lots, the number

of child lots, the average size or density of lots, and the area in dedicated right-of-way.

- **Land consumption**. This metric relates closely to the building permit data. The building permit data include tax lot identifiers for each permit. The City should match each permit to data in the buildable lands inventory and report how much land is being used by plan designation, zone, and land classification (e.g., vacant, redevelopable, infill, etc.). Additionally, we recommend the City map the location of development on an annual basis.
- **Right-of-way and open space dedications**. The Wilsonville Comprehensive Plan states residential density targets in terms of gross acres. The density target in OAR 660-007 is stated in net acres and the density analysis conducted for the Residential Land Study was also presented in net acres. Monitoring net-to-gross factors can provide information that is useful in better understanding the amount of land that is used for streets and required open space dedications. Measuring this has some inherent complications in terms of how to define and measure different components. It is potentially easiest in major subdivisions and village areas.

Legislative action on code changes

As part of this study, Wilsonville staff conducted a Goal 10 policy and Development Code evaluation. Staff concluded that Wilsonville is "...in compliance with applicable Federal and State housing regulations." City and DLCD staff identified several types of amendments to the Development Code needed to better comply with state requirements to review residential development through a clear and objective process:

- Add "duplex" to the list of uses allowed in all PD-R zones (Section 4.124). These zones allow single-family and multifamily development; duplexes are already allowed in every other zone in the City.
- Add an alternative, objective review process for new attached and detached single-family housing proposed in the Old Town Overlay Zone.
- Ensure the Site Design Review process is used to review the design of multifamily buildings in a clear and objective manner.

ECONorthwest recommends that the City take action on these amendments. No Comprehensive Plan text or map amendments are needed.

Appendix A. Summary of Residential Buildable Lands Inventory

This appendix presents the Residential Buildable Inventory memorandum developed by City of Wilsonville staff.

TO: WILSONVILLE PLANNING COMMISSION

FROM: KATIE MANGLE, LONG RANGE PLANNING MANAGER

SUBJECT: GOAL 10 HOUSING PROJECT: RESIDENTIAL BUILDABLE LANDS INVENTORY

DATE: REVISED JULY 17, 2013

CC: CHRIS NEAMTZU, PLANNING DIRECTOR

The primary purpose of the Residential Buildable Lands Inventory is to estimate the amount of land that could develop, or re-develop, with housing over the next 20 years, as required by ORS 197.296. This information will be used to assess the adequacy of the residential buildable land supply for new development and infill or redevelopment within the Wilsonville planning area.[1]

Summary

At the time data was collected for this inventory, February 2013, Wilsonville had 480 gross acres of land available for residential development (see table below, and Attachment 1, Wilsonville Residential Buildable Lands Map).

Wilsonville Buildable Residential Lands Inventory (gross acres)

Comprehensive Plan Designation		District	Vacant Land	Partially Vacant, or Likely to Redevelop	TOTAL Buildable Residential Land	TOTAL Acreage Citywide (approx.)
Residential	Residential Districts	*0-1 du/ac*	-	*2.2*	*2.2*	
		2-3 du/ac	*0.3*	*4.3*	*4.6*	
		4-5 du/ac	*3.4*	*13.4*	*16.7*	
		6-7 du/ac	*12.2*	*8.1*	*20.3*	
		*6-7/10-12 du/ac **	*20.5*	-	*20.5*	
		10-12 du/ac	*29.6*	*8.6*	*38.2*	
		16-20 du/ac	*0.1*	-	*0.1*	
		subtotal for land within City limits	***66.1***	***36.6***	***102.6***	
		Residential Area L (Frog Pond - outside City limits)	*23.0*	*126.4*	149.4	
		Total Residential	**89.1**	**163.0**	**252.1**	**1,613**
Village			**143.4**	**62.8**	**206.2**	**466**
Commercial			**16.9**	**4.8**	**21.7**	**356**
Industrial			**0.0**	**0.0**	**0.0**	**1,605**
Public			**0.0**	**0.0**	**0.0**	**448**
TOTAL			**249.3**	**230.6**	**480.0**	**4,488**

* property is split-zoned

[1] Includes land that is covered by the Wilsonville Comprehensive Plan.

The inventory presented is based on specific assumptions, outlined in the methodology that follows. The inventory should not be considered to be an exhaustive list of what is/is not available for development, but rather a static representation based on the available data. In fact, some of the parcels have already been developed since the inventory data was collected in February 2013. Inclusion does not mean a property will develop, nor does it confer a mandate to do so, just as exclusion does not prevent a property from developing in the future. For purposes of this inventory, buildable lands were identified as property outside of the Significant Resource Overlay Zone (SROZ) that is fully vacant, partially vacant, or likely to redevelop over the next 20 years.

Inventory Methodology

The following methodology describes the steps that were taken to estimate Wilsonville's buildable residential lands. "Buildable land" means land that is suitable, available, and necessary for residential uses, including both vacant land and land likely to be redeveloped.

Step 1. Inventory and map fully vacant residential lands

- City tax lot data was sorted by Comprehensive Plan designation. All lots designated on the Comprehensive Plan map as Residential, Commercial, and Village were included in the inventory. Commercial was included because the zones that implement this designation, Planned Development Commercial (PDC) and Planned Development Commercial Town Center (PDC-TC), allow for mixed uses to include residential.
- To identify parcels that are fully vacant, the analysis selected lots not identified as "developed" in METRO's RLIS GIS data. Planning Division staff refined this step, based on current aerial photography, field checks, and local records.
- Vacant parcels are mapped in red on Working Map 1.

Step 2. Inventory and map redevelopable lands

The following steps were taken to estimate which lands may redevelop over the next 20 years. Redevelopment potential applies to lots that were initially classified as "developed", but which are likely to redevelop during the planning period. While many methods exist to identify redevelopment potential, a common indicator is improvement value or improvement-to-land value ratio. This analysis used the following methodology, which was developed during Wilsonville's 2005 Residential Buildable Land Inventory and based on Metro's 2002 UGB Alternatives Analysis, to identify redevelopable lands.

- A query was performed of all lots to identify those that are not vacant but have potential to redevelop over time due to the relationship between the size of the lot and the value of improvements.
    - Sites that are 0.26-0.5 acres with improvement values less than $50,000 (mapped as orange on Working Map 1)
    - Sites that are over 0.6 acres with improvement values between $50,001- $100,000 (mapped as blue on Working Map 1)
    - Sites that are over 1 acre with improvement values between $100,001-$150,000 (mapped as pink on Working Map 1)

- The results of this query includes land that is wholly redevelopable, meaning existing improvements would be replaced; and also land that is partially vacant, meaning the lot could be divided to allow for additional development. [2]

The results of Steps 1 and 2 are shown in Buildable Residential Lands Working Map 1.

Step 3. Subtract unbuildable acres

Land that falls into any of the following categories were deducted from the inventory:

- Mapped Significant Resource Overlay Zone (SROZ – includes Metro Functional Plan Title 3 and 13 land, land with greater than 25% slope, and 100-year floodplain). Development constraints on this land are outlined in Wilsonville Development Code Section 4.139;
- Home Owner Association-owned lots, and community or public open space tracts;
- Publicly owned land;
- Land encumbered with powerline easements.

The results of Step 3 are shown in Buildable Residential Lands Working Map 2.

Step 4. Planning staff review of draft map

Planning staff reviewed Working Map 2 and made changes to the inventory based on site visits, building permit information, assessment of constraints posed by the Development Code, and aerial photography.

- Removed lots that are under or pending construction (as of 2/28/13).
- Added back to the map and re-defined the following as Buildable:
  - Unbuilt lots in Area of Special Concern A, the Villebois master plan area[3];
  - City-owned property that is buildable (i.e., excess property not being held for a public purpose).
- Added back to the map and re-defined the following as "redevelopable or partially vacant" (and therefore likely to be redeveloped or divided for infill development):
  - Sites that are currently for sale and "soft" though they do not meet the quantitative selection criteria (e.g., a mobile home park that is unoccupied and for sale);
  - Lots that are more than twice the minimum lot size required to support the number of existing dwelling units;
  - Lots in Area of Special Concern L (Frog Pond area)[4];

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[2] Outside of the Village zone, most development in Wilsonville is permitted as Planned Development through a two-stage process that begins with development of a master plan. This process allows for a great deal of flexibility (e.g., most residential zones allow both multifamily and single family housing types).

[3] Most of the available residential land within the City of Wilsonville is within the Villebois planned development area. A Master Plan for this area and subsequent Specific Area Plans identify specific housing typologies and number of units. The Plans are implemented through the Village zone. All existing structures in this area will be removed as the Plan is implemented.

[4] The Frog Pond area is comprised of approximately 40 taxlots used for rural residential and agricultural purposes. The area is planned for predominantly residential development, within the Metro urban growth boundary, and designated as Residential in the Wilsonville Comprehensive Plan. No specific densities or zones have been applied to this area. Many

- Sites that should have been identified as "partially vacant" but were not caught in Step 2.

- Removed from map and defined the following as "Not likely to redevelop":
  - Subsidized housing sites (which met the quantitative criteria only because of public write-down of land value);
  - Sites occupied by active religious institutions;
  - Sites with documented site challenges (documented geo technical limitations, etc.);
  - Sites with known deed restrictions;
  - Sites currently under development;
  - All lots in the Charbonneau development, including the golf course. Staff considers this planned community to be built-out and unlikely to redevelop;
  - Sites occupied by utility infrastructure (e.g., a PGE substation);
  - Commercially-zoned land greater than ½ mile from either Residential or Town Center lots. Such sites have almost no likelihood of being mixed-use with residential.

The results of Step 4 are shown in Buildable Residential Lands Working Map 3.

Step 4. Analysis of Sites Identified as Likely to Redevelop
Lots outside of the Villebois Village and Frog Pond areas that were identified as "likely to redevelop" in Steps 2 and 3 were evaluated against four additional indicators of potential to redevelop (see Attachment 5 for the results of this analysis). This more detailed, lot-by-lot analysis was only performed on the subset of lots that met the criteria outlined for tasks 2 and 3.

- Underbuilt: the number of dwelling units on the site is less than 50% of that allowed by the lot's zoning
- Zoning: the lot is planned for residential development, but still zoned RA-H
- Site of Lot: the lot size is either twice the minimum lot size (if zoned for development), or greater than 2 acres (if zoned RA-H)

For lots that were added in Step 3 to the inventory due to the large lot size (for which improvement value itself did not indicate redevelopment), staff checked on the potential for the lot to be divided.

Two lots that met the Step 2 criteria were removed from the inventory during Step 4 because, though the improvement value is low relative to lot size, even with redevelopment the size of the lot would not support additional housing units.

---

taxlots include improvements; it is anticipated that when the Frog Pond area develops, some of these structures will remain, and some will be replaced.

Step 5. Redevelopment Strike Price Analysis

- A query was performed on all taxlots planned for Residential and Commercial development, to identify Multifamily and Commercial sites with a market redevelopment "strike price" of less than $10/ square foot.[5]

$$\text{Strike Price} = \frac{\text{(Improvement value + land value)}}{\text{Total Square Feet of Lot}}$$

The results of this "Strike price" analysis are shown in Buildable Residential Lands Working Map 4.

Most of the sites identified by this query were already identified in Steps 1, 2, and 4. As a result of this query, seven sites totaling 5.35 acres were added to the inventory.

Step 6. Sort vacant and redevelopable lots by Comprehensive Plan designation

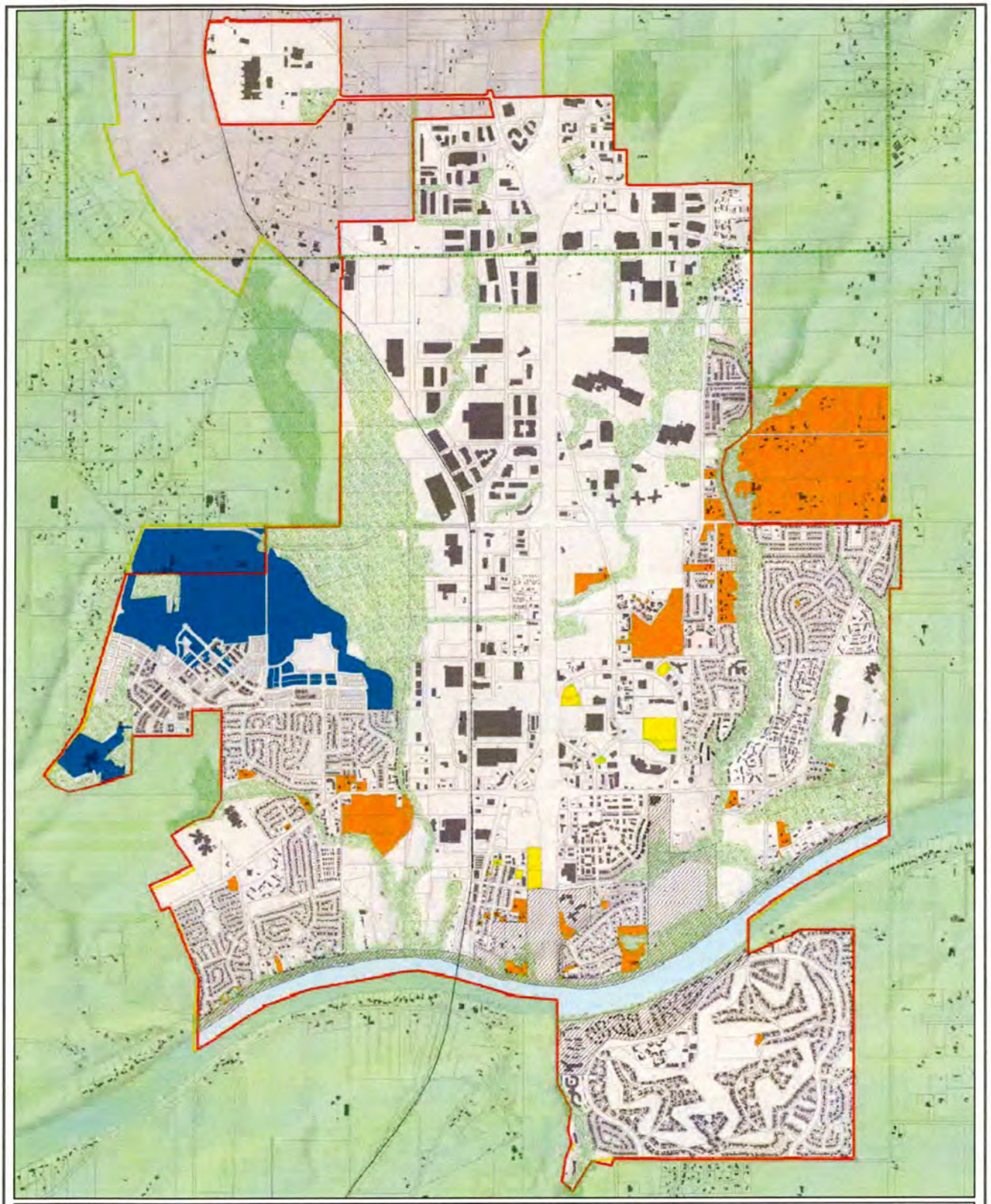
The Comprehensive Plan designation is used, instead of the zone, because in Wilsonville's land use system the Comprehensive Plan dictates the planned residential density on land outside of the (Villebois) Village zone. Vacant and redevelopable land in Wilsonville is held in a low-density Residential Agricultural-Holding (RA or RA-H) zone until the land is ready for development, at which time it must be re-zoned according to the densities in the Comprehensive Plan.

The results of Step 6 are shown in Attachment 1, the Wilsonville Buildable Residential Lands Map.

Attachments:

1. Wilsonville Residential Buildable Lands Map
2. Working Map 1, showing first screen of vacant and redevelopable lands
3. Working Map 2, after unbuildable areas were removed
4. Working Map 3, after lots were added or removed during staff review
5. Results of the analysis of lots likely to redevelop.
6. Working Map 4, showing results of the Strike price analysis

[5] This formula is part of the draft proposed Metro methodology for identifying sites zoned for Multifamily and Mixed Use development that are likely to redevelop. $10/ sq ft is the estimated threshold for the market supporting redevelopment of suburban sites that are zoned for Multifamily development.



Buildable Residential Lands Inventory Map

Data from 2/2013, Map Created 5/2013

Vacant lots and land likely to redevelop

Comprehensive Plan

- Commercial
- Residential
- Village
- SROZ
- Willamette River Greenway
- County Boundary
- City Limits
- UGB

WILSONVILLE GIS Geographic Information Systems

Mile
0 0.5

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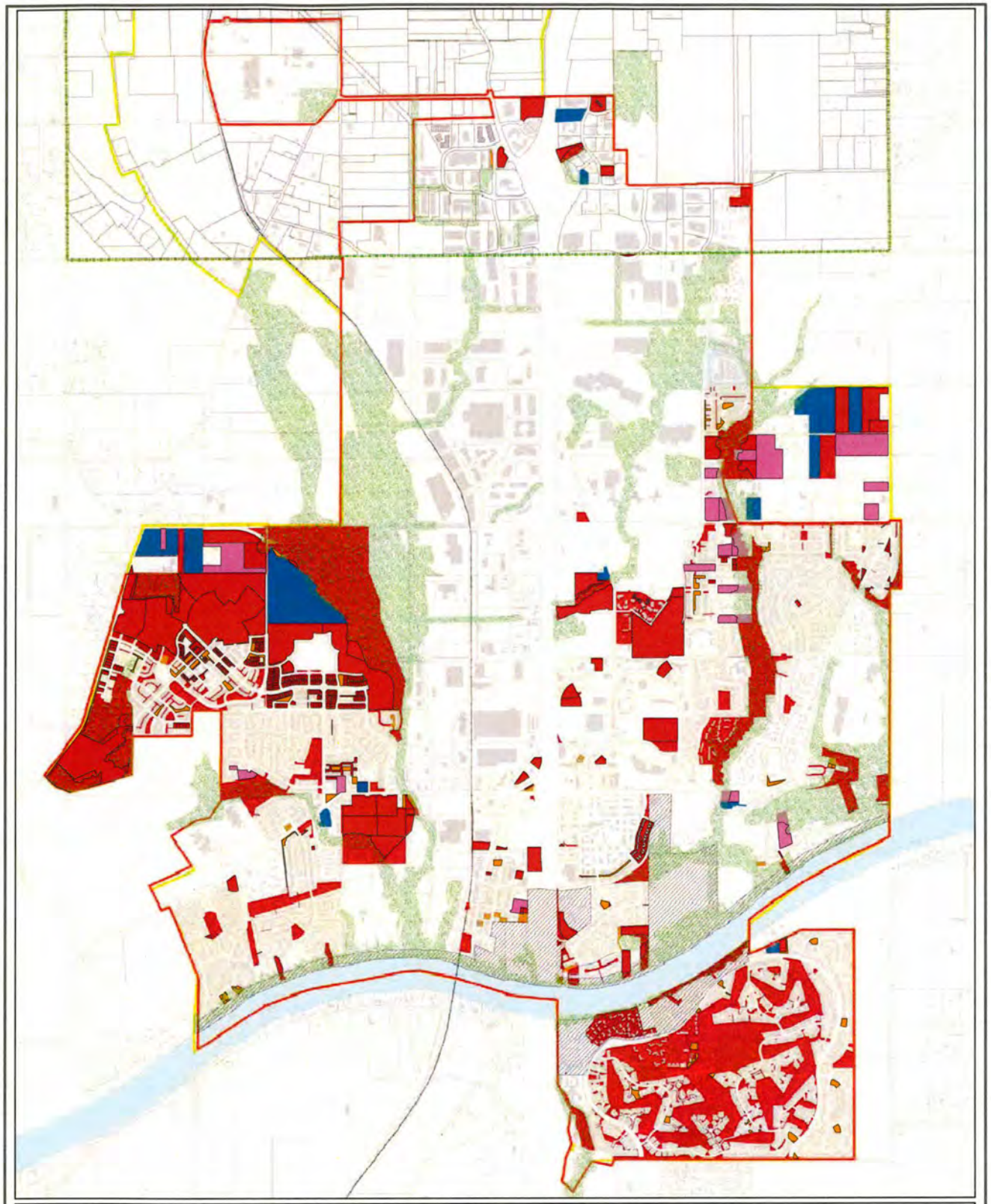

Buildable Residential Lands Working Map 1

- All sites that are over 1 acre with improvement values between $100,001-$150,000
- All sites that are over 0.6 acres with improvement values between $50,001- $100,000
- All sites that are 0.26-0.5 acres with improvement values less than $50,000
- All taxlots with building value of 0 (zero)
- Taxlots - All R and C Comp Plan
- SROZ
- Willamette River Greenway
- Building Footpirnts
- County Boundary
- City Limits
- UGB

WILSONVILLE GIS Geographic Information Systems

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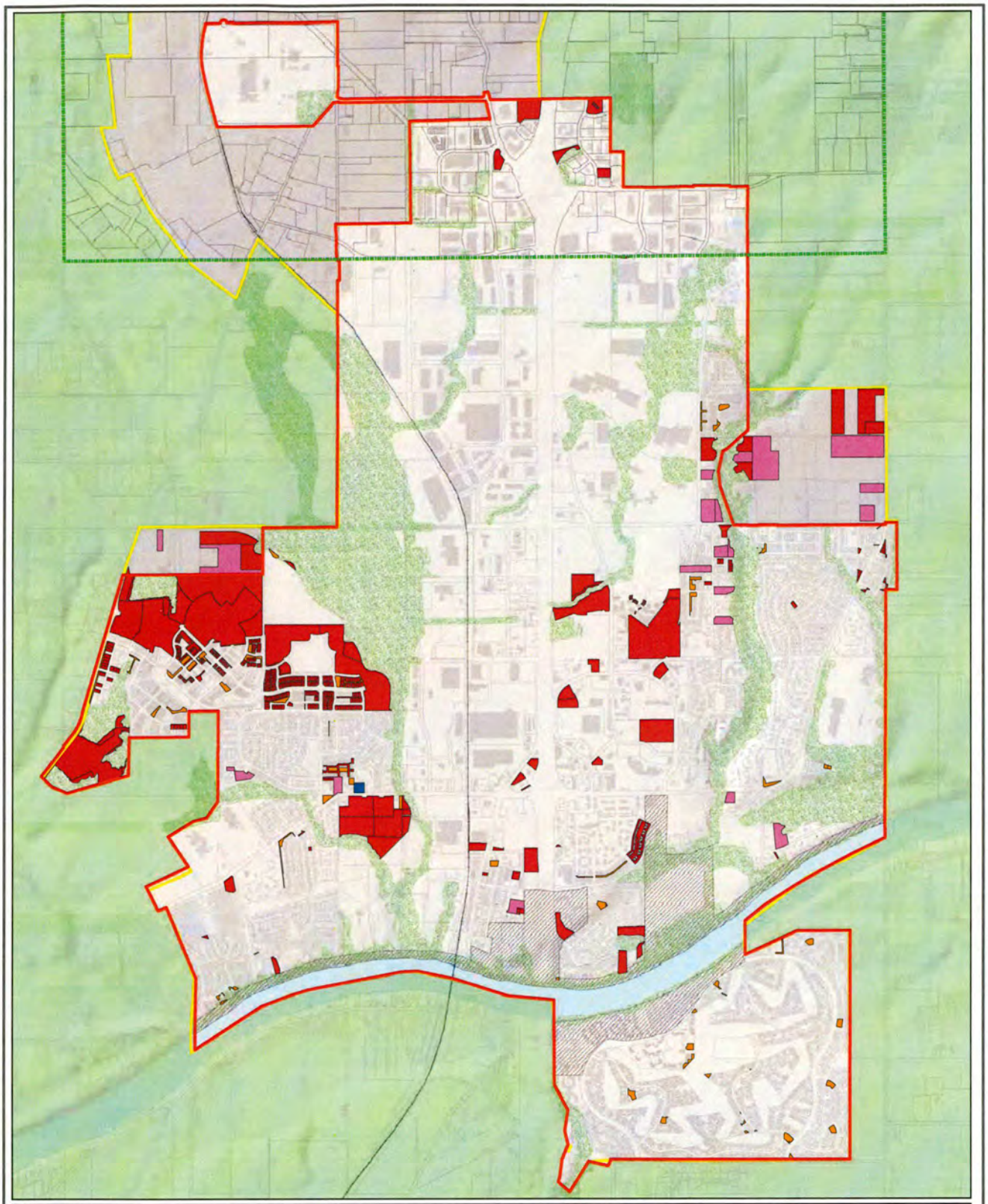

Buildable Residential Lands Working Map 2

DRAFT

This version displays taxlots from model selection criteria, after removing SROZ and HOA lots, and public land.

- SROZ
- Willamette River Greenway
- County Boundary
- City Limits
- UGB
- All taxlots with building value of 0 (zero)
- All sites that are 0.26-0.5 acres with improvement values less than $50,000
- All sites that are over 0.6 acres with improvement values between $50,001- $100,000
- All sites that are over 1 acre with improvement values between $100,001-$150,000

WILSONVILLE GIS Geographic Information Systems

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0 0.5

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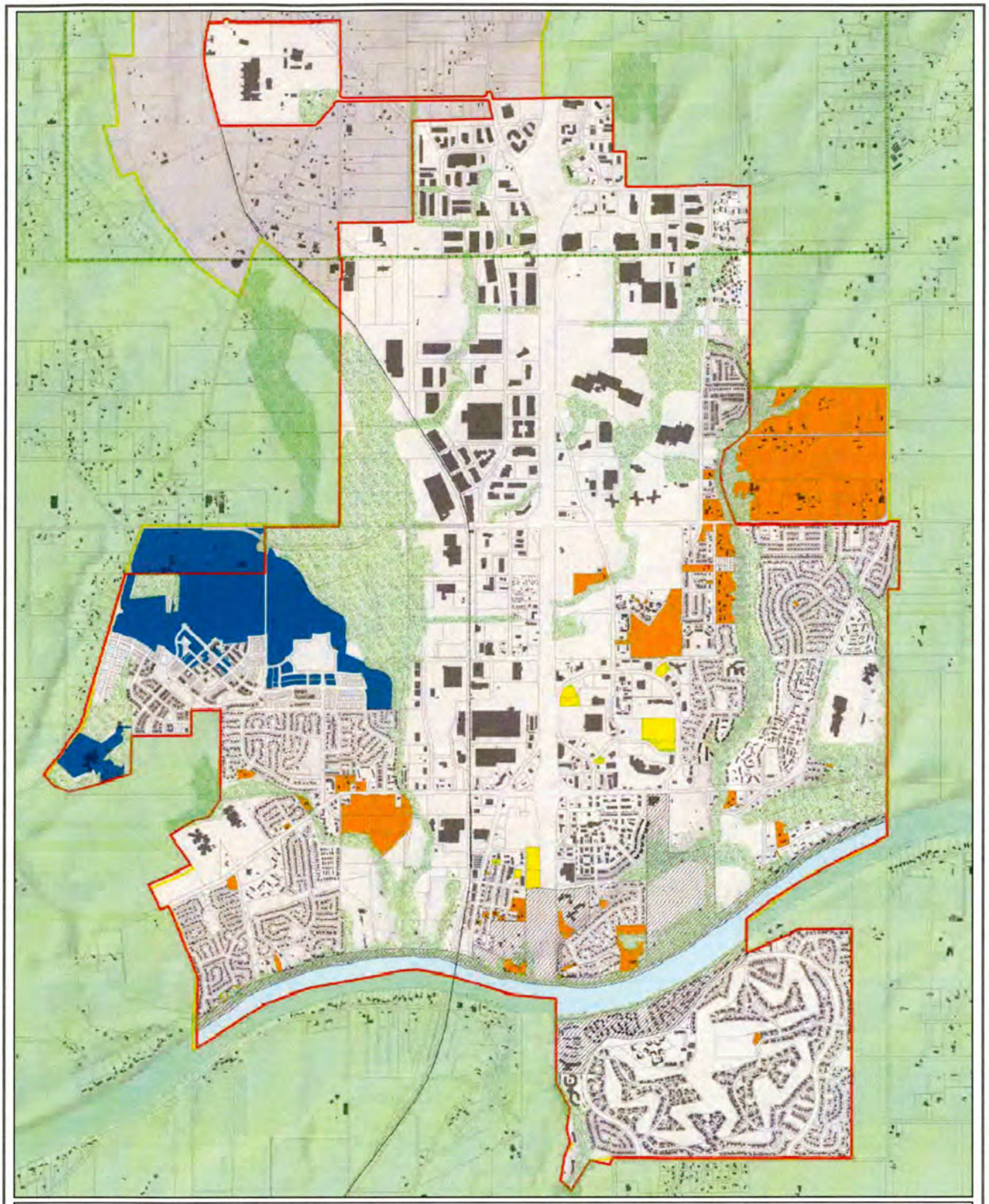

Buildable Residential Lands Working Map 3

DRAFT ***This version displays all taxlots after staff review***

WILSONVILLE GIS Geographic Information Systems

Vacant lots and land likely to redevelop SROZ

Comprehensive Plan

- Commercial
- Residential
- Village
- Willamette River Greenway
- County Boundary
- City Limits
- UGB

Mile
0 0.5

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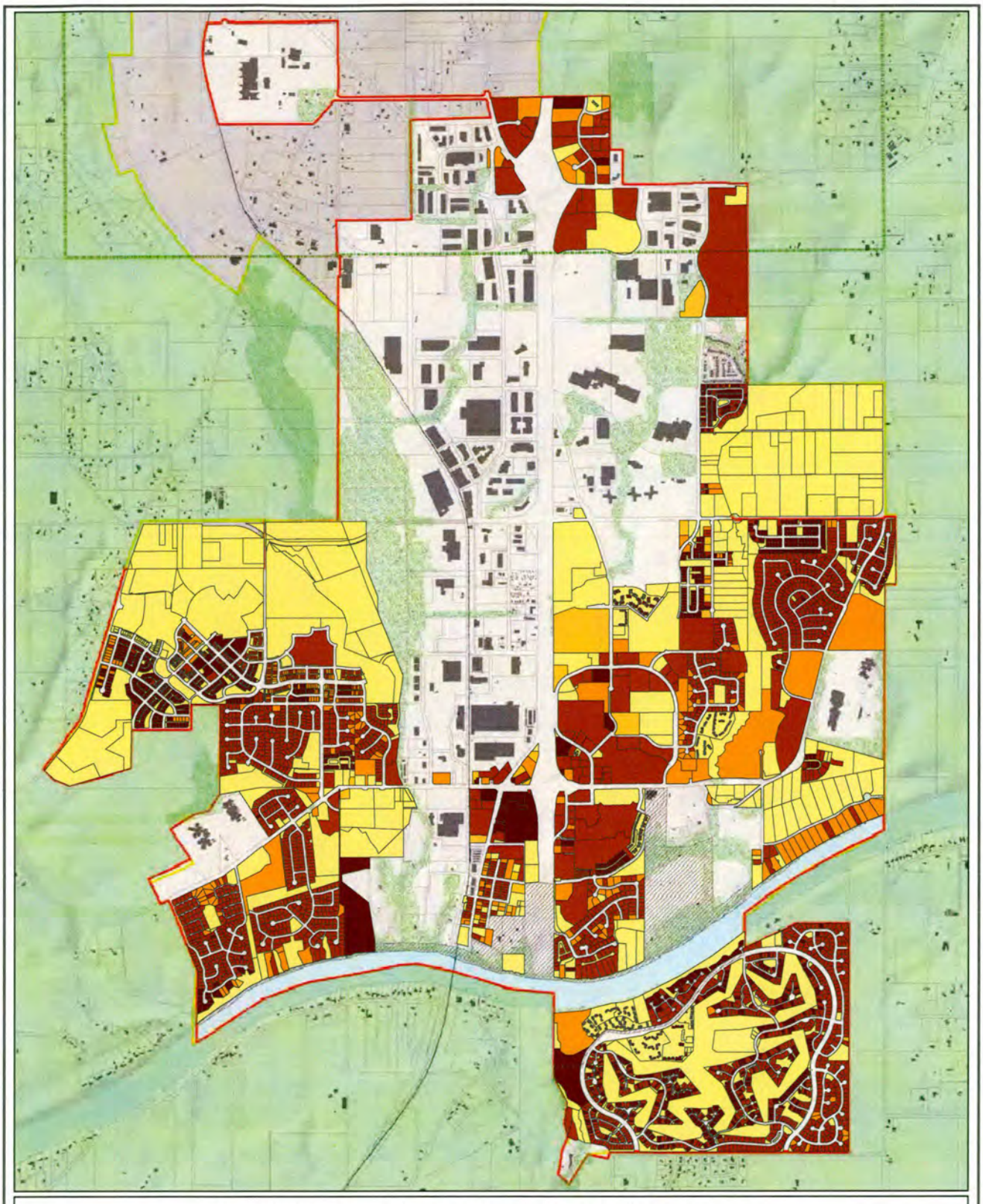
Attachment 5

		Redevelopment Indicators Met							
Taxlot ID	Address	Improvement Value is low relative to lot size (see methodology)	Underbuilt: Site is <50% of zoned capacity	Zoning: Site is planned for development but still in the RAH holding zone	Size of Lot: parcel is either 2 x the minimum lot size of the zone, or >2 acres if zoned RAH	Improvement / Land value is less than 1	Strike Price is less than $10/ sf	Notes	Remove from inventory?
31W13BA05000	28325 SW CANYON CREEK RD S	x		x	x	x	x	Large dividable lot, surrounded by newly redeveloped neighborhood.	
31W14C 00800	10475 SW WILSONVILLE RD	x		x	x	x	x	Large dividable lot, adjacent to similar lot. Infill is possible without removing existing house.	
31W14C 01200	10365 SW WILSONVILLE RD	x		x	x	x	x	Large dividable lot, adjacent to similar lot. Infill is possible without removing existing house.	
31W15DC05100	29786 SW LEHAN CT				x		x	Large dividable lot. Improvement/ land value ratio is 1.1, but infill is possible without removing existing house.	
31W23AC00400	30820 SW FIR AVE	x			x	x	x	large lot; development has been proposed in the past	
31W23AC00600	9150 SW 4TH ST	x		x		x	x	adjacent to I-5. Construction of one SF house underway May 2013 via DB13-0002 .	
31W23AC00700	9180 SW 4TH ST	x		x		x		Construction of one SF house underway May 2013 via DB13-0002 .	
31W22AB00200	32060 SW GUISS WAY	x				x	x	Lot fronts on Wilsonville Rd	
31W23AC01200	30955 SW FIR AVE	x			x		x	Land division may require removing existing building. 11 units proposed for land use permit a few years ago.	
31W23AC01400	30900 SW MAGNOLIA AVE	x		x			x	Manufactured home.	
31W23AC05600	30935 SW MAGNOLIA AVE	x		x				Lot in Old Town neighborhood developed with single family manufactured home. Lot is not adjacent to redevelopable parcels, and shape of lot makes it unlikely to be divided.	yes
31W23DA00100	NO SITUS	x			x			Dividable lot in a neighborhood, occupied by barn.	
31W23DB00700	30990 SW BOONES FERRY RD	x		x				Lot in Old Town neighborhood developed with single family manufactured home. Lot is not adjacent to redevelopable parcels, and shape of lot makes it unlikely to be divided.	yes
31W23DB01200	9400 SW TAUCHMAN ST			x	x		x	Unoccupied mobile home park, for sale	
31W24 00850	8455 SW METOLIUS LN	x			x			Very large lot fronting on Willamette. Application for development of 33 units approved in 2008 (DB07-0073). Application for final plat pending approval in 2013.	
31W24 00900	8455 SW METOLIUS LN		x		x			Very large lot fronting on Willamette. Application for development of 33 units approved in 2008 (DB07-0073). Application for final plat pending approval in 2013.	
31W12D 03001	27650 SW CANYON CREEK RD N	x		x	x		x	large lot, dividable, constrianed by SROZ	
31W12D 03200	27960 SW CANYON CREEK RD N	x		x	x		x	large lot, dividable, constrianed by SROZ	
31W12D 03300	7727 SW BOECKMAN RD	x		x	x		x	large lot, dividable, constrianed by SROZ	
31W13B 00101	28130 SW CANYON CREEK RD S	x		x	x		x	large lot, dividable, constrianed by SROZ	
31W24A 00600	7305 SW MONTGOMERY WAY	x		x	x			large lot, dividable, constrianed by SROZ	
31W13B 00302	28200 SW CANYON CREEK RD S	x		x	x		x	Similar nearby properties have recently been assembled and redeveloped.	

Attachment 5

		Redevelopment Indicators Met							
Taxlot ID	Address	Improvement Value is low relative to lot size (see methodology)	Underbuilt: Site is <50% of zoned capacity	Zoning: Site is planned for development but still in the RAH holding zone	Size of Lot: parcel is either 2 x the minimum lot size of the zone, or >2 acres if zoned RAH	Improvement / Land value is less than 1	Strike Price is less than $10/ sf	Notes	Remove from inventory?
31W13B 00900	28500 SW CANYON CREEK RD S	X		X	X		X	Similar nearby properties have recently been assembled and redeveloped.	
31W13B 01300	28700 SW CANYON CREEK RD S	X		X	X	X	X	Similar nearby properties have recently been assembled and redeveloped.	
31W24A 03400	7535 SW SCHROEDER WAY	X		X	X	X		large lot dividable. Site access and SROZ will make redevelopment challenging. Site currently for sale with adj. lot.	
31W24A 03500	7525 SW SCHROEDER WAY	X		X	X	X	X	large lot dividable. Site access and SROZ will make redevelopment challenging. Site currently for sale with adj. lot.	
31W13B 00300	28160 SW CANYON CREEK RD S			X	X		X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. . Similar nearby properties have recently been assembled and redeveloped.	
31W13B 00301	28080 SW CANYON CREEK RD S			X	X			Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Similar nearby properties have recently been assembled and redeveloped.	
31W13B 00700	28400 SW CANYON CREEK RD S			X	X		X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Similar nearby properties have recently been assembled and redeveloped.	
31W13B 00800	28450 SW CANYON CREEK RD S			X	X		X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Improvement/ land value ratio is 1.2. Similar nearby properties have recently been assembled and redeveloped.	
31W13B 01000	28530 SW CANYON CREEK RD S			X	X		X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Improvement/ land value ratio is 1.10. Similar nearby properties have recently been assembled and redeveloped.	
31W13B 01100	28600 SW CANYON CREEK RD S			X	X	X	X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Similar nearby properties have recently been assembled and redeveloped.	
31W13B 01200	28650 SW CANYON CREEK RD S			X	X	X	X	Large dividable lot, adjacent to similar lots. Constrianed by SROZ. Improvement/ land value ratio is 1.0. Similar nearby properties have recently been assembled and redeveloped.	
31W14C 00900	10455 SW WILSONVILLE RD			X	X		X	Strike price number is $6/sf ft (below the $10 threshold)	
31W22A 00300	10725 SW WILSONVILLE RD			X	X	X	X	Strike price number is $7/sf ft (below the $10 threshold)	



Buildable Residential Lands Working Map 4

DRAFT

This version displays "Strike Value"
(Improvement Value+Land Value) / SqFeet

StrikeValue

- 0 - 10
- 11 - 12
- 13 - 20
- 21 - 50
- 51 - 5212

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Attachment C

Planning Commission
Statewide Planning Goal 10 Housing Needs Analysis
Record Index

April 9 2014 Planning Commission Public Hearing Documents:

Planning Commission Actions

- Notice of Decision
- Resolution No. LP14-0001
- Motion
- Draft Minutes

Additional Attachments to the Staff Report from the Planning Commission Public Hearing.

Attachment 5: An email distributed at the Public Hearing, dated April 9, 2014 from Katie Mangle to Commissioner Al Levit, Regarding April 9 PC Meeting, with responses to a previous email from Commissioner Levit and revised *Wilsonville Residential Land Study* pages.

Attachment 6: Paper copy of the PowerPoint shown at the hearing.

Attachment 7: Written testimony submitted at the hearing by Terry D. Kester.

Draft Resolution No. LP14-0001

Exhibit A: Staff Report for the Goal 10 Residential Land Study dated April 9, 2014, with the following attachments:

Attachment 1: Residential Land Study, final draft dated March 2014

Attachment 2: Residential Land Study Technical Report, final draft dated March 2014

Attachment 3: Planning Commission Work Session Record Index

Attachment 4: Public Involvement Summary and Public/Citizen Outreach and Responses

Documents distributed to the Planning Commission for Work Sessions and as Information Items.

February 19, 2014 PC Work Session

- Meeting Minutes Excerpt
- A Staff Report for the February 19, 2013 Planning Commission meeting, regarding the Goal 10 Housing Needs Analysis Project with:

  Attachment 1. Comments received on the Residential Lands Study reports

  Attachment 2. January 2014 Residential Land Study Public Forum meeting notes

January 8, 2014 Committee for Citizen Involvement Public Forum

- Agenda
- Notes
- Presentation shown at the Public Forum
- *Draft Wilsonville Residential Land Study,* dated December 11, 2013
- *Wilsonville Residential Land Study: Technical Report,* draft dated December 2013
- People in Attendance Sign-in Sheets
- Notice that was posted and emailed/mailed (as a postcard) to interested people.

Planning Commission
Statewide Planning Goal 10 Housing Needs Analysis
Record Index

December 11, 2013 PC Work Session

- Meeting Minutes Excerpt
- Wilsonville Residential Land Study Public Forum Agenda for January 8, 2014
- Wilsonville Residential Land Study draft dated December 11, 2013
- Wilsonville Residential Land Study: Technical Report, December 2013 Draft Report
- A Staff Report for the December 11, 2013 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with:

  Attachment A. Draft Wilsonville Residential Land Study draft dated December 4, 2013

  Attachment B. Preliminary draft of Development Code amendments to Section 4.124

  Attachment C. Preliminary draft of amendments to Section 4.400 Site Design Review

  Attachment D. Preliminary draft of amendments to Section 4.138 Old Town Overlay Zone

  Attachment E. Excerpts from the Old Town Architectural Pattern Book

December 2, 2013 Joint City Council/Planning Commission Work Session:

Documents distributed for the joint Work Session are included with the City Council record.

November 13, 2013 PC Work Session

- Meeting Minutes Excerpt
- A PowerPoint, "Wilsonville Housing Needs Analysis, Planning Commission Meeting: November 2013."
- A Staff Report for the November 13, 2013 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with:

  Attachment A: A memo dated October 29, 2013, from Bob Parker and Beth Goodman of ECONorthwest, regarding, Metro Housing Forecasts and Revisions to the Draft Wilsonville Residential Housing Needs Analysis.

September 11, 2013 PC Work Session

- Meeting Minutes Excerpt
- A PowerPoint, "Wilsonville Housing Needs Analysis, Planning Commission Meeting: September 2013."
- A Staff Report for the September 11, 2013 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with

  Attachment A: Wilsonville Residential Housing Needs Analysis: Results and Considerations, ECONorthwest, September 4, 2013.

  Attachment B: Memo to the project Technical Advisory Committee, entitled, "Goal 10 Policy and Development Code Evaluation", June 7, 2013.

August 14, 2013 PC Work Session

- Meeting Minutes Excerpt
- A PowerPoint, "Wilsonville Housing Needs Analysis, Wilsonville's Housing Capacity"
- A Staff Report for the August 14, 2013 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with

  Attachment A: Wilsonville Residential Housing Capacity Memorandum, ECONorthwest, July 31, 2013

Planning Commission
Statewide Planning Goal 10 Housing Needs Analysis
Record Index

July 15, 2013 Joint City Council/Planning Commission Work Session:

Documents distributed for the joint Work Session are included with the City Council record.

June 12, 2013 PC Work Session

- Meeting Minutes Excerpt
- Paper copy of the PowerPoint, "Wilsonville Housing Needs Analysis Preliminary Analysis of Housing Market Data", shown at the meeting.
- May 6, 2013 and May 7, 2013 email exchange between Katie Mangle and Dennis Ye regarding, "Metro forecasting track record", with Regional Forecast Comparison: History and Current Forecast charts on the back.
- An email dated June 12, 2013, from Eric Postma, regarding Goal 10 Housing Needs Allowance
- A Staff Report for the June 12, 2013 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with

  Attachment A: Draft Chapter 3 – Historical and Recent Development Trends

  Attachment B: Excerpt from Draft Chapter 4 – Demographic and Other Factors Affecting Residential Development in Wilsonville

  Attachment C: Final Residential Buildable Lands Inventory Memo with attached maps

April 10, 2013 Work Session

- Meeting Minutes Excerpt
- Paper copy of PowerPoint presentation shown at the meeting.
- A Staff Report for the April 10 Planning Commission meeting, regarding the Statewide Planning Goal 10 Housing Needs Analysis Project with

  Attachment A: Draft Residential Buildable Lands Inventory Memo with attached maps:

  * Buildable Residential Lands Working Map 1
  * Buildable Residential Lands Working Map 2
  * Buildable Residential Lands Working Map 3
  * Buildable Residential Lands Working Map 4

January 9, 2013 Work Session

- Meeting Minutes Excerpt
- Paper copy of PowerPoint presentation, "Goal 10 Housing Needs Assessment, Policy Framework", shown at the meeting.
- "Planning for Housing: Don't Forget the Basics (or Start with the Foundation) by Bill Kloos of the Law Office of Bill Kloos PC.
- A Staff Report for the January 9, 2013 meeting regarding Statewide Planning Goal 10 Housing Needs Analysis project with:

  Attachment A: DLCD Summary of Goal 10 (OAR 660-015-0000)

King, Sandy

From: Neamtzu, Chris
Sent: Friday, April 25, 2014 4:23 PM
To: Cosgrove, Bryan
Cc: Mangle, Katie; King, Sandy
Subject: Goal 10 follow up

Councilor Starr,

At the Council worksession on April 7th, it was noted that prior to 2000, the Comprehensive Plan included a goal for achieving a housing mix of 50% SF, 40% MF, 10% SF mobile homes (60% SF/40%MF). It was asked whether the City should add a similar policy back into the Plan. The current Comprehensive Plan policy reads: **"Targets are to be set in order to meet the City's Goals for housing and assure compliance with State and regional standards." (IM 4.1.4.e).**

As Mr. Bob Parker of Eco NW explains in his Comprehensive Plan analysis, any local policy is superseded by the required state housing mix (50 SF/50 MF). The evaluation also determined that the existing Plan policies did not need to be updated to comply with the Goal 10 Rules. The old pre- 2000 policy was non-compliant and needed to be revised to reflect consistency with state law which is why it was removed. The Residential Land Study will be adopted as a sub-element of the City's Comprehensive Plan. On page 2, in the summary it states **"Under current Comprehensive Plan policies, Wilsonville can achieve a development mix of 50% single family detached and 50% attached and multifamily housing. This assumes that Frog Pond is planned exclusively for single-family housing".** This reflects the policy direction the Council has provided on this project and is a strong statement in support of your concern.

That being said, Staff could be directed to propose that the above-referenced Implementation Measure be replaced with a statement such as: **"Over time, the City's goal is to achieve a balanced housing mix that complies with regional and State standards and includes 50% single family detached housing units."** If that type of change to the Comprehensive Plan were desired by the Council, staff would suggest that an addition be made to page 21 of the Residential Land Study under 'Recommended Code Amendments' where this change could be referenced. The specifics would then be taken back through the process before the Planning Commission for discussion in the context of the Development Code amendments. This type of revision would follow logically from what is already in the Study, though no other Comp Plan amendments appear to be needed.

Please let us know if there are any other questions.

Thank you,

Chris Neamtzu, AICP
Planning Director
City of Wilsonville | Community Development Department
503-570-1574 | neamtzu@ci.wilsonville.or.us

City of
WILSONVILLE
in OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject: Ordinance No. 741,** Zone Map Amendment from PF to V, "Grande Pointe at Villebois", Phase 7 of SAP South, Villebois. Polygon Northwest, applicant. **Staff Members:** Daniel Pauly AICP, Associate Planner. **Department:** Planning Division
Action Required	**Development Review Board Recommendation**
☐ Motion ☒ Public Hearing Date: ☒ Ordinance 1st Reading Date: May 5. ☒ Ordinance 2nd Reading Date: May 19 ☐ Resolution ☐ Information or Direction ☐ Information Only ☐ Council Direction ☐ Consent Agenda	☒ Approval ☐ Denial ☐ None Forwarded ☐ Not Applicable **Comment:** Following their review at the April 14th meeting, the Development Review Board, Panel A recommends approval of the Zone Map Amendment.
Staff Recommendation: Staff recommends that the City Council adopt Ordinance No. 741.	
Recommended Language for Motion: I move to adopt Ordinance No. 741 on the 1st reading.	
PROJECT / ISSUE RELATES TO: Comprehensive Plan, Zone Code and Villebois Master Plan.	

☐Council Goals/Priorities	☒Adopted Master Plan(s) Villebois Master Plan	☐Not Applicable

ISSUE BEFORE COUNCIL: Approve, deny or modify Ordinance No. 741 for a Zone Map Amendment from the PF (Public Facility) zone to Village zone on approximately 42.76 acres southwest of Arbor Villebois and next to Graham Oaks Nature Park on the east side of SW Grahams Ferry Road. Conforming the V Zone to the established densities on the Villebois Village Master Plan Map is a routine item, for which the City Council is the final local authority.

EXECUTIVE SUMMARY: In October of 2013 the Council approved amending the Villebois Village Master Plan to set the stage for the development of area designated as "Future Study Area" for development of single-family residences along with associated parks and open space.

Polygon Northwest has subsequently continued to work with the neighborhood and staff to refine the design of the project which includes a total of 100 residential lots following the pattern established in the Master Plan Amendment. Development Review Board Panel A unanimously approved various component applications with a recommendation the City Council recommend the associated zone map amendment.

EXPECTED RESULTS: Adoption of Ordinance No.741.

TIMELINE: Construction of the subdivision is planned to begin this summer.

CURRENT YEAR BUDGET IMPACTS: Proposed is 100-lot single family detached house subdivision. This project is a private development so the applicant is responsible to make all public and private improvements, pay city application fees and systems development charges for parks, water, sewer, storm sewer and streets.

FINANCIAL REVIEW / COMMENTS:
Reviewed by: CAR , Date: April 22 , 2014

LEGAL REVIEW / COMMENT:
Reviewed by: MEK, Date: April 22, 2014
The Resolution is approved as to form.

COMMUNITY INVOLVEMENT PROCESS: The required public hearing notices have been sent.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY Ordinance No. 741 will provide:

- Continued build-out of the Villebois Master Plan as amended by the Council in October 2013.
- 100 larger detached single-family houses.
- Construction jobs for several years.
- Development of a number of private parks and open space.
- Preservation of 24.06 acres of Open Space

ALTERNATIVES: The Applicant seeks to develop the subject property within the allowed V Zone housing density and does not seek a Comprehensive Plan Map Amendment.

CITY MANAGER COMMENT:

ATTACHMENTS:

Exhibit A – Ordinance No. 741 and Attachments
- Attachment A, Zoning Order DB14-0004.
  - Attachment 1, Legal Description
  - Attachment 2, Map Depicting Zone Amendment
- Attachment B Zone Map Amendment Findings, May 5, 2014.
- Attachment C DRB Resolution No. 275

Exhibit B – Amended Adopted Staff Report and DRB Recommendation (Exhibit A1)

COUNCIL EXHIBIT A

ORDINANCE NO. 741

AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING A ZONE MAP AMENDMENT FROM THE PUBLIC FACILITY (PF) ZONE TO THE VILLAGE (V) ZONE ON APPROXIMATELY 42.76 - ACRES COMPRISING TAX LOTS 2800 AND 2890 OF SECTION 15, T3S, R1W, CLACKAMAS COUNTY, OREGON, POLYGON NORTHWEST COMPANY, APPLICANT.

RECITALS

WHEREAS, Polygon Northwest Company ("Applicant") has made a development application requesting, among other things, a Zone Map Amendment of the Property; and

WHEREAS, the development application form has been signed by Northwest Wilsonville Properties LLC ("Owner"), as owner of the real property legally described and shown on Exhibits A and B, attached hereto and incorporated by reference herein ("Property"); and

WHEREAS, the City of Wilsonville Planning Staff analyzed the request and prepared a staff report for the Development Review Board, finding that the application met the requirements for a Zone Map Amendment and recommending approval of the Zone Map Amendment, which staff report was presented to the Development Review Board on April 14, 2014;

WHEREAS, the Development Review Board Panel 'A' held a public hearing on the application for a Zone Map Amendment on April 14, 2014, and after taking public testimony and giving full consideration to the matter, adopted Resolution No. 275 which recommends that the City Council approve a request for a Zone Map Amendment (Case File DB14-0004), adopts the staff report with modified findings and recommendation, all as placed on the record at the hearing, certain of which are contingent on City Council approval of the Zone Map Amendment and authorizes the Planning Director to issue approvals to the Applicant consistent with the amended staff report, as adopted by DRB Panel A; and

WHEREAS, on May 5, 2014, the Wilsonville City Council held a public hearing regarding the above described matter, wherein the City Council considered the full public record made before the Development Review Board, including the Development Review Board and

City Council staff reports; took public testimony; and, upon deliberation, concluded that the proposed Zone Map Amendment meets the applicable approval criteria under the City of Wilsonville Development Code;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section 1. Findings. The City Council adopts, as findings and conclusions, the forgoing Recitals and the Development Review Board staff report, as contained in the record of the above described DRB hearing and incorporates it by reference herein, as if fully set forth.

Section 2. Order. The official City of Wilsonville Zone Map is hereby amended by Zoning Order DB14-0004, attached hereto as Exhibit A, from the Public Facility (PF) Zone to the Village (V) Zone.

SUBMITTED to the Wilsonville City Council and read the first time at a meeting thereof on the 5th day of May 2014, and scheduled for the second and final reading on May 19, 2014, commencing at the hour of 7 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, OR.

_____
Sandra C. King, CMC, City Recorder

ENACTED by the City Council on the 5th day of May, 2014, by the following votes:
Yes:___ No:___

_____
Sandra C. King, CMC, City Recorder

DATED and signed by the Mayor this ____day of ___, 2014.

_____
Tim Knapp, MAYOR

SUMMARY OF VOTES:

Mayor Knapp
Council President Starr
Councilor Goddard
Councilor Stevens
Councilor Fitzgerald

Attachments:

Attachment A, Zoning Order DB14-0004.
Attachment 1, Legal Description
Attachment 2, Map Depicting Zone Amendment
Attachment B Zone Map Amendment Findings, May 5, 2014.
Attachment C DRB Resolution No. 275

EXHIBIT A

BEFORE THE CITY COUNCIL OF THE CITY OF WILSONVILLE, OREGON
POLYGON NORTHWEST COMPANY

In the Matter of the Application of Pacific Community Design, Inc., Agent for the Applicant, Polygon Northwest Company for a Rezoning of Land and Amendment of the City of Wilsonville Zoning Map Incorporated in Section 4.102 of the Wilsonville Code.	))))))))	**ZONING ORDER DB14-0004**

The above-entitled matter is before the Council to consider the application of DB14-0004, for a Zone Map Amendment and an Order, amending the official Zoning Map as incorporated in Section 4.102 of the Wilsonville Code.

The Council finds that the subject property ("Property"), legally described and shown on the attached Exhibits 1 and 2, has heretofore appeared on the City of Wilsonville Zoning Map as Public Facility (PF).

The Council having heard and considered all matters relevant to the application for a zone Map Amendment, including the Development Review Board record and recommendation, finds that the application should be approved.

THEREFORE IT IS HEREBY ORDERED that The Property, consisting of approximately 42.76 acres comprising Tax Lots 2800 and 2890 of Section 15, as more particularly shown in the Zone Map Amendment Map, Attachment 2 and described in Attachment 1 is hereby rezoned to Village (V), subject to conditions detailed in this Order's adopting Ordinance. The foregoing rezoning is hereby declared an amendment to the Wilsonville Zoning Map (Section 4.102 WC) and shall appear as such from and after entry of this Order.

Dated: This 5th day of May, 2014.

Council Exhibit A

Attachment A

TIM KNAPP, MAYOR

APPROVED AS TO FORM:

Michael E. Kohlhoff, City Attorney

ATTEST:

Sandra C. King, CMC, City Recorder

Attachment 1: Legal Description
Attachment 2: Map depicting Zone Map Amendment

Pacific Community Design

EXHIBIT "A"

July 9, 2013

LEGAL DESCRIPTION Job No. 395-021
Zone Change

A tract of land in the Southwest quarter of Section 15 and the Southeast quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the City of Wilsonville, County of Clackamas and the State of Oregon, described as follows:

BEGINNING at the southwest corner of the plat of "Arbor Villebois No. 4";

thence along the southerly plat boundary line of "Arbor Villebois No. 4", South 88°18'41" East, a distance of 804.79 feet to the northwest corner of Lot 181 of "Arbor Villebois No. 3";

thence along the westerly plat boundary line of "Arbor Villebois No. 3", South 01°13'44" West, a distance of 603.57 feet to the southwest corner of the plat of "Arbor Villebois No. 3";

thence leaving said plat boundary line, South 02°51'59" West, a distance of 744.00 feet;

thence South 75°44'45" West, a distance of 266.08 feet;

thence South 75°20'01" West, a distance of 969.44 feet;

thence North 64°57'40" West, a distance of 323.02 feet;

thence North 45°06'47" West, a distance of 256.11 feet to a point on the easterly right-of-way line of SW Grahams Ferry Road;

thence along said easterly right-of-way line, on a 2894.79 foot radius non-tangential curve, concave northwesterly, with a radius point bearing North 44°41'37" West, arc length of 355.76 feet, central angle of 07°02'29", chord bearing of North 41°47'08" East, and chord distance of 355.53 feet to a point of tangency;

thence continuing along said easterly right-of-way line, North 38°15'53" East, a distance of 678.81 feet to a point of tangential curvature;

thence continuing along said easterly right-of-way line, on a 1175.92 foot radius tangential curve to the left, arc length of 426.78 feet, central angle of 20°47'40", chord bearing of North 27°52'03" East, and chord distance of 424.44 feet to a point of tangency;

12564 SW Main Street, Tigard, OR 97223 • (T) 503-941-9484 (F) 503-941-9485

Attachment 1

thence continuing along said easterly right-of-way line, North 17°27'18" East, a distance of 199.63 feet to the POINT OF BEGINNING.

Containing 42.75 acres, more or less.

Basis of bearings per plat of "Arbor Villebois No. 4", Clackamas County Survey Records.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
TRAVIS C. JANSEN
57751

RENEWS: 6/30/2015

Pacific Community Design, Inc.
12564 SW Main Street, Tigard, OR 97223 • [T] 503-941-9484 [F] 503-941-9485

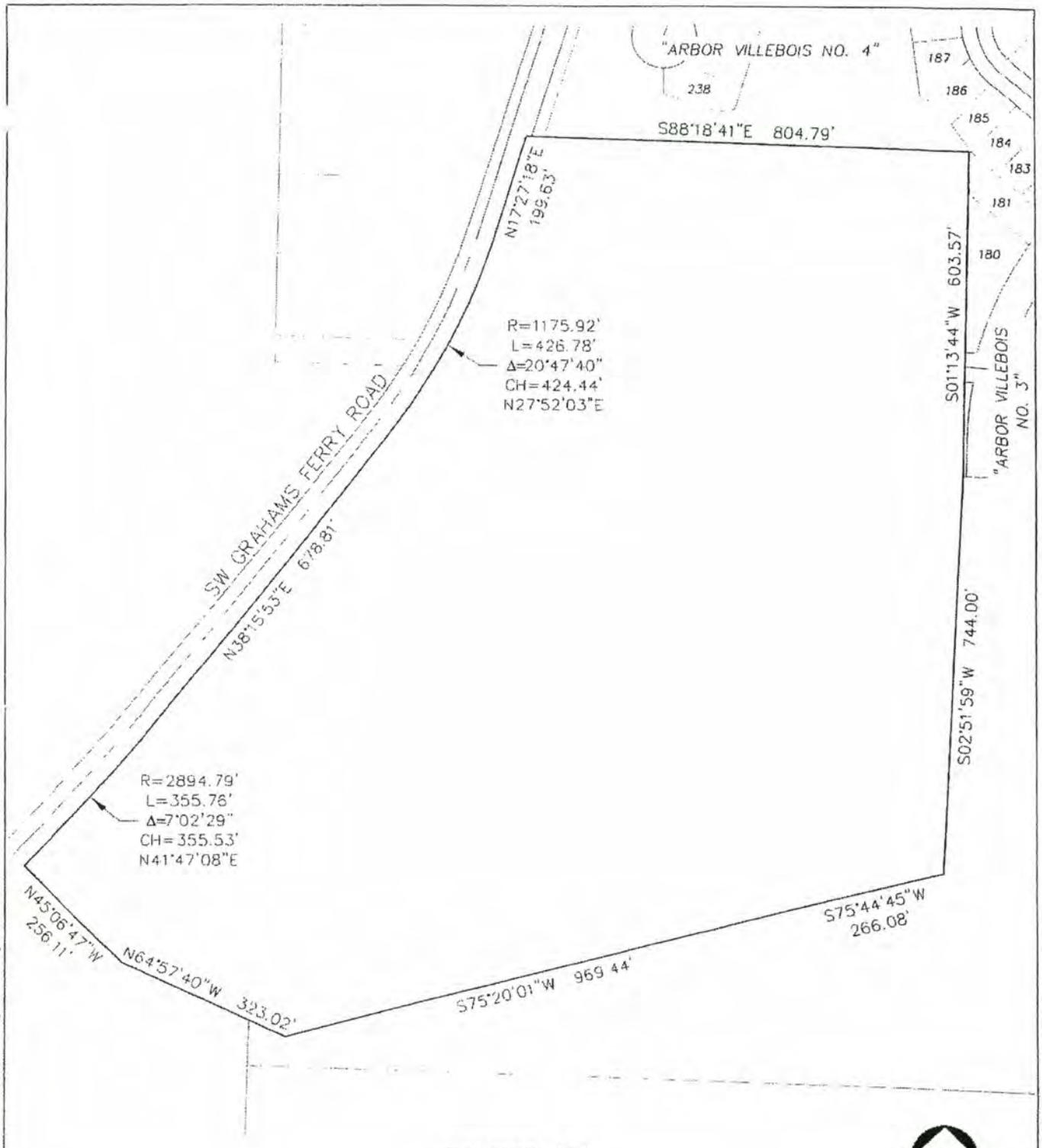
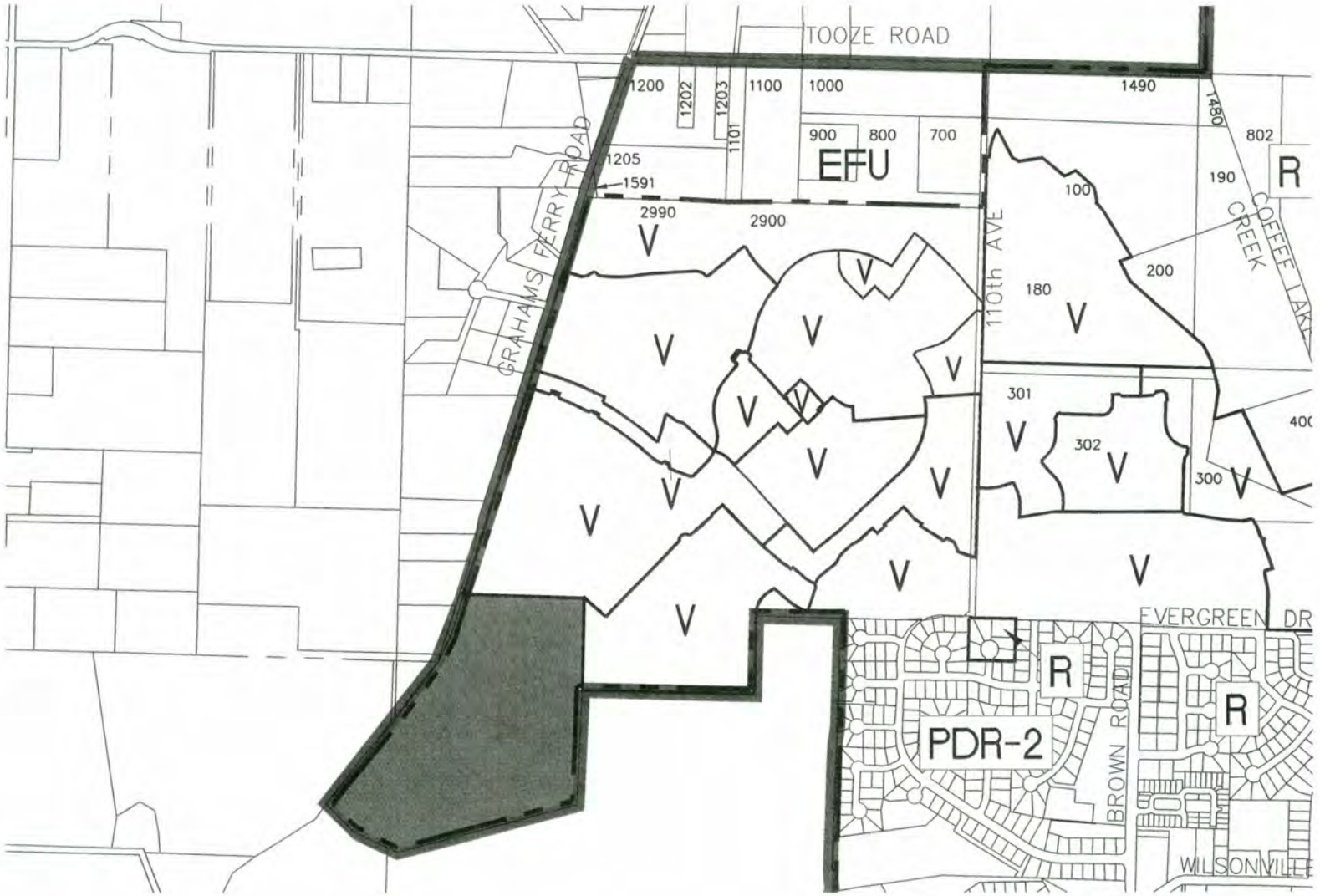


EXHIBIT "A"

DRAWN BY: CLL DATE: 7/9/13
REVIEWED BY: TCJ DATE: 7/9/13
PROJECT NO.: 395-021
SCALE: 1"=250'
PAGE 3 OF 3

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485



LEGEND

- SUBJECT AREA – PROPOSED VILLAGE (V) ZONE (42.76 AC)
- ZONE LINE
- EXISTING UGB
- EXISTING CITY BOUNDARY
- PF EXISTING ZONING DESIGNATION

1" = 1000'

PROPOSED ZONE MAP AMENDMENT

Attachment 2

N:\pro\395-021\09 Drawings\03 Planning\Exhibits\395021.Zoning Plan Exhibit PDP 7 South.dwg – SHEET: 8x11 Feb 26, 2014 – 3:27pm jmh

Exhibit B

STAFF REPORT
WILSONVILLE PLANNING DIVISION

Polygon Northwest Company
"Grande Pointe at Villebois"
Zone map amendment

CITY COUNCIL
QUASI-JUDICIAL PUBLIC HEARING

HEARING DATE May 5, 2014

DATE OF REPORT April 28, 2014

APPLICATION NOS.: DB14-0004 Zone Map Amendment

REQUEST/SUMMARY: The City Council is being asked to review a Zone Map Amendment that will enable the development of a 100-lot residential subdivision, and associated parks and open space and other improvements.

LOCATION: 29500 SW Grahams Ferry Road. East side of road ¾ miles south of SW Tooze Road. Southwest of current Villebois development, northwest of Graham Oaks Nature Park.. The property is specifically known as Tax Lots 2800 and 2890, Section 15, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon.

PROPERTY OWNER: Bo Oswald, Northwest Wilsonville Properties LLC

APPLICANT: Fred Gast, Polygon NW Company

APPLICANT'S REP.: Stacy Connery AICP, Pacific Community Design, Inc.

COMPREHENSIVE PLAN MAP DESIGNATION: Residential-Village

ZONE MAP CLASSIFICATIONS: PF (Public Facility)

STAFF REVIEWERS: Daniel Pauly AICP, Associate Planner

DRB RECOMMENDATIONS: **Approve** the requested Zone Map Amendment.

APPLICABLE REVIEW CRITERIA

DEVELOPMENT CODE	
Section 4.008	**Application Procedures-In General**
Section 4.009	**Who May Initiate Application**
Section 4.010	**How to Apply**
Section 4.011	**How Applications are Processed**
Section 4.014	**Burden of Proof**
Section 4.033	**Authority of City Council**

Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.125	V-Village Zone
Sections 4.139.00 through 4.139.11 as applicable	Significant Resource Overlay Zone (SROZ)
Section 4.177	Street Improvement Standards
Section 4.197	Zone Changes and Amendments to Development Code-Procedures
COMPREHENSIVE PLAN	
Implementation Measure 4.1.6.a.	
Implementation Measure 4.1.6.b.	
Implementation Measure 4.1.6.c.	
Implementation Measure 4.1.6.d.	
OTHER PLANNING DOCUMENTS	
Comprehensive Plan	
Villebois Village Master Plan	
SAP South Approval Documents	

Vicinity Map

BACKGROUND/SUMMARY:

PDP 7S Preliminary Development Plan (DB14-0003)

The proposed Preliminary Development Plan 7 of Specific Area Plan South (also known as Grande Pointe at Villebois) comprises 42.76 acres. The applicant proposes a variety of larger single-family housing types totaling 100 units, 24.06 acres of parks and open space, 6.83 acres of public streets, and associated infrastructure improvements. The front of all the houses will face

tree lined streets, parks and green spaces. The applicant plans on building the project in two phases, Phase 1 being 56 homes in the western portion of the project, Pocket Park 16 and the northern and southern open space, and Phase II being 44 homes on the eastern portion of the project and the remaining open space and linear greens.

Proposed Housing Type	Number of Units
Large Size Single Family	35
Standard Size Single Family	25
Medium Size Single Family	40
Total	100

Zone Map Amendment (DB14-0004)

The zoning proposal is to change the current PF zone, a remnant of the former uses, to the Village (V) zone. The proposed residential and park uses are permitted in the Village zone. The Village zone has been applied to all of Villebois as it has developed.

CONCLUSION AND CONDITIONS OF APPROVAL:

Staff and the DRB have reviewed the applicant's analysis of compliance with the applicable criteria. This Staff report adopts the applicant's responses as Findings of Fact except as noted in the Findings.

FINDINGS OF FACT:

1. The statutory 120-day time limit applies to this application. The application was received on January 17, 2014. On February 13, 2014, staff conducted a completeness review within the statutorily allowed 30-day review period, and, on February 21, 2014, the Applicant submitted new materials. On February 26, 2014 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 26, 2014.

2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	V	Single-family residential
East:	V	Single-family residential/ Graham Oaks Nature Park
South:	PF/V	Graham Oaks Nature Park
West:	--	Unincorporated Rural Residential

3. Prior land use actions include:

Legislative:
02PC06 - Villebois Village Concept Plan
02PC07A - Villebois Comprehensive Plan Text
02PC07C - Villebois Comprehensive Plan Map
02PC07B - Villebois Village Master Plan
02PC08 - Village Zone Text
04PC02 – Adopted Villebois Village Master Plan
LP-2005-02-00006 – Revised Villebois Village Master Plan
LP-2005-12-00012 – Revised Villebois Village Master Plan (Parks and Recreation)
LP10-0001 – Amendment to Villebois Village Master Plan (School Relocation from SAP North to SAP East)
LP13-0005 – Amendment to Villebois Village Master Plan (Future Study Area)

Quasi-Judicial:
03DB21 - SAP-South

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

GENERAL INFORMATION

Section 4.008 Application Procedures-In General

Review Criteria: This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.
Finding: These criteria are met.
Explanation of Finding: The application is being processed in accordance with the applicable general procedures of this Section.

Section 4.009 Who May Initiate Application

Review Criterion: "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."
Finding: This criterion is satisfied.
Explanation of Finding: The application has been submitted on behalf of contract purchaser Polygon Homes, and is signed by Bo Oswald, an authorized member of the current owner, Northwest Wilsonville Properties, LLC.

Subsection 4.010 (.02) Pre-Application Conference

Review Criteria: This section lists the pre-application process
Finding: These criteria are satisfied.
Explanation of Finding: A pre-application conference was held on May 2, 2013 in accordance with this subsection.

Subsection 4.011 (.02) B. Lien Payment before Application Approval

Review Criterion: "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."
Finding: This criterion is satisfied.
Explanation of Finding: No applicable liens exist for the subject property. The application can thus move forward.

Subsection 4.035 (.04) A. General Site Development Permit Submission Requirements

Review Criteria: "An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code." Listed 1. through 6. j.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has provided all of the applicable general submission requirements contained in this subsection.

Section 4.110 Zoning-Generally

Review Criteria: "The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192." "The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise."
Finding: These criteria are satisfied.
Explanation of Finding: This proposed development is in conformity with the Village zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

CONCLUSIONARY FINDINGS, REQUEST C: DB14-0004 ZONE MAP AMENDMENT

Comprehensive Plan

Compact Urban Development-Implementation Measures

Implementation Measure 4.1.6.a

1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
   Finding: These criteria are satisfied.
   Explanation of Finding: Development in this area is being guided by all the listed plans and codes.

Implementation Measure 4.1.6.b.

2. **Review Criteria:** This implementation measure identifies the elements the Villebois Village Master Plan must contain.
   Finding: These criteria are not applicable
   Explanation of Finding: The concurrent proposal for a preliminary development plan implements the procedures as outlined by the Villebois Village Master Plan, as previously approved.

Implementation Measure 4.1.6.c.

3. **Review Criterion:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
   Finding: This criterion is satisfied.
   Explanation of Finding: The Village Zone zoning district is being applied to an area designated as Residential-Village in the Comprehensive Plan.

Implementation Measure 4.1.6.d.

4. **Review Criterion:** "The "Village" Zone District shall allow a wide range of uses that befit and support an "urban village," including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses."

Finding: This criterion is satisfied.
Explanation of Finding: The area covered by the proposed zone change is proposed for residential uses, parks and open space, and sanitary sewer lift station as shown in the Villebois Village Master Plan.

Planning and Land Development Ordinance

Section 4.029 Zoning to be Consistent with Comprehensive Plan

5. **Review Criterion:** "If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant is applying for a zone change concurrently with a Preliminary Development Plan, which is equivalent to a Stage II Final Plan for a planned development.

Subsection 4.110 (.01) Base Zones

6. **Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.
Finding: This criterion is satisfied.
Explanation of Finding: The requested zoning designation of Village "V" is among the base zones identified in this subsection.

Subsection 4.125 (.01) Village Zone Purpose

7. **Review Criteria:** "The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The subject lands are designated Residential-Village on the Comprehensive Plan map and are within the Villebois Village Master Plan area and the zoning designation thus being applied is the Village "V".

Subsection 4.125 (.02) Village Zone Permitted Uses

8. **Review Criteria:** This subsection lists the uses permitted in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed residential, park and open space, and utility uses are consistent with the Village Zone designation and Villebois Village Master Plan.

Subsection 4.125 (.18) B. 2. Zone Change Concurrent with PDP Approval

9. **Review Criterion:** "... Application for a zone change shall be made concurrently with an application for PDP approval..."

Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment is being requested concurrently with a request for PDP approval. See Request B.

Subsection 4.197 (.02) Zone Change Review

Subsection 4.197 (.02) A. Zone Change Procedures

10. **Review Criteria:** "That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;"
Finding: These criteria are satisfied.
Explanation of Finding: The request for a zone map amendment has been submitted as set forth in the applicable code sections.

Subsection 4.197 (.02) B. Zone Change: Conformance with Comprehensive Plan Map, etc.

11. **Review Criteria:** "That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: The proposed zone map amendment is consistent with the Comprehensive Map designation of Residential-Village and as shown in Findings C1 through C4 comply with applicable Comprehensive Plan text.

Subsection 4.197 (.02) C. Zone Change: Specific Findings Regarding Residential Designated Lands

12. **Review Criteria:** "In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: Implementation Measure 4.1.6.c. states the "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation. Since the Village Zone must be applied to areas designated "Residential Village" on the Comprehensive Plan Map and is the only zone that may be applied to these areas, its application is consistent with the Comprehensive Plan.

Subsection 4.197 (.02) D. Zone Change: Public Facility Concurrency

13. **Review Criteria:** "That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized."
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan compliance report and the plan sheets demonstrate that the existing primary public facilities are available or can be

provided in conjunction with the project. Section IIC of the applicant's notebook, Exhibit B3, includes supporting utility and drainage reports. In addition, the applicant has provided a Traffic Impact Analysis, which is in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.197 (.02) E. Zone Change: Impact on SROZ Areas

14. **Review Criteria:** "That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;"
Finding: These criteria are satisfied.
Explanation of Finding: A portion of the subject property is within the SROZ. Request G is reviewing SROZ regulations and ensuring the development does not have a significant adverse effect on natural resources. The proposed development is being focused on areas of the site previously disturbed by the development.

Subsection 4.197 (.02) F. Zone Change: Development within 2 Years

15. **Review Criterion:** "That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant has provided information stating they reasonably expect to commence development within two (2) years of the approval of the zone change, beginning construction in 2014. However, in the scenario where the applicant or their successors due not commence development within two (2) years allow related land use approvals to expire, the zone change shall remain in effect.

Subsection 4.197 (.02) G. Zone Change: Development Standards and Conditions of Approval

16. **Review Criteria:** "That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards."
Finding: These criteria are satisfied.
Explanation of Finding: As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

Council Exhibit A

Attachment C

DEVELOPMENT REVIEW BOARD
RESOLUTION NO. 275

A RESOLUTION ADOPTING FINDINGS RECOMMENDING APPROVAL OF A ZONE MAP AMENDMENT FROM PUBLIC FACILITIES (PF) TO VILLAGE (V) AND ADOPTING FINDINGS AND CONDITIONS APPROVING AN AMENDMENT TO SAP SOUTH TO ADD PLAN AREA 2, A PRELIMINARY DEVELOPMENT PLAN FOR SAP-SOUTH PDP-7, A TENTATIVE SUBDIVISION PLAT, A TYPE C TREE PLAN, A FINAL DEVELOPMENT PLAN FOR PARKS AND OPEN SPACE, A SROZ MAP REFINEMENT, A SRIR REVIEW AND A SROZ BOUNDARY VERIFICATION FOR A 100-LOT SINGLE FAMILY SUBDIVISION IN VILLEBOIS AND ASSOCIATED IMPROVEMENTS. THE SUBJECT SITE IS LOCATED AT 29500 SW GRAHAMS FERRY ROAD ON TAX LOTS 2800 AND 2890, OF SECTION 15, TOWNSHIP 3 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON. STACY CONNERY, AICP, PACIFIC COMMUNITY DESIGN, INC. – REPRESENTATIVE FOR FRED GAST, POLYGON NW COMPANY- APPLICANT.

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code, and

WHEREAS, the Planning Staff has prepared staff report on the above-captioned subject dated April 7, 2014, and

WHEREAS, said planning exhibits and staff report were duly considered by the Development Review Board Panel A at a scheduled meeting conducted on April 14, 2014, at which time exhibits, together with findings and public testimony were entered into the public record, and

WHEREAS, the Development Review Board considered the subject and the recommendations contained in the staff report, and

WHEREAS, interested parties, if any, have had an opportunity to be heard on the subject.

NOW, THEREFORE, BE IT RESOLVED that the Development Review Board of the City of Wilsonville does hereby adopt the staff report dated April 7, 2014, attached hereto as Exhibit A1, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations, subject to City Council approval of the Zone Map Amendment Request (DB14-0004) as applicable, for:

DB14-0002, DB14-0003, DB14-0005 through DB14-0007, and SI14-0002 SAP Amendment, Preliminary Development Plan, Tentative Subdivision Plat, Type C Tree Plan, Final Development Plan, SROZ Map Refinement, Significant Resource Impact Report Review, and SROZ Boundary Verification for a 100-lot single-family residential subdivision, and associated parks and open space and other improvements..

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 14th day of April, 2014 and filed with the Planning Administrative Assistant on April 17, 2014. This resolution is final on the 15th calendar day after the postmarked date of the written notice of decision per *WC Sec 4.022(.09)* unless appealed per *WC Sec 4.022(.02)* or called up for review by the council in accordance with *WC Sec 4.022(.03)*.

Mary Fierros Bower Chair, Panel A
Wilsonville Development Review Board

Attest:

Shelley White, Planning Administrative Assistant

Exhibit A1

STAFF REPORT
WILSONVILLE PLANNING DIVISION

Polygon Homes- Grande Pointe at Villebois

DEVELOPMENT REVIEW BOARD PANEL 'A'
QUASI-JUDICIAL PUBLIC HEARING
STAFF REPORT
AMENDED AND ADOPTED APRIL 14, 2014
Deleted Language ~~Struck through~~
Added Language ***Bold Italics Underlined***

HEARING DATE	April 14, 2014
DATE OF REPORT:	April 7, 2014

APPLICATION NOS.: DB14-0002 SAP-South Amendment for Plan Area 2
DB14-0003 SAP-South PDP 7, Preliminary Development Plan
DB14-0004 Zone Map Amendment
DB14-0005 Tentative Subdivision Plat
DB14-0006 Type C Tree Plan
DB14-0007 Final Development Plan for Parks and Open Space
SI14-0002 SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

REQUEST/SUMMARY: The Development Review Board is being asked to review a Villebois Specific Area Plan Amendment to add a Plan Area 2 to Specific Area Plan South, Preliminary Development Plan, Zone Map Amendment, Tentative Subdivision Plat, Type C Tree Plan, Final Development Plan, and Significant Resource Overlay Zone (SROZ) Map Refinement, SRIR Review, and SROZ Boundary Verification for a 100-lot residential subdivision, and associated parks and open space and other associated improvements.

LOCATION: 29500 SW Grahams Ferry Road. East side of road ¾ miles south of SW Tooze Road. Southwest of current Villebois development, northwest of Graham Oaks Nature Park.. The property is specifically known as Tax Lots 2800 and 2890, Section 15, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon.

OWNER: Bo Oswald, Northwest Wilsonville Properties LLC

APPLICANT: Fred Gast, Polygon NW Company

APPLICANT'S REP.: Stacy Connery AICP, Pacific Community Design, Inc.

COMPREHENSIVE PLAN MAP DESIGNATION: Residential-Village

ZONE MAP CLASSIFICATIONS: PF (Public Facility)

STAFF REVIEWERS: Daniel Pauly AICP, Associate Planner

Steve Adams PE, Development Engineering Manager
Kerry Rappold, Natural Resource Program Manager
Don Walters, Building Plans Examiner

STAFF RECOMMENDATIONS: **Approve with conditions** the requested SAP Amendment, Preliminary Development Plan, Tentative Subdivision Plat, Tree Removal Plan, Final Development Plan for Parks and Open Space, SROZ Map Refinement, SRIR Review, and SROZ Boundary Verification. **Recommend approval** of the requested Zone Map Amendment to City Council.

APPLICABLE REVIEW CRITERIA

DEVELOPMENT CODE	
Section 4.008	**Application Procedures-In General**
Section 4.009	**Who May Initiate Application**
Section 4.010	**How to Apply**
Section 4.011	**How Applications are Processed**
Section 4.014	**Burden of Proof**
Section 4.031	**Authority of the Development Review Board**
Section 4.033	**Authority of City Council**
Subsection 4.035 (.04)	**Site Development Permit Application**
Subsection 4.035 (.05)	**Complete Submittal Requirement**
Section 4.110	**Zones**
Section 4.113	**Residential Development in Any Zone**
Section 4.125	**V-Village Zone**
Sections 4.139.00 through 4.139.11 as applicable	**Significant Resource Overlay Zone (SROZ)**
Section 4.154	**Bicycle, Pedestrian, and Transit Facilities**
Section 4.155	**Parking, Loading, and Bicycle Parking**
Section 4.167	**Access, Ingress, and Egress**
Section 4.169	**General Regulations-Double Frontage Lots**
Section 4.171	**Protection of Natural Features and Other Resources**
Section 4.175	**Public Safety and Crime Prevention**
Section 4.176	**Landscaping, Screening, and Buffering**
Section 4.177	**Street Improvement Standards**
Section 4.197	**Zone Changes and Amendments to Development Code-Procedures**
Sections 4.200 through 4.220	**Land Divisions**
Sections 4.236 through 4.270	**Land Division Standards**
Sections 4.300 through 4.320	**Underground Utilities**
Sections 4.400 through 4.440 as applicable	**Site Design Review**
Sections 4.600 through 4.640.20 as applicable	**Tree Preservation and Protection**
OTHER PLANNING DOCUMENTS	
Comprehensive Plan	
Villebois Village Master Plan	
SAP South Approval Documents	

Vicinity Map

BACKGROUND/SUMMARY:

SAP South Amendment for Plan Area 2 (DB14-0002)

The proposed Specific Area Plan (SAP) amendment for Specific Area Plan (SAP) South seeks to add Plan Area 2, which is the subject property, into SAP South. The amendment will allow application of the existing planning tools used to guide development of SAP South to development of Plan Area 2. These planning tools include an Architectural Pattern Book, Community Elements Book, Master Signage and Wayfinding Plan, and Rainwater Management Book.

Plan Area 2 is also known as the 'Future Study Area' in the Villebois Village Master Plan. The Master Plan was amended in October 2013 to update the 'Future Study Area' with a residential land use plan and associated details and information to guide the subsequent review stages for proposed development of this property. In Figure 3, Conceptual Specific Area Plan Boundaries, of the amended Villebois Village Master Plan the subject property is shown as part of Specific Area Plan South.

A number of minor refinements to the Master Plan are proposed as design of the proposed development has progressed. All refinements meet the test of not being significant as defined in Subsection 4.125 (.18) F. and therefore can be approved as part of the SAP Amendment request. The refinements include adding subtle curves to certain streets, minor changes to size and

amenities within parks and open space, and clarification of the residential unit count (100 units proposed).

PDP 7S Preliminary Development Plan (DB14-0003)

The proposed Preliminary Development Plan 7 of Specific Area Plan South (also known as Grande Pointe at Villebois) comprises 42.76 acres. The applicant proposes a variety of larger single-family housing types totaling 100 units, 24.06 acres of parks and open space, 6.83 acres of public streets, and associated infrastructure improvements. The front of all the houses will face tree lined streets, parks and green spaces. The applicant plans on building the project in two phases, Phase 1 being 56 homes in the western portion of the project, Pocket Park 16 and the northern and southern open space, and Phase II being 44 homes on the eastern portion of the project and the remaining open space and linear greens.

Proposed Housing Type	Number of Units
Large Size Single Family	35
Standard Size Single Family	25
Medium Size Single Family	40
Total	100

Zone Map Amendment (DB14-0004)

The zoning proposal is to change the current PF zone, a remnant of the former uses, to the Village (V) zone. The proposed residential and park uses are permitted in the Village zone. The Village zone has been applied to all of Villebois as it has developed.

Tentative Subdivision Plat (DB14-0005)

The applicant is proposing the subdivision of the properties into 100 residential lots, along with alleys, parks areas, and street rights-of-way. The name of the proposed subdivision approved by Clackamas County is "Grande Pointe at Villebois."

Type C Tree Plan (DB14-0006)

The preservation of on-site trees was an important factor in the design of PDP 7 South. To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within areas previously impacted by development. A majority of the site trees are preserved within the proposed conservation easement area. Trees were only inventoried within and around the proposed development footprint.

The proposed tree preservation plan seeks to preserve the maximum quantity of trees rated "Important" and "Good," per Villebois Village Master Plan Chapter 3, Implementation Measure 9. In addition, the City's tree ordinance emphasizes preservation of Oregon White Oak and Native Yew trees. The Tree Report demonstrates most of the inventoried trees are in "Poor" condition (50%) or "Moderate" condition (28%). Of trees inventoried, 19% are rated in "Good" condition and 3% are rated in "Important" condition. Four (4) of the twenty-four (24) "Important" trees inventoried are proposed for removal for construction. All inventoried "Important" trees are Oregon White Oak. Of the one hundred fifty-four (154) inventoried "Good" trees one hundred and one (101) are proposed for removal. Only five (5) of the "Good" trees proposed for removal are Oregon White Oak. Twelve (12) "Good" Oregon White Oak trees are proposed for preservation. Douglas-fir is the predominant species of "Good" trees being removed. In addition four (4) "Good" trees are listed as "likely to remove". Two (2) of these trees are Oregon White Oak. The determination to remove trees was based upon an assessment of which trees were necessary to remove due to the poor or hazardous health of the tree, whether or not they interfered with the health of other trees, and whether removal is necessary for utility work or the construction of houses.

	General Condition Rating				Total
Treatment Recommendation	P	M	G	I	
Retain	109	101	49	20	**279** (34.4%)
Remove	286	121	101	4	**512** (63.1%)
Likely to be Removed	7	9	4	0	**20** (2.50%)
Total	**402** (50%)	**231** (28%)	**154** (19%)	**24** (3%)	**811** (100%)

Final Development Plan for Parks and Open Space (DB14-0007)

Details have been provided for all the parks and open space matching the requirements of the Community Elements Book. Street trees, curb extensions, street lights, and mail kiosks are also shown conforming to the Community Elements Book.

DISCUSSION TOPICS:

Courtyard Fencing

In order to increase consistency with the Architectural Pattern Book and other development elsewhere in Villebois a condition of approval requires courtyard fencing consistent with the pattern book and the architectural style of the home on thirty-percent of the lots. The courtyard fences are especially encouraged for lots facing linear greens and alley loaded lots.

Traffic on Villebois Drive

Understandably, neighbors in the adjoining development are concerned about increased traffic on neighboring streets including Villebois Drive, including the comments in Exhibit D1 and D2. Staff has not identified capacity issues with Villebois Drive or any improvements on adjoining residential streets that would be triggered by this development.

Ensuring Preservation of "Good" and "Important" Oregon White Oak Trees

An implementation measure from the Villebois Village Master Plan states in part, "The design of Villebois shall retain the maximum number of existing trees practicable that are six inches or more DBH in the "Important" and "Good" tree rating categories, which are defined in the Community Elements Books." Native species of trees and trees with historical importance shall be given special consideration for retention." Oregon White Oak is among the species of native trees prioritized for retention. The subject site includes a number of Oregon White Oak trees rated as "Good" or "Important". While many of these trees are preserved within the proposed conservation easement covering the area of the site within the Significant Resource Overlay Zone (SROZ), a number are not. They are included in park areas, open spaces, and yards.

The City has extensive experience preserving trees in Villebois and in the City in general. Through the experience the City has learned a number of lessons. The City has learned trees are too often damaged during construction by improper utility and other work within the root zone. The City has learned too over watering, either by improper irrigation or by temporary or permanent grading get be detrimental to the health of preserved trees. The City has learned that preserved trees are a community and neighborhood resource and amenity and their upkeep and maintenance can be a burden on individual homeowners over time.

Based on the special value of the preserved "Good" and "Important" Oregon White Oak trees and past experience with tree preservation a number of Conditions of Approval are being imposed to ensure the proper preservation and long-term maintenance of these trees. These conditions require tree preservation easements where the trees are entirely or partially within private yards and assigns maintenance to the homeowners association rather than the private

homeowners. Also, the easements restrict inappropriate landscaping and irrigation around the preserved trees. A condition requires specific setbacks on certain lots to minimize impact within the root zones of the preserved trees. A condition address using caution when placing fence posts around preserved trees. Another condition requires boring for installation of utilities to avoid the roots of "Important" and "Good' Trees. Finally, a condition requires bilingual signs on the tree preservation fencing for "Important" and "Good" Oregon White Oaks stating the penalty for damaging the tree may be up to the assessed value of the tree as determined by a tree valuation report required to be submitted as part of the tree removal permit.

CONCLUSION AND CONDITIONS OF APPROVAL:

Staff has reviewed the applicant's analysis of compliance with the applicable criteria. This Staff report adopts the applicant's responses as Findings of Fact except as noted in the Findings. Based on the Findings of Fact and information included in this Staff Report, and information received from a duly advertised public hearing, staff recommends that the Development Review Board approve the proposed applications (DB14-0002, DB14-0003, DB14-0005, DB14-0006, DB14-00017, and SI14-0002) and recommend approval of the zone map amendment to City Council (DB14-0004) with the following conditions:

The Developer is working with the City to reach agreement on the apportionment of fair and equitable exactions for the subject applications through a Development Agreement. Such agreement is subject to approval by the City Council by resolution.

REQUEST A: DB14-0002 SAP South Plan Area 2 ~~Amendments~~ *Amendment*

Planning Division Conditions:	
PDA 1.	Prior to development of the open space in Phase 2 the applicant shall work with Metro to develop appropriate interface enhancements for trail connections with Graham Oaks Nature Park and shall provide the City with a copy of correspondence from Metro either approving or denying a connecting trail on Metro property. ***See Finding A39.***

REQUEST B: DB14-0003 SAP-South PDP 7, Preliminary Development Plan

Planning Division Conditions:	
PDB 1.	Approval of DB14-0003 SAP-South PDP 7, Preliminary Development Plan is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004)
PDB 2.	Street lighting types and spacing shall be as shown in the Community Elements Book. See Finding B28.
PDB 3.	All park and open ***space*** improvements approved by the Development Review Board within Phase I (Phasing Shown on Sheet 11 of Exhibit B4) shall be completed prior the issuance of the twenty-eight (28th) house permit for the phase. All park and open space improvements approved by the Development Review Board within Phase II (Phasing Shown on Sheet 11 of Exhibit B4) shall be completed prior the issuance of the twenty-second (22nd) house permit for the phase. If weather or other special circumstances prohibit completion, bonding for the improvements will be permitted. See Finding B57.
PDB 4.	The applicant/owner shall enter into an Operations and Maintenance Agreement for

	the subdivision that clearly identifies ownership and maintenance for parks and open space, paths, and natural area tracts. Such agreement shall ensure maintenance in perpetuity and shall be recorded with the subdivision for 'Grande Pointe at Villebois.' Such agreement shall be reviewed and approved by the City Attorney prior to recordation. See also Finding F4.
PDB 5.	The applicant/owner shall install courtyard fencing in the front yard of no less than thirty percent (30%) of the houses, which is thirty (30) of the one hundred (100) houses. The applicant/owner is especially encouraged to place the courtyards in the front yard of homes facing linear greens and pocket parks that do not have a porch as well as alley loaded homes. The design and placement of the required courtyard fencing shall be consistent with the Architectural Pattern Book and the architectural style of the house. The courtyard area enclosed by the fence shall not exceed a five (5) percent slope from front building line of the house to the point of the courtyard closest to the front lot line or between the points of the courtyard closest to opposite side lot lines. Where necessary, the applicant shall install dry stack rock or brick wall along the front or side of the lot to ensure a five (5) percent or less slope is maintained. See Finding B25.
PDB 6.	Where a building foundation is exposed in the public view shed more than would be typical on a level lot, the foundation shall have a brick or stone façade matching the design of the house.

REQUEST C: DB14-0004 Zone Map Amendment

Planning Division Conditions:
This action recommends adoption of the Zone Map Amendment to the City Council for the subject properties. Case files DB14-0003, DB14-0005, DB14-0006, and DB14-0007 are contingent upon City Council's action on the Zone Map Amendment request.

REQUEST D DB14-0005 Tentative Subdivision Plat

Planning Division Conditions:	
PDD 1.	Approval of DB14-0005 Tentative Subdivision Plat is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDD 2.	Any necessary easements or dedications shall be identified on the Final Subdivision Plat.
PDD 3.	If one or more of the park/open space tracts are to be dedicated to the City or other public entity, this dedication(s) shall also be executed and recorded with the Final Plat.
PDD 4.	Alleyways shall remain in private ownership and be maintained by the Homeowner's Association established by the subdivision's CC&Rs. The CC&R's shall be reviewed and approved by the City Attorney prior to recordation.
PDD 5.	The Final Subdivision Plat shall indicate dimensions of all lots, lot area, minimum lot size, easements, proposed lot and block numbers, parks/open space by name and/or type, and any other information that may be required as a result of the hearing process for PDP-7S or the Tentative Plat.
PDD 6.	A non-access reservation strip shall be applied on the final plat to those lots with access to a public street and an alley. All lots with access to a public street and an

	alley must take vehicular access from the alley to a garage or parking area. A plat note effectuating that same result can be used in the alternative. The applicant shall work with the County Surveyor and City Staff regarding appropriate language. See Finding D3.
PDD 7.	All reserve strips and street plugs shall be detailed on the Final Subdivision Plat. See Finding ~~E3~~***D4***.
PDD 8.	All tracts shall, except those indicated for future home development, shall include a public access easement across their entirety except for the area occupied by the Sanitary Sewer ~~Lift~~***Pump*** Station.
PDD 9.	The applicant/owner shall submit subdivision bylaws, covenants, and agreements to the City Attorney prior to recordation. See Finding D6.

REQUEST E: DB14-0006 Type C Tree Plan

Planning Division Conditions:	
PDE 1.	Approval of DB14-0006 Type C Tree Plan is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDE 2.	The property owner/applicant or their successors in interest shall grant access to the property for authorized City representatives as needed to verify the tree related information provided, to observe tree related site conditions, and to verify, once a removal permit is granted, that the terms and conditions of the permit are followed.
PDE 3.	In order to ensure proper preservation the applicant/owner shall grant easements to the City over the area within the drip lines of preserved "Important" and "Good" Oregon White Oak Trees outside the SROZ/proposed Conservation Easement on individual lots. Such easements shall be shown on the Final Plat. The applicant/owner shall enter into an easement agreement regarding these tree preservation easements which, among other provisions typical of such agreements, shall include the following provisions: • City and HOA access to inspect health of trees and condition of area within easement and perform any necessary activity to preserve trees and maintain appropriate landscaping within the easement area. • Establish HOA responsibility for landscaping and tree maintenance within the easement areas. • Limit landscaping within the tree protection easements to native plantings compatible with Oregon White Oaks. • Require temporary and permanent drainage and irrigation be designed around easement areas to optimize the amount of water in the root zone of the trees to support their health. • Require all hardscape improvements and home construction to follow the arborist recommendations in Exhibit B7. • Establish that if one of the preserved trees dies or structurally fails beyond preservation, that an additional Oregon White Oak is planted in its place. Trees requiring tree protective easements include the following trees identified in the submitted Arborist Report as seen in Exhibits B3 and B4, and B7: • Tree 509 (Lot 65) • Tree 510 (Lot 65)

	• Tree 1023 (Lot 100) • Tree 1257 (Lot 93) • Tree 775 (Lot 95) • Tree 799 if retained (Lot 95) • Tree 865 (Lot 92) • Tree 787 (Lot 94) • Tree 788 (Lot 94) • Tree 856 (Lot 91)
PDE 4.	Houses on lots with trees or drip lines listed in Condition of Approval PDE 3 shall be constructed to minimize impact on the trees and, to the extent feasible, not place foundations, or other hardscape improvements within the root zone of the trees. Pursuant to note 6 of Table V-1 in Section 4.125 WC Lots 91 and 93 can be exempt from the maximum front setback to enable tree preservation. If it is necessary to place foundations or other hardscape improvements within the root zone of the trees listed in Condition of Approval PDE 3, construction shall be coordinated with and follow recommendations of the project arborist to minimize impacts. ***Construction on Lot 91 shall be substantially follow the site plan in Exhibit B11.***
~~**PDE 5.**~~	~~Prior to granting a Tree Removal Permit in accordance with the proposed Tree Removal Plan the permit grantee shall file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount determined by the City to ensure compliance with the Tree Removal Permit conditions and the requirements of the Tree Preservation and Protection Ordinance. See Finding E5.~~
PDE ~~6.~~5.	Trees planted as replacement of removed trees shall be, state Department of Agriculture Nursery Grade No. 1. or better, shall meet the requirements of the American Association of Nursery Men (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade, shall be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced. See Findings E21 and E22.
PDE ~~7.~~6.	Solvents, building material, construction equipment, soil, or irrigated landscaping, shall not be placed within the drip line of any preserved tree, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist. See Finding E24.
PDE ~~8.~~7.	Before and during development, land clearing, filling or any land alteration the applicant shall erect and maintain suitable tree protective barriers which shall include the following: • 6' high fence set at tree drip lines. • Fence materials shall consist of 2 inch mesh chain links secured to a minimum of 1 ½ inch diameter steel or aluminum line posts. • Posts shall be set to a depth of no less than 2 feet in native soil. • ***Fences shall be maintained in full upright position.*** • Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. • For preserved "Important" and "Good" Oregon White Oak trees and their drip lines outside the SROZ/proposed Conservation Easement, a legible sign ***in***

	English and Spanish shall be securely fastened to the fencing in a visible location stating "Penalty for damaging this tree may be up to $(assessed value)" ***and its Spanish equivalent*** or substantially similar language. Such assessed value shall be based on the tree valuation report provided pursuant to Condition of Approval PDE 8. See Findings E3 and E24.
PDE ~~9.~~*8.*	The applicant/owner shall cause a tree valuation report to be prepared by the appropriate arboricultural professional establishing an assessed value for each of the preserved "Important" and "Good" Oregon White Oak outside or with drip lines outside the SROZ/proposed Conservation Easement as listed in Condition of Approval PDE 3. The report shall be submitted to the Planning Division together with the tree removal permit. See Finding E3.
PDE ~~10.~~*9.*	Fence posts placement within drip lines and root zones of preserved trees shall be hand dug and supervised by the project arborist. If roots are encountered alternative fence post placement is required as determined by the project arborist.
PDE ~~11.~~*10.*	Utilities, including franchise utilities, public utilities, and private utilities and service lines shall be directionally bored as necessary to avoid the root zone of preserved trees. All work within the root zone of preserved trees shall be supervised by and follow the recommendation of the project arborist.
PDE ~~12.~~*11.*	While an extensive arborist report has been completed and trees and conditions have been inventoried to determine which trees will be preserved it is understood that unforeseen tree health issues or construction situations may arise involving preserved trees, particularly preserved "Good" and "Important" trees. If such issues or situations arise the project arborist shall provide City staff with a written explanation of the measures considered to preserve the trees along with the line of reasoning that makes the preservation of the tree not feasible. Prior to further construction within the tree protection zone, the City will verify the validity of the report through review by an independent arborist to ensure that the tree cannot be preserved. If it is ultimately decided that the tree cannot be preserved by both arborists, then the developer may remove the tree, and will be required to plant one tree of the same variety at another location within the project area. If a tree listed in Condition of Approval PDE 3 is removed under the provisions of this Condition prior to recording of the Final Plat, the protective easement for the tree will not be required as well as any related setback requirements in Condition of Approval PDE 4.

REQUEST F: DB14-0007 Final Development Plan for Parks and Open Space

Planning Division Conditions:	
PDF 1.	Approval of DB14-0007 Final Development Plan for Parks and Open Space is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDF 2.	All plant materials shall be installed consistent with current industry standards.
PDF 3.	All construction, site development, and landscaping of the parks shall be carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. Minor alterations may be approved by the Planning Division through the Class I Administrative Review process. See Finding F32.
PDF 4.	All retaining walls within the public view shed shall be a decorative stone or brick construction or veneer. Final color and material for the retaining walls shall be approved by the Planning Division through the Class I Administrative Review

	Process. ~~The temporary retaining wall along the north property line shall be Lock-n-Load or Keystone-type modular block retaining wall.~~ See Finding F37.
PDF 5.	All hand rails within the parks and open space shall be of a design similar to the approved courtyard fencing shown in the Architectural Pattern Book. Final design of any hand rails in parks and open space shall be approved by the Planning Division through the Class I Administrative Review Process. See Finding F37.
PDF 6.	All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Development Review Board. See Finding F41 through F43.
PDF 7.	The applicant shall submit final parks, landscaping and irrigation plans to the City prior to construction of parks. The irrigation plan must be consistent with the requirements of Section 4.176(.07) C.
PDF 8.	Prior to occupancy of each house the Applicant/Owner shall install landscaping along the public view-sheds of each house, unless otherwise approved by the Community Development Director. Homeowners association shall contract with a professional landscape service to maintain the landscaping.
PDF 9.	The street trees on SW Alta Court shall be a variety listed in the Community Elements Book for secondary residential streets. No street trees shall be planted where ~~there~~***their*** growth would interfere with Tree 856 or 860, preserved "Important" Oregon White Oak trees. See Finding F23.
PDF 10.	Street trees, as shown on the approved landscape plans, shall be planted as each house or park is built, except as noted in Condition of Approval PDF 9 above.
PDF 11.	Final construction plans for playground equipment, shelter, and other elements shall demonstrate compliance with the requirements of the Community Elements Book which have not been verified for compliance at the current level of design. See Findings F9 and F17.

REQUEST G: SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

Planning Division Conditions:	
NONE	
Natural Resources Division Conditions:	
Significant Resource Overlay Zone	
NRG 1.	The applicant shall submit the SROZ refinement mapping, including the removed impact areas, as ARCGIS shape files or a compatible format.
NRG 2.	All landscaping, including herbicides used to eradicate invasive plant species and existing vegetation, in the SROZ shall be reviewed and approved by the Natural Resources Program Manager. Native plants are required for landscaping in the SROZ.
NRG 3.	Prior to any site grading or ground disturbance, the applicant is required to delineate the boundary of the SROZ. Six-foot (6') tall cyclone fences with metal posts pounded into the ground at 6'-8' centers shall be used to protect the significant natural resource area where development encroaches into the 25-foot Impact Area. • ***Fences shall be maintained in full upright position.***
NRG 4.	Pursuant to Section 4.139.03 (.05) of the Wilsonville Code, the applicant is required to use habitat-friendly development practices (Table NR-2) to the extent practicable for any encroachment into the Significant Resource Overlay Zone and the 25-foot Impact Area. The applicant shall reduce the light spill-off into the SROZ from the

	proposed street lighting.
NRG 5.	Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.
NRG 6.	The applicant shall submit a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes ownership, the new owners will have the continued responsibilities established by this section.
NRG 7.	The Significant Resource Overlay Zone (SROZ) and mitigation area depicted on the SRIR mapping for the site shall be identified in a conservation easement. The applicant shall record the conservation easement with Clackamas County. The conservation easement shall include language prohibiting any disturbance of natural vegetation without first obtaining approval from the City Planning Division and the Natural Resources Program Manager. The conservation easement shall be reviewed by the City Attorney prior to recording.

The following Conditions of Approval are provided by the Engineering, Natural Resources, or Building Divisions of the City's Community Development Department or Tualatin Valley Fire and Rescue, all of which have authority over development approval. A number of these Conditions of Approval are not related to land use regulations under the authority of the Development Review Board or Planning Director. Only those Conditions of Approval related to criteria in Chapter 4 of Wilsonville Code and the Comprehensive Plan, including but not limited to those related to traffic level of service, site vision clearance, recording of plats, and concurrency, are subject to the Land Use review and appeal process defined in Wilsonville Code and Oregon Revised Statutes and Administrative Rules. Other Conditions of Approval are based on City Code chapters other than Chapter 4, state law, federal law, or other agency rules and regulations. Questions or requests about the applicability, appeal, exemption or non-compliance related to these other Conditions of Approval should be directed to the City Department, Division, or non-City agency with authority over the relevant portion of the development approval.

Request B: Preliminary Development Plan and Request F: Final Development Plan

Engineering Division Conditions:	
Standard Comments:	
PF 1.	All construction or improvements to public works facilities shall be in conformance to the City of Wilsonville Public Works Standards.
PF 2.	Applicant shall submit insurance requirements to the City of Wilsonville in the following amounts: *Coverage (Aggregate, accept where noted)* *Limit*

	Commercial General Liability	
	General Aggregate (per project)	$ 2,000,000
	Fire Damage (any one fire)	$ 50,000
	Medical Expense (any one person)	$ 10,000
	Business Automobile Liability Insurance	
	Each Occurrence	$ 1,000,000
	Aggregate	$ 2,000,000
	Workers Compensation Insurance	$ 500,000

PF 3. No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, right-of-way and easements have been obtained and Staff is notified a minimum of 24 hours in advance.

PF 4. All public utility/improvement plans submitted for review shall be based upon a 22"x 34" format and shall be prepared in accordance with the City of Wilsonville Public Work's Standards.

PF 5. Plans submitted for review shall meet the following general criteria:

a. Utility improvements that shall be maintained by the public and are not contained within a public right-of-way shall be provided a maintenance access acceptable to the City. The public utility improvements shall be centered in a minimum 15-ft. wide public easement for single utilities and a minimum 20-ft wide public easement for two parallel utilities and shall be conveyed to the City on its dedication forms.
b. Design of any public utility improvements shall be approved at the time of the issuance of a Public Works Permit. Private utility improvements are subject to review and approval by the City Building Department.
c. In the plan set for the Public Works Permit, existing utilities and features, and proposed new private utilities shall be shown in a lighter, grey print. Proposed public improvements shall be shown in bolder, black print.
d. All elevations on design plans and record drawings shall be based on NAVD 88 Datum.
e. All proposed on and off-site public/private utility improvements shall comply with the State of Oregon and the City of Wilsonville requirements and any other applicable codes.
f. Design plans shall identify locations for street lighting, gas service, power lines, telephone poles, cable television, mailboxes and any other public or private utility within the general construction area.
g. As per City of Wilsonville Ordinance No. 615, all new gas, telephone, cable, fiber-optic and electric improvements etc. shall be installed underground. Existing overhead utilities shall be undergrounded wherever reasonably possible.
h. Any final site landscaping and signing shall not impede any proposed or existing driveway or interior maneuvering sight distance.
i. Erosion Control Plan that conforms to City of Wilsonville Ordinance No. 482.
j. Existing/proposed right-of-way, easements and adjacent driveways shall be identified.
k. All engineering plans shall be stamped by a Professional Engineer registered in

	the State of Oregon.
PF 6.	Submit plans in the following general format and order for all public works construction to be maintained by the City: a. Cover sheet b. City of Wilsonville construction note sheet c. General construction note sheet d. Existing conditions plan. e. Erosion control and tree protection plan. f. Site plan. Include property line boundaries, water quality pond boundaries, sidewalk improvements, right-of-way (existing/proposed), easements (existing/proposed), and sidewalk and road connections to adjoining properties. g. Grading plan, with 1-foot contours. h. Composite utility plan; identify storm, sanitary, and water lines; identify storm and sanitary manholes. i. Detailed plans; show plan view and either profile view or provide i.e.'s at all utility crossings; include laterals in profile view or provide table with i.e.'s at crossings; vertical scale 1"= 5', horizontal scale 1"= 20' or 1"= 30'. j. Street plans. k. Storm sewer/drainage plans; number all lines, manholes, catch basins, and cleanouts for easier reference l. Water and sanitary sewer plans; plan; number all lines, manholes, and cleanouts for easier reference. m. Detailed plan for storm water detention facility (both plan and profile views), including water quality orifice diameter and manhole rim elevations. Provide detail of inlet structure and energy dissipation device. Provide details of drain inlets, structures, and piping for outfall structure. Note that although storm water detention facilities are typically privately maintained they will be inspected by engineering, and the plans must be part of the Public Works Permit set. n. Detailed plan for water quality facility (both plan and profile views). Note that although storm water quality facilities are typically privately maintained they will be inspected by Natural Resources, and the plans must be part of the Public Works Permit set. o. Composite franchise utility plan. p. City of Wilsonville detail drawings. q. Illumination plan. r. Striping and signage plan. s. Landscape plan.
PF 7.	Prior to manhole and sewer line testing, design engineer shall coordinate with the City and update the sanitary and stormwater sewer systems to reflect the City's numbering system. Video testing and sanitary manhole testing will refer to the updated numbering system. Design engineer shall also show the updated numbering system on As-Built drawings submitted to the City.
PF 8.	The applicant shall install, operate and maintain adequate erosion control measures in conformance with the standards adopted by the City of Wilsonville Ordinance No. 482 during the construction of any public/private utility and building improvements

	until such time as approved permanent vegetative materials have been installed.
PF 9.	Applicant shall work with City's Natural Resources office before disturbing any soil on the respective site. If 5 or more acres of the site will be disturbed applicant shall obtain a 1200-C permit from the Oregon Department of Environmental Quality. If 1 to less than 5 acres of the site will be disturbed a 1200-CN permit from the City of Wilsonville is required.
PF 10.	To lessen the impact of the proposed project on the downstream storm drain system, and adjacent properties, project run-off from the site shall be detained and limited to the difference between a developed 25-year storm and an undeveloped 25-year storm. The detention and outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PF 11.	A storm water analysis prepared by a Professional Engineer registered in the State of Oregon shall be submitted for review and approval by the City to address appropriate pipe and detention facility sizing.
PF 12.	The applicant shall be in conformance with all water quality requirements for the proposed development per the Public Works Standards. If a mechanical water quality system is used, prior to City acceptance of the project the applicant shall provide a letter from the system manufacturer stating that the system was installed per specifications and is functioning as designed.
PF 13.	Storm water quality facilities shall have approved landscape planted and/or some other erosion control method installed and approved by the City of Wilsonville prior to streets and/or alleys being paved.
PF 14.	The applicant shall provide the City with a Stormwater Maintenance and Access Easement (on City approved forms) for City inspection of those portions of the storm system to be privately maintained. Applicant shall maintain all LID storm water components and private conventional storm water facilities located within medians and from the back of curb onto and including the project site.
PF 15.	Fire hydrants shall be located in compliance with TVF&R fire prevention ordinance and approval of TVF&R.
PF 16.	The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly abandoned in conformance with State standards.
PF 17.	All survey monuments on the subject site, or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
PF 18.	Sidewalks, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.

PF 19.	No surcharging of sanitary or storm water manholes is allowed.
PF 20.	The project shall connect to an existing manhole or install a manhole at each connection point to the public storm system and sanitary sewer system.
PF 21.	A City approved energy dissipation device shall be installed at all proposed storm system outfalls. Storm outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PF 22.	The applicant shall provide a 'stamped' engineering plan and supporting information that shows the proposed street light locations meet the appropriate AASHTO lighting standards for all proposed streets and pedestrian alleyways.
PF 23.	All required pavement markings, in conformance with the Transportation Systems Plan and the Bike and Pedestrian Master Plan, shall be completed in conjunction with any conditioned street improvements.
PF 24.	Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.
PF 25.	The applicant shall provide adequate sight distance at all project driveways by driveway placement or vegetation control. Specific designs to be submitted and approved by the City Engineer. Coordinate and align proposed driveways with driveways on the opposite side of the proposed project site.
PF 26.	Access requirements, including sight distance, shall conform to the City's Transportation Systems Plan (TSP) or as approved by the City Engineer. Landscaping plantings shall be low enough to provide adequate sight distance at all street intersections and alley/street intersections.
PF 27.	Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and ~~Allied Waste Management (United Disposal)~~ ***Republic Services*** for access and use of their vehicles.
PF 28.	Applicant shall prepare an Ownership and Maintenance agreement between the City and the Owner. Stormwater or rainwater facilities may be located within the public right-of-way upon approval of the City Engineer. The Ownership and Maintenance agreement shall specify that the rainwater and stormwater facilities shall be privately maintained by the Applicant; maintenance shall transfer to the respective homeowners association when it is formed.
PF 29.	The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
PF 30.	All water lines that are to be temporary dead-end lines due to the phasing of construction shall have a valved tee with fire-hydrant assembly installed at the end of the line.
PF 31.	Applicant shall provide a minimum 6-foot Public Utility Easement on lot frontages to all public right-of-ways. An 8-foot PUE shall be provided along Minor and Major Collectors. A 10-ft PUE shall be provided along Minor and Major Arterials.
PF 32.	Mylar Record Drawings: At the completion of the installation of any required public improvements, and before a 'punch list' inspection is scheduled, the Engineer shall perform a record survey. Said survey shall be the basis for the preparation of 'record drawings' which will serve as the physical record of those changes made to the plans and/or specifications,

	originally approved by Staff, that occurred during construction. Using the record survey as a guide, the appropriate changes will be made to the construction plans and/or specifications and a complete revised 'set' shall be submitted. The 'set' shall consist of drawings on 3 mil. Mylar and an electronic copy in AutoCAD, current version, and a digitally signed PDF.
Specific Comments:	
PF 33.	At the request of Staff, DKS Associates completed a Transportation Impact Analysis (TIA) dated October 21, 2013. The study was completed anticipating 113 residential units in the development; the proposed development has 100 units resulting in a reduced impact to City streets and intersections from what is reported in the TIA. The project is hereby limited to no more than the following impacts. Estimated New PM Peak Hour Trips: 100 Units: 101; (113 Units): (114) Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area: 100 Units: 36; (113 Units): (40)
PF 34.	The TIA indicates the intersection of Grahams Ferry Road and Tooze Road would operate at LOS F with these and other approved Villebois subdivisions. Improvements to this intersection are planned and funded by the City and construction work is anticipated to be completed by spring 2016.
PF 35.	All construction traffic shall access the site via Grahams Ferry Road. No construction traffic will be allowed on internal Villebois streets, except where water and sanitary work will occur on the south end of Villebois Drive.
PF 36.	In the 2013 Transportation Systems Plan Grahams Ferry Road is identified as a Minor Arterial. Applicant shall dedicate sufficient right-of-way to accommodate Grahams Ferry Road as a Minor Arterial; this will require an additional 8.5 feet of right-of-way dedication to the City to accommodate a half-street width of 38.5-ft (total right-of-way width of 77 feet).
PF 37.	Applicant shall reconstruct Grahams Ferry Road with a modified street cross-section. North of Athens Lane, west to east: storm swale, 1-ft gravel shoulder, 3-ft asphalt shoulder, two 11-ft travel lanes, 3-ft asphalt shoulder, 1-ft gravel shoulder, swale, landscaping and a 10-ft multi-use pathway. The center turn lane/median will not be constructed at this time. The centerline of street will match the existing centerlines north and south of the proposed project. South of Athens Lane the 10-ft pathway shall become a 5-ft sidewalk. Locate the pathway and sidewalk to minimize impacts to existing trees. Applicant will be eligible for Street SDC credits for all roadwork beyond 24 feet from edge of asphalt and for 5 feet of the 10-foot wide multi-use path.
PF 38.	On Grahams Ferry Road, stormwater will continue to be collected in storm swales; however the Applicant shall be required to provide detention and water quality requirements for impervious surfaces created with the reconstruction of Grahams

	Ferry Road.
PF 39.	On Grahams Ferry Road adjacent to the Villebois Village development the standard street light is a 35-ft black fiberglass direct bury pole (30-ft mounting height) with 6-ft black arm and black full-cutoff cobra head luminaire.
PF 40.	South of Villebois SAP South PDP 4, Grahams Ferry Road runs through a forested corridor. It is both the desire and direction of the City to allow a lower lighting standard on this section of roadway adjacent to the proposed development, with the exception of the intersection of Athens Lane and Grahams Ferry Road which shall be lighted per national guidelines. Applicant's lighting engineer shall work with City staff to determine an acceptable lighting level on Grahams Ferry Road.
PF 41.	With the improvements to Grahams Ferry Road applicant shall cause to have all overhead utilities along the east side of the road installed underground along the entire property frontage.
PF 42.	Internal street lighting: the proposed subdivision is located in what was referred to as the Future Study Area. While the Villebois street lighting master plan does not cover this area specifically, all internal streets shall be lighted with approved Westbrooke style street lights to maintain consistency with the other recently approved or constructed Villebois subdivisions.
PF 43.	Applicant has indicated this will be a two-phase project, with the first phase applicant shall complete full street design and construction through the far right-of-way and corner radii of all planned streets within the development. Streets shall be designed in conformance to the applicable street types as shown in the Villebois Village Master Plan.
PF 44.	Pedestrian Linkage - to provide school and pedestrian connectivity applicant shall provide a rocked, paved or bark-mulch pathway from the Phase 1 area to Villebois Drive.
PF 45.	The applicant shall provide 'stamped' engineering details with dimensions for intersection sight distance verification and AutoTURN layouts for all proposed intersections, including alley/street connections. Adequate clearance shall be provided at all intersections and alleyways. The sight distance point for exiting vehicles shall be located 14.4 feet from the edge of the traveled way. At a minimum, the applicant shall provide 'stamped' engineering AutoTURN layouts for fire trucks and buses (WB-60) that show the overhang and/or mirrors of the vehicle as opposed to the wheel paths. Turning vehicles may use the width of the minor street to start the appropriate turn. The vehicle must however, stay within the appropriate receiving (inside) lane of the major street. Additionally, the turning vehicle must not intrude onto the wheel chair ramp on the inside of the turning movement.
PF 46.	Alleys that are identified by Tualatin Valley Fire and Rescue (TVF&R) as possible routes for medical and/or fire emergencies shall meet TVF&R's design requirements.
PF 47.	At the time of plan submittal for a Public Works Permit, the applicant shall provide to the City a copy of correspondence showing that the plans have also been distributed to the franchise utilities. Prior to issuance of a Public Works Permit, the applicant shall have coordinated the proposed locations and associated infrastructure design for

	the franchise utilities. Should permanent/construction easements or right-of-way be required to construct the public improvements or to relocate a franchised utility, the applicant shall provide a copy of the recorded documents. Should the construction of public improvements impact existing utilities within the general area, the applicant shall obtain written approval from the appropriate utility prior to commencing any construction.
PF 48.	Applicant shall provide sufficient mail box units for the proposed phasing plan; applicant shall construct mail kiosk at locations coordinated with City staff and the Wilsonville U.S. Postmaster.
PF 49.	Rainwater management components will be allowed to be located in the public right-of-way, however such components shall be maintained by the Applicant, or subsequent HOA, and this shall be included in the Ownership and Maintenance agreement as required in PF 28.
PF 50.	Applicant shall connect sanitary sewer to the existing line at Villebois Drive & Amalfi Lane.
PF 51.	Applicant shall plug the abandoned existing force main and grout interior of sewer manhole at the corner of Villebois Drive and Normandy.
PF 52.	Most of the proposed development will require service from a wastewater pump station to be constructed by the Applicant, then owned and maintained by the City. Wastewater pump station shall be designed and constructed in compliance with the City standards in Exhibit C6.
PF 53.	Applicant shall construct a "looped" water system per PF 29 with phase 1 of the development with connections at Villebois Drive and Grahams Ferry Road. On Grahams Ferry Road this can be done by tying onto the south end of the existing 12" water line and extending an 8" water line down Grahams Ferry Road and into the proposed subdivision and tying into the 8" water line shown at Sicily Street and Como Drive.
PF 54.	With construction of the Villebois SAP South PDP 3 development there was a water vault and meter installed at the northwest corner of Villebois Drive and Amalfi Lane. Applicant shall remove this vault, piping and meter; water meter shall be returned to the City.
PF 55.	Existing abandoned water, sanitary, and storm water lines shall either be completely removed, grouted in place, or abandoned per a City approved recommendation from a Registered Geotechnical Engineer.
PF 56.	SAP South PDP 7 consists of 100 lots, 56 lots in the first phase and 44 lots in the second phase. All construction work in association with the Public Works Permit and Project Corrections List shall be completed prior to the City Building Division issuing a certificate of occupancy, or a building permit for the housing unit(s) in excess of 50% of total (29th lot for first phase and 23rd lot for the second phase).
PF 57.	Where "Good" and "Important" preserved trees are located within, or the drip-line extends across, the PUE, if conduits are placed in these areas they shall be bored under the tree's root system and not open trenched.

Request D: Tentative Subdivision Plat

PFE 1.	Subdivision or Partition Plats: Paper copies of all proposed subdivision/partition plats shall be provided to the City for review. Once the subdivision/partition plat is

	approved, applicant shall have the documents recorded at the appropriate County office. Once recording is completed by the County, the applicant shall be required to provide the City with a 3 mil Mylar copy of the recorded subdivision/partition plat.
PFE 2.	Subdivision or Partition Plats: All newly created easements shown on a subdivision or partition plat shall also be accompanied by the City's appropriate Easement document (on City approved forms) with accompanying survey exhibits that shall be recorded immediately after the subdivision or partition plat.
PFE 3.	Street names may need to be modified to meet Clackamas County GIS requirements. The street name "Estonia Way" cannot be used as there is an existing street by that name in Villebois SAP East PDP 1.

All Requests:

Natural Resource Division Conditions:	
Rainwater Management Plan:	
NR 1.	The Rainwater Management Plan does not match the proposed utility plan. Submit an updated Rainwater Management Plan, which reflects the current plan.
NR 2.	The applicant shall submit a detailed operations and maintenance manual for the rainwater management components that has been reviewed and approved by city staff before 50% of the units are occupied in **Plan Area 2, SAP South.**
NR 3.	Pursuant to the City of Wilsonville Public Works Standards, access should be provided for the entire perimeter of the rainwater management components. At a minimum, at least one access shall be provided for maintenance and inspection.
NR 4.	All Rainwater Management Components and associated infrastructure located in public areas shall be designed to the Public Works Standards. Rainwater Management Components in private areas shall comply with the plumbing code.
NR 5.	Plantings in Rainwater Management Components located in public areas shall comply with the Public Works Standards. Plantings in Rainwater Management Components located in private areas shall comply with the Plant List in the Rainwater Management Program or Community Elements Plan.
NR 6.	The rainwater management components shall comply with the requirements of the Oregon DEQ UIC (Underground Injection Control) Program.
Stormwater Management:	
NR 7.	Provide profiles, plan views and specifications for the proposed water quality treatment facilities consistent with the requirements of the City of Wilsonville's Public Works Standards.
NR 8.	Pursuant to the Public Works Standards, the applicant shall submit a maintenance plan (including the City's stormwater maintenance covenant) for the proposed stormwater facilities, inclusive of the rainwater management components, prior to approval for occupancy of the associated development.
NR 9.	Pursuant to the City of Wilsonville's Public Works Standards, access shall be provided to all areas of the proposed water quality treatment facilities. At a minimum, at least one access shall be provided for maintenance and inspection.
Other:	
NR 10.	The applicant shall comply with all applicable state and federal requirements for the proposed construction activities and proposed facilities (e.g. DEQ NPDES #1200–C permit).

Building Division Conditions:
None
Tualatin Valley Fire & Rescue Conditions:
None

MASTER EXHIBIT LIST:

The following exhibits are hereby entered into the public record by the Development Review Board as confirmation of its consideration of the application as submitted. This is the exhibit list that includes exhibits for Planning Case Files DB14-0002 through DB14-0007, SI14-0002.

A1. Staff report and findings (this document)
A2. Slides and notes for Staff's Public Hearing Presentation *(available at Public Hearing)*
A3. Staff Memo to DRB Regarding Staff Report Corrections and Changes dated April 14, 2014
B1. Applicant's Notebook for SAP Amendments and SROZ: *Under separate cover*
Section I: General Information
IA) Introductory Narrative
IB) Form/Ownership Documentation
IC) Copy of Certification of Assessment & Liens
ID) Fee Calculation
IE) Mailing List *Staff Note: This information has been revised*
Section II: SAP Amendment & SROZ Map Refinement
IIA) Supporting Compliance Report
IIB) Reduced Drawings *Staff Note: Sheet 8 revised, see Exhibit B9.*
IIC) Utility & Drainage Report
IID) Traffic Analysis
IIE) Historic/Cultural Resource
IIF) Significant Resource Impact Report
IIG) Tree Report
IIH) Architectural Pattern Book Proposed Amendments
III) Community Elements Book Proposed Amendments
IIJ) Master Signage and Wayfinding Plan Proposed Amendments
IIK) Rainwater Management Book
IIL) Sample Elevations of Mailbox Kiosk
IIM) Utility Sequencing Plan
B2. Applicant's SAP Large Format Plans (Smaller 11x17 plans included in Sections IIB of the applicant's notebook Exhibit B1.) *Under separate cover.*
Sheet 1 Cover Sheet
Sheet 2 Existing Conditions
Sheet 3 Aerial Photograph
Sheet 4 Land Use Key
Sheet 5 Land Use Plan
Sheet 6 Circulation Plan
Sheet 7 Street Sections
Sheet 8 Park/Open Space/Pathways Plan *Revised, see Exhibit B9.*
Sheet 9 SROZ Plan
Sheet 10 Street Tree Plan
Sheet 11 Tree Preservation Plan
Sheet 12 Grading Plan

Sheet 13 Utility Plan
Sheet 14 Phasing Plan

B3. Applicant's Notebook for PDP/Tentative Plat/Zone Change/Tree Removal Plan/Final Development Plan: *Under separate cover*

Section I: General Information
- IA) Introductory Narrative
- IB) Form/Ownership Documentation
- IC) Fee Calculation
- ID) Mailing List *Staff Note: This information has been revised*

Section II: Preliminary Development Plan
- IIA) Supporting Compliance Report
- IIB) Reduced Drawings
- IIC) Utility & Drainage Reports
- IID) Traffic Analysis
- IIE) Tree Report
- IIF) Significant Resource Impact Report (SRIR)
- IIG) Conceptual House Elevations

Section III: Tentative Subdivision Plat
- IIIA) Supporting Compliance Report
- IIIB) Tentative Plat *Staff Note: Sheet 4.1 revised, see Exhibit B9.*
- IIIC) Draft CC&R's
- IIID) Copy of Certification of Assessments and Liens
- IIIE) Subdivision Name Approval

Section IV: Zone Change
- IVA) Supporting Compliance Report
- IVB) Zone Change Map
- IVC) Legal Description & Sketch

Section V: Tree Removal Plan
- VA) Supporting Compliance Report
- VB) Tree Report
- VC) Tree Preservation Plan

Section VI: Final Development Plan
- VIA) Supporting Compliance Report
- VIB) Reduced Plans *Staff Note: Sheets L2, L3, L4 revised, see Exhibit B9.*
- VIC) Illustrative Plans
- VID) Sample Elevations of Mailbox Kiosks

B4. Applicant's Large Format Plans PDP/Tentative Plat/Tree Plan (Smaller 11x17 plans included in Sections IIB and IIIB of the applicant's notebook Exhibit B3.) *Under separate cover.*

Sheet 1 Cover Sheet
Sheet 2 Existing Conditions
Sheet 3 Aerial Photograph
Sheet 4.1 Tentative Plat *Staff Note: revised to add Tract 'X' above Lot 91. See Exhibit B9.*
Sheet 4.2 Tentative Plat

Sheet 5.1 Grading and Erosion Control
Sheet 5.2 Grading and Erosion Control
Sheet 6 Composite Utility Plan
Sheet 7.1 Circulation Plan
Sheet 7.2 Street Sections
Sheet 8.1 Site/Land Use Plan
Sheet 8.2 Typical Lot Pattern
Sheet 9.1 Tree Preservation Plan
Sheet 9.2 Tree Preservation Plan
Sheet 10 Street Tree/Lighting Plan
Sheet 11 Phasing Plan

B5. Large Format Plans for Final Development Plan (Smaller 11x17 plans included in Section VIB of the applicant's notebook, Exhibit B1.) *Under separate cover.*
Sheet L0 Cover Sheet
Sheet L1 Street Tree Plan
Sheet L2 Planting Plan North *Staff Note: Revised, see Exhibit B9*
Sheet L3 Planting Plan South *Staff Note: Revised, see Exhibit B9*
Sheet L4 Pocket Park 16 Park Plan *Staff Note: Revised, see Exhibit B9*
Sheet L5 Entry Plan East
Sheet L6 Entry Plan West
Sheet L7 Nature Trail Activity Area Plan
Sheet L8 Plant Legend and Details
Sheet L9 Details

B6. House Front Elevations Approved by Steve Coyle, City's Consultant Architect

B7. Arborist Memo Dated April 2, 2014 Regarding Important Oregon White Oak Trees
Memo
Site Plan Drawing for Tree 618
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 625
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 856
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 860
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 1023
Modified Profile for Hardscape within Critical Root Zone

B8. Conservation Easement Exhibit
Sheet 1.1 South
Sheet 1.2 North

B9. Revised Sheets Submitted April 2, 2014 Regarding Changes Related to Preserved Important Oregon White Oak Trees
Sheet 8 from Exhibit B2 Park/Open Space/Pathways Plan
Sheet 4.1 from Exhibit B4 Tentative Plat
Sheet L2 from Exhibit B5 Planting Plan North
Sheet L3 from Exhibit B5 Planting Plan South
Sheet L4 from Exhibit B5 Pocket Park 16 Park Plan

B10. Fire Truck AutoTURN Exhibit for Alta Court
B11. Lot 91 Preliminary Utility Layout
C1. Comments and Conditions from Engineering Division
C2. Comments and Conditions from Building Division
C3. Comments, Findings, and Conditions from Natural Resources
C4. Comments and Conditions from TVF&R
C5. Comments from Public Works
C6. Wastewater Pump Station Design Standards
C7. Revised Engineering Conditions PF 37 and 38 regarding Grahams Ferry Rd.
D1. Email Letter from Gary Templer dated March 27, 2014
D2. Email from John Danahy dated March 31, 2014

FINDINGS OF FACT:

1. The statutory 120-day time limit applies to this application. The application was received on January 17, 2014. On February 13, 2014, staff conducted a completeness review within the statutorily allowed 30-day review period, and, on February 21, 2014, the Applicant submitted new materials. On February 26, 2014 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 26, 2014

2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	V	Single-family residential
East:	V	Single-family residential/ Graham Oaks Nature Park
South:	PF/V	Graham Oaks Nature Park
West:	--	Unincorporated Rural Residential

3. Prior land use actions include:

Legislative:
02PC06 - Villebois Village Concept Plan
02PC07A - Villebois Comprehensive Plan Text
02PC07C - Villebois Comprehensive Plan Map
02PC07B - Villebois Village Master Plan
02PC08 - Village Zone Text
04PC02 – Adopted Villebois Village Master Plan
LP-2005-02-00006 – Revised Villebois Village Master Plan
LP-2005-12-00012 – Revised Villebois Village Master Plan (Parks and Recreation)
LP10-0001 – Amendment to Villebois Village Master Plan (School Relocation from SAP North to SAP East)
LP13-0005 – Amendment to Villebois Village Master Plan (Future Study Area)

Quasi-Judicial:
03DB21 - SAP-South

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

CONCLUSIONARY FINDINGS:

NOTE: Pursuant to Section 4.014 the burden of proving that the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

GENERAL INFORMATION

Section 4.008 Application Procedures-In General

Review Criteria: This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.
Finding: These criteria are met.
Explanation of Finding: The application is being processed in accordance with the applicable general procedures of this Section.

Section 4.009 Who May Initiate Application

Review Criterion: "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."
Finding: This criterion is satisfied.
Explanation of Finding: The application has been submitted on behalf of contract purchaser Polygon Homes, and is signed by Bo Oswald, an authorized member of the current owner, Northwest Wilsonville Properties, LLC.

Subsection 4.010 (.02) Pre-Application Conference

Review Criteria: This section lists the pre-application process
Finding: These criteria are satisfied.
Explanation of Finding: A pre-application conference was held on May 2, 2013 in accordance with this subsection.

Subsection 4.011 (.02) B. Lien Payment before Application Approval

Review Criterion: "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."
Finding: This criterion is satisfied.

Explanation of Finding: No applicable liens exist for the subject property. The application can thus move forward.

Subsection 4.035 (.04) A. General Site Development Permit Submission Requirements

Review Criteria: "An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code." Listed 1. through 6. j.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has provided all of the applicable general submission requirements contained in this subsection.

Section 4.110 Zoning-Generally

Review Criteria: "The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192." "The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise."
Finding: These criteria are satisfied.
Explanation of Finding: This proposed development is in conformity with the Village zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

REQUEST A: DB14-0002 SAP-SOUTH AMENDMENTS FOR PLAN AREA 2

The applicant's findings in Section IIA of their notebook, Exhibit B1, respond to the majority of the applicable criteria.

Wilsonville Comprehensive Plan

Implementation Measure 4.1.6.a. Development in the "Residential-Village" Map Area

A1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
Finding: These criteria are satisfied.
Explanation of Finding: As found in this report, development is being proposed consistent with the Villebois Village Master Plan and the "Village" Zone District. See Findings A3 through A69.

Implementation Measure 4.1.6.c. Application of the "Village" Zone District

A2. **Review Criteria:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
Finding: These criteria are satisfied.
Explanation of Finding: The "Village" Zone is proposed to be applied. See Request C.

Villebois Village Master Plan

General- Land Use Plan

Goal: Villebois Village shall be a complete community that integrates land use, transportation, and natural resource elements to foster a unique sense of place and cohesiveness.

General-Land Use Plan Policy 1 Range of Choices

A3. **Review Criteria:** "The Villebois Village shall be a complete community with a wide range of living choices, transportation choices, and working and shopping choices. Housing shall be provided in a mix of types and densities resulting in a minimum of 2,300 dwelling units within the *Villebois Village Master Plan* area."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP amendment continues the provision of a mix of types and densities resulting in a minimum of 2,300 dwelling units within the Villebois area. The proposed SAP amendment also facilitates mode choice in transportation with facilities for bicycles and pedestrians in addition to vehicles. Commercial areas continue to be concentrated around the Village Center.

General-Land Use Plan Policy 2 Compliance with Figure 1 – Land Use Plan

A4. **Review Criteria:** "Future development applications within the Villebois Village area shall provide land uses and other major components of the Plan such as roadways and parks and open space in general compliance with their configuration as illustrated on *Figure 1 – Land Use Plan* or as refined by Specific Area Plans. The proposed uses for the Future Study Area Specific Area Plan Amendment to SAP South shall be those identified in *Figure 1 – Land Use Plan,* which includes residential uses being limited to single-family lots in the medium to estate land use category identified in Wilsonville Code Subsection 4.125 (.18) F. 1. a. iv. arranged in a similar pattern as other areas on the edges of Villebois. Due to its location outside the general trapezoidal shape of Villebois and distance from the Village Center and neighborhood commons as well as its relatively small size, the Future Study Area Specific Area Plan Amendment to SAP South shall not be considered a neighborhood plan as defined in Section 2.1 of the *Villebois Village Master Plan.*"
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP Amendment further defines the residential uses in the Future Study Area and other components are in the general configuration shown in the Master Plan. As can be seen on Sheet 5 *Land Use Plan* of the applicant's submitted plan set, Exhibit B2, the residential uses are limited to medium to large lots. They are arranged as a similar pattern as other areas in Villebois with large and standard lots on the edges with a mix of lot sizes on the interior of the site. The applicant has not requested the area be considered a neighborhood plan.

General-Land Use Plan Policy 3 Civic, Recreational, Educational, and Open Space Opportunities

A5. **Review Criteria:** "The Villebois Village shall provide civic, recreational, educational and open space opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP Amendment shows recreational opportunities shown in the Master Plan for the subject area.

General-Land Use Plan Policy 4 Full Public Services

A6. **Review Criteria:** "The Villebois Village shall have full public services including: transportation; rainwater management; water; sanitary sewer; fire and police services; recreation, parks and open spaces; education; and transit."
Finding: These criteria are satisfied.
Explanation of Finding: All the listed public services are proposed to be provided consistent with the Master Plan.

General-Land Use Plan Policy 5 Development Guided by Finance Plan and CIP

A7. **Review Criteria:** "Development of Villebois shall be guided by a Finance Plan and the City's Capital Improvement Plan, ensuring that the availability of services and development occur in accordance with the City's concurrency requirements (see Implementation Measure 4, below)."
Finding: These criteria are satisfied.
Explanation of Finding: All city requirements for concurrency and Development Agreements remain in effect and will be applied, including concurrency requirements with the PDP approval. See Request B.

General-Land Use Plan Implementation Measure 1 Unique Planning and Regulatory Tools

A8. **Review Criteria:** "Allow for unique planning and regulatory tools that are needed to realize the *Villebois Village Master Plan*. These tools shall include, but are not limited to: Specific Area Plans; Pattern Books; and Community Elements Books."
Finding: These criteria are satisfied.
Explanation of Finding: All the listed tools are being utilized for the area proposed to be added to SAP South as Plan Area 2.

General-Land Use Plan Implementation Measure 3 Master Plan Refinements

A9. **Review Criteria:** "Refinements to the *Villebois Village Master Plan* are anticipated as more detailed plans are developed for the Specific Area Plans. Specific Area Plans may propose refinements to the *Villebois Village Master Plan* without requiring an amendment to the *Villebois Village Master Plan* provided the refinement is not significant. Non-significant refinements shall be defined in the Village ("V") Zone text and may include, but are not limited to: minor alterations to street alignments or minor changes in area or uses. Disagreement about whether a refinement is significant shall be resolved by a process provided in the Village ("V") Zone text."
Finding: These criteria are satisfied.
Explanation of Finding: Refinements are proposed consistent with this allowance.

General-Land Use Plan Implementation Measure 4 Coordinating Finance Plan and Development Agreements

A10. **Review Criteria:** "The Master Planner shall coordinate with the City on the development of a Finance Plan for necessary urban services and public infrastructure. Each developer within Villebois Village will sign their own Development Agreement that will address the necessary urban services and public infrastructure as appropriate."
Finding: These criteria are satisfied.
Explanation of Finding: All city requirements for concurrency and Development Agreements remain in effect and will be applied, including concurrency requirements with the PDP approval. See Request B.

General-Land Use Plan Implementation Measure 5 SAP South Amendment for Future Study Area

A11. **Review Criteria:** "The Specific Area Plan (SAP) Amendment to SAP South for the Future Study Area shall demonstrate compliance with the *Villebois Village Master Plan*, the City's Comprehensive Plan and its sub-elements, the City's Planning and Land Development Ordinance, and all other applicable regulatory requirements. The developer of the Future Study Area shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal."
Finding: These criteria are satisfied.
Explanation of Finding: Villebois Village Master Plan amendments were approved by the City Council in October 2013 for single-family residential development in the Future Study Area (City Case File LP13-0005, Ordinance No. 724). Further land use requests, including the SAP Amendment are able to proceed.

Residential Neighborhood Housing

Goal: The Villebois Village shall provide neighborhoods consisting of a mix of homes for sale, apartments for rent, row homes, and single-family homes on a variety of lot sizes, as well as providing housing for individuals with special needs. The Villebois Village shall provide housing choices for people of a wide range of economic levels and stages of life through diversity in product type.

Residential Neighborhood Housing Policy 1 Variety of Housing Options

A12. **Review Criteria:** "Each of the Villebois Village's neighborhoods shall include a wide variety of housing options and shall provide home ownership options ranging from affordable housing to estate lots."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed mix of housing for the subject area is similar to that in the adjacent area of SAP South, PDP 4 as well as other areas on the edges of Villebois with large and standard lots on the outer edge with a mix of medium, large, and standard lots inside the initial edge.

Residential Neighborhood Housing Policy 2 Affordable Rental and Ownership Opportunities

A13. **Review Criteria:** "Affordable housing within Villebois shall include rental and home ownership opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: Affordable rental and home ownership opportunities at the level shown in the adopted Master Plan remain. The proposed mix of housing for the subject area is similar to that in the adjacent area of SAP South, PDP 4 as well as other areas on the edges of Villebois with large and standard lots on the outer edge with a mix of medium, large, and standard lots inside the initial edge.

Residential Neighborhood Housing Policy 3 Average Density Requirement

A14. **Review Criteria:** "The mix of housing shall be such that the Village development provides an overall average density of at least 10 dwelling units per net residential acre."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed development helps maintain an overall average density in Villebois of more than 10 dwellings units per net residential acre with the type of residential development shown in Figure 1 of the Villebois Village Master Plan.

Residential Neighborhood Housing Policy 4 Minimum Total Dwelling Units

A15. **Review Criteria:** "The Villebois Village shall accommodate a total of at least 2,300 dwelling units within the boundary of the *Villebois Village Master Plan*."
Finding: These criteria are satisfied.
Explanation of Finding: This dwelling unit minimum for Villebois continues to be exceeded.

Residential Neighborhood Housing Policy 5 Mix of Housing Types in Neighborhoods

A16. **Review Criteria:** "The Villebois Village shall provide a mix of housing types within each neighborhood and on each street to the greatest extent practicable."
Finding: These criteria are satisfied.
Explanation of Finding: A variety of housing types are proposed in the subject area consistent with Figure 1 of the Villebois Village Master Plan.

Residential Neighborhood Housing Policy 6 Community Housing Requirements

A17. **Review Criteria:** "The Villebois Village shall include community housing types consistent with Oregon Revised Statute 426.508(4), which requires that no more than 10 acres be retained from the sale of the former Dammasch State Hospital property for development of community housing for chronically mentally ill persons. The City of Wilsonville, the Oregon Department of Administrative Services, and the Mental Health and Developmental Disability Services Division shall jointly coordinate the identification of the acreage to be retained."
Finding: These criteria are satisfied.
Explanation of Finding: None of the designated 10 acres are within the subject area.

Residential Neighborhood Housing Policy 7 Governor's Quality Development Objectives and Governor's Livability Initiative

A18. **Review Criteria:** "The development standards and Specific Area Plans required by the Village zone shall be consistent with the Governor's Quality Development Objectives and the Governor's Livability Initiative."
Finding: These criteria are satisfied.
Explanation of Finding: The Governor's Quality Development Objectives (QDO's), part of the Oregon Initiative adopted in 1997, have guided the design and development of Villebois. The Development Objectives promote the building of strong livable communities, economic growth and the efficient use of public resources, and are listed as follows:

- Promote compact development within urban growth boundaries.
- Give priority to a quality mix of development that addresses the economic and community goals of a community and region.
- Encourage mixed-use, energy efficient development.
- Support development that is compatible with community and regional environmental concerns and available natural resources.
- Support development for a balance of jobs and affordable housing within the community.
- Promote sustainable local and regional economies.

The Villebois Village Concept Plan, the Villebois Village Master Plan and the Village zone were developed, and have all been adopted, to guide the creation of a community that is consistent with these objectives. The SAP amendment does not alter any of these circumstances. The proposed uses are consistent Figure 1 – Land Use Plan which has been found to meet these objectives.

Residential Neighborhood Housing Policy 8 Increasing Transportation Options

A19. **Review Criteria:** "Each neighborhood shall be designed to increase transportation options. Neighborhoods shall be bike and pedestrian friendly."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP amendment continues to show trails, paths, bike facilities, block lengths, etc. consistent with the Master Plan to be pedestrian friendly and increase transportation options.

Residential Neighborhood Housing Policy 10 Incorporating Natural Features

A20. **Review Criteria:** "Natural features shall be incorporated into the design of each neighborhood to maximize their aesthetic character while minimizing impacts to said natural features."
Finding: These criteria are satisfied.
Explanation of Finding: Wetlands and forested areas are incorporated into the design of the subject area.

Residential Neighborhood Housing Implementation Measure 1 Compact, Pedestrian Oriented Character

A21. **Review Criteria:** "Ensure, through the development standards and Pattern Book(s) required by the Village zone, that the design and scale of dwellings are compatible with the compact, pedestrian-oriented character of the concepts contained in the *Villebois Village Concept Plan* and the contents of this *Villebois Village Master Plan*."
Finding: These criteria are satisfied.
Explanation of Finding: The same development standards and Pattern Book is being applied as other areas of SAP South to ensure design of dwellings consistent with the compact, pedestrian-oriented character and other development in Villebois.

Residential Neighborhood Housing Implementation Measure 2 Pattern Books

A22. **Review Criteria:** "Create a set of design guidelines for the development of Pattern Books with the Village zone requirements. Pattern Books shall address, at a minimum, architectural styles and elements, scale and proportions, and land use patterns with lot diagrams."
Finding: These criteria are satisfied.
Explanation of Finding: The pattern book previously used for the rest of SAP South is also being applied to the subject area.

Park Descriptions Pocket Park 16

A23. **Review Criteria:** "Pocket Park 16 provides a neighborhood focal point and gathering spot, and connections to the adjacent nature trail system. This pocket park provides nature paths, a picnic table, benches, and a play structure."
Finding: These criteria are satisfied.
Explanation of Finding: Pocket Park 16 provides all of the required elements, in addition to other elements including a shelter. See Park Refinement Request below and Final Development Plan request, Request F.

Park Descriptions Miscellaneous Linear Greens (Future Study Area)

A24. **Review Criteria:** "These linear greens offer visual and physical linkages to open space areas and areas adjacent to existing landscaping. Some linear green spaces include lawn areas, benches, and existing trees where feasible."
Finding: These criteria are satisfied.
Explanation of Finding: Linear greens are proposed consistent with the Master Plan. See Final Development Plan request, Request F.

Park Descriptions OS-3: Forested Wetland Preserve (Future Study Area SROZ)

A25. **Review Criteria:** "This site contains intact and functioning wetlands within forested areas. While the plan does not include restoration or expansion of the wetlands in this site, any work or impacts within the forested wetland preserve shall comply with SROZ regulations as applicable. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Benches will be located along nature trails in forested areas, and will be distanced from residential areas and play areas. These areas will offer opportunity for wildlife viewing and quiet contemplation that complements the undeveloped nature of this open space. This open space will also include a creative child play area, benches, and picnic tables. Additionally, connections to trails in Graham Oaks Natural Area will be provided."
Finding: These criteria are satisfied.
Explanation of Finding: Minor refinements are proposed for Open Space 3. See Finding A114. All improvements in Open Space 3 are being reviewed through the SROZ regulations. See Request G.

Trails and Pathways Descriptions Forested Wetland Preserve (OS-3, 4, 5, and 6)

A26. **Review Criteria:** "The Villebois Village Master Plan includes 5,998 lineal feet of nature trails around the edge of the forested wetland, connecting the Future Study Area with the West Neighborhood Park and Greenway via a short sidewalk."
Finding: These criteria are satisfied.
Explanation of Finding: The connections and network of trails described in the Master Plan for Open Space 3 are provided.

Chapter 3 Parks & Open Space/Off-Street Trails & Pathways

Goal The Parks system within Villebois Village shall create a range of experiences for its residents and visitors through an interconnected network of pathways, parks, trails, open space and other public spaces that protect and enhance the site's natural resources and connect Villebois to the larger regional park/open space system.

Parks and Open Spaces Policy 1 Incorporating Existing Trees, Planting Shade Trees

A27. **Review Criteria:** "Parks and open space areas shall incorporate existing trees where feasible and large shade trees shall be planted in appropriate locations in parks and open spaces."
Finding: These criteria are satisfied.
Explanation of Finding: The site includes numerous existing trees. To minimize the impacts to existing trees on the site, the proposed development footprint is predominantly

located within the areas previously impacted by development. Trees have only been inventoried within the proposed development footprint; outside of the development footprint all existing trees will be retained within proposed parks and open space areas.

Parks and Open Spaces Policy 2 Interconnected Trail System

A28. **Review Criteria:** "An interconnected trail system shall be created linking the park and open spaces and key destination points within Villebois and to the surrounding neighborhoods. The trails system shall also provide loops of varying length to accommodate various activities such as walking, running and rollerblading."
Finding: These criteria are satisfied.
Explanation of Finding: The site is located at the southwest corner of Villebois, abutting earlier phases of Villebois to the north and east. The site also abuts Grahams Ferry Road to the west and Grahams Oaks Nature Park to the south and east. Key destination points include other park areas, the Village Center and the Lowrie Primary School within Villebois, as well as the trail system within Graham Oaks Nature Park and the middle school east of Graham Oaks Nature Park. The Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 and B9, shows creation of an interconnected trail system linking the proposed parks and open spaces with the key destination points within this phase and with the surrounding neighborhoods. The proposed trail system provides loops of varying length that will accommodate various types of activities. Condition of Approval PF 44 requires an interim path to provide connectivity through Phase II prior to construction for residents of Phase I.

Parks and Open Spaces Policy 3 Variety of Facilities and Activities

A29. **Review Criteria:** "Parks shall encourage the juxtaposition of various age-oriented facilities and activities, while maintaining adequate areas of calm."
Finding: These criteria are satisfied.
Explanation of Finding: The Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, shows proposed park and open space areas. The proposed homes will be surrounded by large open space areas that include a nature trail system with nature trail activity areas and benches distributed along the trails to provide for areas of creative play or quiet reflection in ways that minimize impacts to the SROZ resources. A centrally located pocket park is planned adjacent to, but outside of, the SROZ and is bordered by two of the main roads within this phase. This pocket park will serve as a neighborhood gathering space, located at the convergence of multiple trail segments from different directions and multiple streets from different directions. The pocket park provides a mix of age-oriented facilities and activity areas, including a sheltered seating area, child play structures for older and younger aged children, a lawn play area, and creative play through interaction opportunities with the non-significant wetland and with an active lawn area located to complement child play structures. Additionally, linear greens and landscape tracts are provided to connect the park and open space areas through the middle of the project. The planned park and open space areas provide activities for a range of ages and activity levels.

Parks and Open Spaces Policy 4 Wildlife Habitat

A30. **Review Criteria:** "Park designs shall encourage opportunities for wildlife habitat, such as plantings for wildlife foraging and/or habitat, bird and/or bat boxes and other like elements."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed park designs include large open space tracts for the preservation and enhancement of SROZ areas. The proposed nature trail system with nature trail activity areas will be established in ways that preserve and encourage opportunities for wildlife habitat.

Parks and Open Spaces Policy 5 Power of Ten

A31. **Review Criteria:** "Gathering spaces in parks shall generate social interaction by adding layers of activity (Power of Ten)."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed pocket park will serve as the primary gathering space within this phase. The design to this pocket park will generate social interactions through the layers of activities planned within and adjacent to the park, including the convergence of various trails and adjacent streets, a shelter with seating, two play structures for different age groups, creative play opportunities through interaction with a non-significant wetland area in conjunction with a seating area overlooking the wetland area and an active lawn area located to complement child play structures, and an adjacent roadside mailbox.

Parks and Open Spaces Policy 6 Compliance with SROZ Regulations

A32. **Review Criteria:** "Build-out of the Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Any encroachment into the SROZ will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways shall be made to comply with SROZ regulations."
Finding: These criteria are satisfied.
Explanation of Finding: SROZ regulations are being reviewed, see Request G.

Parks and Open Spaces Policy 9 Parks Flexibility Over Time

A33. **Review Criteria:** "Parks and recreation spaces shall provide for flexibility over time to allow for adaptation to the future community's park, recreation and open space needs."
Finding: These criteria are satisfied.
Explanation of Finding: No park programming is such as to preclude future flexibility.

Parks and Open Spaces Policy 11 Parking along Park Frontages

A34. **Review Criteria:** "On-street parking will not be allowed along the frontages of parks and open spaces where views into and out of the park spaces should be protected. Parking will be allowed along parks and open spaces in circumstances where it is necessary for the function of the park and will not obstruct the views into and out of the park area."
Finding: These criteria are satisfied.

Explanation of Finding: On-street parking along parks is not proposed, consistent with this Policy.

Parks and Open Spaces Implementation Measure 1 Compliance with Parks Figures

A35. **Review Criteria:** "Future and pending development applications within Villebois (Specific Area Plans, Preliminary Development Plans and Final Development Plans) shall comply with the park, trail, open space system proposed in Figure 5 – Parks and Open Space Plan, Figure 5A – Recreational Experiences Plan, and Table 1: Parks Programming. Refinements may be approved in accordance with Village Zone section 4.125(.18) (F)."
Finding: These criteria are satisfied.
Explanation of Finding: SAP South Plan Area 2 is generally consistent with Figure 5, Figure 5A and Table 1 of the Villebois Village Master Plan. Minor refinements are proposed as discussed in Findings A114 through A119 as allowed in Subsection 4.125 (.18) F.

Parks and Open Spaces Implementation Measure 3 Native Vegetation, Landforms, and Hydrology

A36. **Review Criteria:** "Parks and open spaces shall be designed to incorporate native vegetation, landforms and hydrology to the fullest extent possible."
Finding: These criteria are satisfied.
Explanation of Finding: As shown on the Park/Trail/Open Space Plan , Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, parks and open space areas are designed to incorporate native vegetation (existing trees are retained within park & open space areas), landforms (minimal grading will occur within parks and no grading will occur within SROZ open space areas aside from identified impact areas) and hydrology (the locally significant wetland is preserved within an SROZ open space area and non-locally significant wetlands are retained within the pocket park and with open space areas).

Parks and Open Spaces Implementation Measure 4 Community Elements Book

A37. **Review Criteria:** "Each Specific Area Plan shall include a Community Elements Book that (1) meets the requirements of Master Plan Chapter 3; (2) specifies the value system and methodology for tree preservation, protection and tree planting; and (3) provides a proposed plant list. The Community Elements Book also includes specifications for site furnishings and play structures. Proposed parks shall closely comply with the specifications of the applicable Community Elements Book."
Finding: These criteria are satisfied.
Explanation of Finding: A Community Elements Book was submitted and approved with the application for Specific Area Plan South. This application proposes to add Plan Area 2 to SAP South. This application includes a proposal to add Plan Area 2 to the SAP South Community Elements Book (see Exhibit B1, notebook, Section II I).

Parks and Open Spaces Implementation Measure 5 Artwork is Encouraged

A38. **Review Criteria:** "Artwork is encouraged to be incorporated into parks."
Finding: These criteria are satisfied.

Explanation of Finding: Space has been reserved for placement of artwork in parks closer to the Village Center and within neighborhood and community gathering spaces. The addition of Plan Area 2 does alter this approach.

Parks and Open Spaces Implementation Measure 6 Interface with Graham Oaks

A39. **Review Criteria:** "The interface with the Graham Oaks Natural Areas should contain enhancements such as trail connections, landscaping, gateway features, seating and overlook opportunities."
Finding: These criteria will be satisfied by Condition of Approval PDA 1.
Explanation of Finding: The Park/ Open Space/Pathways Plan illustrates connections from the nature trail system in Plan Area 2 to the Graham Oaks Natural Area, with two (2) connections to the east and one (1) connection to the south. Benches and nature trail activity areas are provided along nature trails in parks and open space areas, including trails connecting to Graham Oaks Natural Area. The Applicant will coordinate with Metro regarding appropriate interfaces/enhancements at trail connections which may include some gateway features such as signage. The condition of approval ensures the coordination occurs between the applicant and Metro.

Parks and Open Spaces Implementation Measure 7 Year Round Recreation

A40. **Review Criteria:** "The ability to recreate year round shall be preserved through measures such as: the provision of some hard surfaces that function in the wet season; areas shaded from the sun; areas protected from the rain; safely lit areas and indoor recreation opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: Specific Area Plan South includes a variety of year-round recreation and open space opportunities, including a neighborhood commons, multi-use trails, and play and park structures. The Park/ Open Space/Pathways Plan illustrates how Plan Area 2 will contribute additional parks and open space areas that contribute to the ability to recreate year round. Through the preservation of existing trees within parks and open space areas, shade from the sun and rain is provided along the nature trail system and the nature trail activity areas. The pocket park includes a shelter with a small hardscape area, which will be functional in the wet season and provide shade from the sun. This area will also be safely lit due to the adjacent roads and street lights.

Parks and Open Spaces Implementation Measure 9 Tree Retention

A41. **Review Criteria:** "The design of Villebois shall retain the maximum number of existing trees practicable that are six inches or more DBH in the "Important" and "Good" tree rating categories, which are defined in the Community Elements Books. Trees rated "Moderate" shall be evaluated on an individual basis as regards retention. Native species of trees and trees with historical importance shall be given special consideration for retention."
Finding: These criteria are satisfied.
Explanation of Finding: The site includes numerous existing trees, including a significant number of mature Oregon White Oak. To minimize the impacts to existing trees on the site, the proposed development footprint is predominantly located within areas previously impacted by development. Trees have only been inventoried within the proposed development footprint; outside of the development footprint all existing trees will be

retained within proposed parks and open space areas. The Tree Preservation Plan identifies the inventoried existing trees, their classification and their whether they will be retained or removed. Specific Methodology used to determine DBH and tree ratings is described in the Tree Report (see Exhibit B1, notebook, Section IIG). Efforts have been undertaken in the site layout to retain as many "Important" and "Good" trees as practicable, with special consideration given to Oregon White Oak trees.

Parks and Open Spaces Implementation Measure 10 Tree Preservation and Planting Plans

A42. **Review Criteria:** "Each Specific Area Plan, Preliminary Development Plan and Final Development Plan shall include tree preservation plans and planting plans to indicate proposed tree planting within parks and along streets and descriptions of the size of trees when planted and upon maturity."
Finding: These criteria are satisfied.
Explanation of Finding: The Tree Preservation Plan (see Exhibit B1, notebook, Section IIG) has been submitted with SAP South Plan Area 2. The Preliminary Development Plan and Final Development Plan include additional information on tree preservation and street tree plans.

Parks and Open Spaces Implementation Measure 11 Cultural and Historic Resources

A43. **Review Criteria:** "Provide for review of cultural and historic resources on portions of Villebois that are to be annexed into the City of Wilsonville with the Specific Area Plan."
Finding: These criteria are satisfied.
Explanation of Finding: A cultural resources inventory has been completed and is available in Exhibit B1, notebook, Section IIE. No resources have been identified for preservation.

Parks and Open Spaces Implementation Measure 13 SROZ Compliance

A44. **Review Criteria:** "The Villebois Master Plan shall comply with the Significant Resource Overlay Zone (SROZ) regulations. Proposed encroachments into the SROZ for exempt or non-exempt development shall be reviewed for compliance with the requirements of Section 4.139 of the Wilsonville Code."
Finding: These criteria are satisfied.
Explanation of Finding: Request G reviews compliance with the SROZ regulations.

Parks and Open Spaces Implementation Measure 14 Park Lighting

A45. **Review Criteria:** "A conceptual plan for the lighting of park spaces throughout Villebois is provided on the plan included in Appendix H. Future development applications shall comply with the lighting system proposed in Appendix H. Refinements may be approved in accordance with Village Zone Section 4.125(.18)(F)."
Finding: These criteria are satisfied.
Explanation of Finding: No park lighting is shown for the subject area in Appendix H. Portions of Pocket Park 16 as well as the linear greens will be lit by adjacent street lights.

Parks and Open Spaces Implementation Measure 15 Variety of Child Play Areas

A46. **Review Criteria:** "Each child play area shall include uses suitable for a range of age groups."
Finding: These criteria are satisfied.
Explanation of Finding: The pocket park includes two (2) play structures suitable for younger children and older children, as well as an active lawn play area and access to a non-significant wetland for creative play. Additionally nature trails pass through the pocket park connecting to the open space areas and linear greens which also include nature trails and nature trail activity areas. The attached Park/Open Space/Pathways Plan, see Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, illustrates proposed park elements, which provide a variety of uses suitable for a range of age groups.

Parks and Open Spaces Implementation Measure 18 Completion of Parks and Home Occupancy

A47. **Review Criteria:** "The park spaces included within each phase of development will be completed prior to occupancy of 50% of the housing units in that particular phase unless weather or other special circumstances prohibit completion, in which case bonding for the improvements shall be permitted."
Finding: These criteria are satisfied.
Explanation of Finding: A Condition of Approval PDB 3 under the Request B, Preliminary Development Plan, ensures compliance with this implementation measure.

Parks and Open Spaces Implementation Measure 20 ADA Park Access

A48. **Review Criteria:** "The adequacy, amount and location of the proposed parking (including ADA parking) necessary to serve the proposed park uses shall be evaluated in detail at the SAP and PDP level. Off-street parking may be required to serve the various park users."
Finding: These criteria are satisfied.
Explanation of Finding: With only local pocket parks and linear greens no off-street parking is required.

Sanitary Sewer Goal, Policy, and Implementation Measures

A49. **Review Criteria:** "Goal: The Villebois Village shall include adequate sanitary sewer service.

Policy

1. The sanitary sewer system for Villebois Village shall meet the necessary requirements for the City of Wilsonville Wastewater Master Plan.

Implementation Measures

1. Implement the following list of policies and projects of the City of Wilsonville Wastewater Master Plan:

- Policies: 1-7; and
- Projects: CIP-UD2.

2. Incorporate the construction of CIP-UD2 into the Finance Plan.

3. Insure the 537 gpm capacity of the Evergreen Road sewer line is not exceeded with Specific Area Plan South application.

4. Insure the 340 gpm capacity of the Park at Merryfield sewer line is not exceeded with Specific Area Plan South application.

5. At the time of development of the Future Study Area, replace private pump station with Public Sanitary Sewer Lift Station build consistent with Technical Appendix I."

Finding: These criteria are satisfied.
Explanation of Finding: Construction of the Barber Main sewer line has been completed and now serves the subject site. A supporting utility report is included in Exhibit B1, notebook, Section IIC, demonstrating the sanitary sewer for SAP South Plan Area 2 will insure the 153 gpm capacity of the Barber Main sewer line is not exceeded. The Utility Plan, see Sheet 13 of Exhibit B2, shows the provision of a Public Sanitary Sewer Lift Station to replace the private pump station. The Public Sanitary Sewer Lift Station will be built consistent with Technical Appendix I. Additional design details for the Public Sanitary Sewer Lift Station will be provided to the City for review with subsequent construction plans for the first phase of this development. Additional design standards for the lift station are included in Exhibit C6.

Water System Goal, Policy, and Implementation Measures

A50. **Review Criteria:**

"Goal

The Villebois Village shall include adequate water service.

Policy

The water system for Villebois Village shall meet the necessary requirements of the City of Wilsonville Water System Master Plan.

Implementation Measures
1. Implement the following list of Water System Master Plan policies and projects with development of Villebois Village:

- Policies: 1-7
- Projects:
  1) 18-inch main in Barber Street from Kinsman Road to Brown Road
  2) 48-inch main in Kinsman Road from Barber Street to Boeckman Road
  3) 24-inch main in Boeckman Road from Kinsman Road to Villebois Drive
  4) 18-inch main in Villebois Drive from Boeckman Road to Barber Street
  5) 18-inch main in Barber Street from Brown Road to Grahams Ferry Road
  6) 18-inch main in Grahams Ferry Road from Barber Street to Tooze Road.
  7) 12-inch main in Grahams Ferry Road from the Future Study Area to Barber Street

8) 30-inch main in Tooze Road from Villebois Drive to Grahams Ferry Road
9) 12-inch main in extension of Villebois Drive from Barber Street to the Future Study Area
10) 12-inch main connections from Barber Street to Evergreen Road

2. Incorporate the construction of the above referenced projects into the Finance Plan."

Finding: These criteria are satisfied.
Explanation of Finding: A water system is proposed consistent with Master Plan requirements.

Storm Water Goal

The Villebois Village shall include adequate storm water systems to prevent unacceptable levels of flooding, protect receiving streams and water bodies from pollution and increased runoff rates due to development, and create a connection between people and the environment.

Storm Water Policy 1 Meeting Stormwater Master Plan and Public Works Standards

A51. **Review Criteria:** "The onsite storm water system for Villebois shall meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards."
Finding: These criteria are satisfied.
Explanation of Finding: The Utility Plan, Sheet 13 of Exhibit B2, shows the proposed stormwater system for Specific Area Plan South Plan Area 2. A supporting utility report is included in Exhibit B1, notebook, Section IIC, which demonstrates that the stormwater system will meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards.

Storm Water Policy 2 and 3 Minimizing Development "Footprint" on Hydrological Cycle, Rainwater Management

A52. **Review Criteria:** "Villebois Village shall strive to minimize the development "footprint" on the hydrological cycle through the combination of stormwater management and rainwater management."
"Villebois Village shall integrate rainwater management systems into parks and open space areas."
Finding: These criteria are satisfied.
Explanation of Finding: Rainwater Management Systems are integrated into parks and open space areas as shown on the Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 as shown modified in Exhibit B9. The Rainwater Management Program for SAP South Plan Area 2 is described in Exhibit B1, notebook, Section IIK.

Storm Water Implementation Measure 11 Stormwater Facility Maintenance

A53. **Review Criteria:** "Pursuant to the City's Stormwater Master Plan Policies 9.2.4 and 9.2.5, maintenance of stormwater conveyance facilities, including detention/retention facilities, will be planned as part of the Specific Area Plans for the Villebois Village."
Finding: These criteria are satisfied.

Explanation of Finding: Ownership and maintenance of stormwater conveyance facilities in SAP South Plan Area 2 will be addressed through the future Ownership & Maintenance Agreement to be prepared with Final Plat Review.

Circulation System Goal

The Villebois Village shall provide for a circulation system that is designed to reflect the principles of smart growth.

Circulation System Policy 1 Encourage Alternative Modes, Accommodate All Modes

A54. **Review Criteria:** "The Villebois Village shall encourage alternatives to the automobile, while accommodating all travel modes, including passenger cars, trucks, buses, bicycles and pedestrians."
Finding: These criteria are satisfied.
Explanation of Finding: Transportation facilities including streets, sidewalks, and trails are proposed consistent with the Master Plan accommodating different travel modes.

Circulation System Implementation Measure 5 Curb Extensions

A55. **Review Criteria:** "Curb extensions may be utilized within the Villebois Village area under the following basic principles for their placement and design:

- A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located. In the Village Center (inside the Village Loop), the minimum curb-to-curb public street width should be 22 feet, in order to accommodate delivery and garbage truck movements.
- Fire trucks, buses, and single-unit trucks (i.e., garbage trucks) shall be able to negotiate from Collector/Arterial streets without crossing the Collector/Arterial street centerline. Fire trucks shall be able to negotiate through Residential streets, although it is acceptable for them to cross the street centerline on Residential streets.
- Passenger car turning movements shall be able to stay within the street centerline on all streets.
- Bike lanes shall not be forced into vehicle travel lanes.

Placement of curb extensions shall be reviewed through the City's minor alteration process with Specific Area Plans."
Finding: These criteria are satisfied.
Explanation of Finding: Curb extensions are proposed to be placed as shown within the Specific Area Plan Drawings, Exhibit B2, and the Community Elements Book (see Exhibit B1, notebook, Section III). Approval of a minor alteration for placement of the curb extensions is requested.

Circulation System Implementation Measure 6 Alignment Compliant with SROZ

A56. **Review Criteria:** "Street and pathway alignments shall be demonstrated to be in compliance with Significant Resource Overlay Zone (SROZ) regulations with Specific Area Plans."
Finding: These criteria are satisfied.
Explanation of Finding: SROZ compliance is reviewed in Request G.

Circulation System Implementation Measure 7 Connectivity Between Street Termination Points and Adjacent Trails/Pathways

A57. **Review Criteria:** "Pedestrian and bicycle connectivity shall be provided between public and private street termination points and adjacent trails/pathways at the discretion of the City Engineer."
Finding: These criteria are satisfied.
Explanation of Finding: Sufficient pedestrian and bicycle connectivity is provided including a number of trails. No specific termination points have been identified in need of additional pedestrian and bicycle connectivity by the City Engineer.

Technical Appendix I Sanitary Sewer Pump Station for Future Study Area

A58. **Review Criteria:**

"Pump Station Building

Pump stations shall have building enclosures that contain all electrical panels, instrumentation, control systems, generator, and other components are required by the City. Exterior walls shall meet building code structural requirements and meet the Villebois Village Architectural pattern book. The generator shall have its own room with an appropriately sized louver for ventilation. The roof shall be constructed with fire proof materials and have a minimum of 10 feet of clear space above the floor.

Access

Design specifications shall incorporate all applicable and reasonable efforts to maximize close and efficient access for removal, replacement and maintenance of all major and minor equipment. This includes but is not limited to adequate clearances, sufficient anchorage, hoists, hatches and platforms.

Design Capacity

Wetwells and force mains shall be designed and sized to accommodate full buildout within the identified basin(s) contributing to the pump station, unless otherwise approved by the City.

Service area shall include all land that can be provided with gravity wastewater collection service. Service area shall also include basins, which may discharge wastewater into the subject basin, as identified in the City's master plan and/or by City staff. Design population shall be determined per the City's master plan and with additional guidance provided by the City. For facilities being constructed to serve new developments, design population should be based on planned build-out densities.

Design Flow

Pumping stations and related components shall be designed to discharge the Peak Hourly Flow (PHF) with criteria as approved by the City, based on approved master plans.

Project Engineer shall also review the City's master plans and the DEQ's guidelines.

Receiving System

Project Engineer shall evaluate the downstream sanitary sewer system to determine the impacts of the increase in flow (e.g. peak pumping capacity) from the proposed pump station."
Finding: These criteria are satisfied.
Explanation of Finding: The location of the lift station has been identified, and design consistent with this subsection will be reviewed during the Public Works permitting process for the development.

Statewide Planning Goals

Goal 1 Citizen Involvement

A59. **Review Criterion:** "To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."
Finding: This criterion is satisfied.
Explanation of Finding: The adoption process for the proposed SAP amendment includes duly noticed public hearings before the Development Review Board. The current process was preceded by a Master Plan adoption process found compliant with Goal 1.

Goal 2 Part I Land Use Planning

A60. **Review Criterion:** "To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions."
Finding: This criterion is satisfied.
Explanation of Finding: The City is currently in compliance with Goal 2 because it has an acknowledged Comprehensive Plan and regulations implementing the plan. The Villebois Village Master Plan was adopted consistent with the planning policies in the Comprehensive Plan. The Villebois Village Master Plan was found to be consistent with Goal 2 because it creates a more specific plan for a portion of the City that provides additional guidance for future regulations. The proposed SAP amendment does not alter these circumstances.

Goal 5 Natural Resources, Scenic and Historic Areas, and Open Spaces

A61. **Review Criterion:** "To protect natural resources and conserve scenic and historic areas and open spaces."
Finding: This criterion is satisfied.
Explanation of Finding: The proposed SAP amendment complies with local and regional policies and requirements to implement this goal. A significant amount of natural area and open space is shown preserved in the SAP South, Plan Area 2, including Open Space 3.

Goal 6 Air, Water and Land Resource Quality

A62. **Review Criteria:** "To maintain and improve the quality of the air, water and land resources of the state."
Finding: These criteria are satisfied.

Explanation of Finding: The Villebois Village Master Plan is consistent with the air, water and land resources policies of the Comprehensive Plan. The Villebois Village Master Plan protects water and land resources by providing protection for natural resource areas and limiting development to areas that have less impact on natural resources. The Master Plan does not propose any residential structures within the 100-year floodplain. The Plan also calls for measures to use environmentally sensitive techniques for storm drainage. The Plan provides for a mixed-use, compact, interconnected Village that will provide transportation benefits by reducing the need for lengthy vehicle trips and increase the opportunity for bicycle and pedestrian transportation. The proposed SAP amendment does not alter these conditions as it remains consistent with the Master Plan in this regard.

Goal 7 Areas Prone to Natural Disasters and Hazards

A63. **Review Criteria:** "To protect life and property from natural disasters and hazards."
Finding: These criteria are satisfied.
Explanation of Finding: No areas prone to floods, erosion, landslides, wildfire, etc. have been identified in SAP South, Plan Area 2.

Goal 8 Recreational Needs

A64. **Review Criteria:** "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."
Finding: These criteria are satisfied.
Explanation of Finding: Recreational amenities are shown throughout SAP South, Plan Area 2. The amenities include a variety of play areas, trails, and gathering spots. In addition, connections are provided to the regional Graham Oaks Nature Park and the regional Ice Age Tonquin Trail.

Goal 10 Housing

A65. **Review Criteria:** "To provide for the housing needs of citizens of the state."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan complies with local and regional policies and requirements to implement this goal. The housing density and number goals for Villebois continue to be met with the number units and type of housing proposed for SAP South, Plan Area 2.

Goal 11 Public Facilities and Services

A66. **Review Criteria:** "To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan is consistent with the applicable provisions of the City's various utility plans (see Chapter 4 – Utilities of the Master Plan). It proposes to coordinate future development with the provision of the public facility infrastructure in the area (Figure 6 – Conceptual Composite Utilities Plan).

The proposed SAP amendment does not change the planned utilities as shown in the Master Plan.

Goal 12 Transportation

A67. **Review Criteria:** "To provide and encourage a safe, convenient and economic transportation system."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan provides plans (Figure 7 – Street Plan and Figure 8 – Proposed Arterial/Collectors Street System) for a transportation system that is integrated with the transportation system existing and proposed for the City and surrounding areas of Clackamas County. Street sections (Figures 9A and 9B – Street and Trail Sections) are designed to slow traffic, encourage walking and bicycling, and create a pleasant environment. The proposed SAP amendment remains consistent with the transportation components of the Villebois Village Master Plan, and thus this goal.

Goal 13 Energy Conservation

A68. **Review Criteria:** "Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
Finding: These criteria are satisfied.
Explanation of Finding: The Comprehensive Plan has been acknowledged to be consistent with Goal 13, and the Villebois Village Master Plan is consistent with Comprehensive Plan energy conservation policies. The Villebois Village Master Plan provides for a compact mixed-use development that will conserve energy by reducing the amount of and length of vehicle trips by making bicycle and pedestrian transportation viable alternatives for many trips. The proposed SAP amendment remains consistent with the Villebois Village Master Plan in this regard, and thus Goal 13.

Goal 14 Urbanization

A69. **Review Criteria:** "To provide for an orderly and efficient transition from rural to urban land use."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan is consistent with Comprehensive Plan urbanization policies and the Residential – Village Land Use designation. The proposed SAP amendment for SAP South, Plan Area 2 continues to comply with and further the intent of Goal 14 by providing a coordinated plan for urbanization of the Master Plan area that coordinates development of the area with development of public facilities, including the transportation system, and protects natural resources. The SAP amendment continues to provide more detailed plans for the urbanization of an area already determined to be within the City's urban growth boundary.

Village Zone

Subsection 4.125 (.01) Purpose

The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan.

Subsection 4.125 (.02) Permitted Uses in Village Zone

A70. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone, including single-family detached dwellings, row houses, and non-commercial parks, playgrounds, and recreational facilities.
Finding: These criteria are satisfied.
Explanation of Finding: The uses proposed includes single-family homes, parks and playgrounds, and open space which are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in the Village Zone

"All development in this zone shall be subject to the V Zone and the applicable provisions of the Wilsonville Planning and Land Development Ordinance. If there is a conflict, then the standards of this section shall apply. The following standards shall apply to all development in the V zone:"

Subsection 4.125 (.05) A. 1.-2 Block, Alley, Pedestrian and Bicycle Standards: Maximum Block Perimeter and Spacing Between Streets for Local Access

A71. **Review Criteria:** "Maximums Block Perimeter: 1,800 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent a block perimeter from meeting this standard."
"If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard."
Finding: These criteria are satisfied.
Explanation of Finding: Circulation patterns along the perimeter of SAP South Plan Area 2 are dictated by a 600-foot access spacing standard on Grahams Ferry Road (City of Wilsonville Transportation System Plan requirement for a minor arterial) along the west property line, surrounding SROZ boundaries, Metro's Graham Oaks Nature Park to the east and south, and existing development patterns along the north boundary of the site (e.g. adjacent single-family residential lots and parks in SAP South). Internal circulation patterns are impacted by incorporation of the following design features: rear-loaded garages with access provided through alleys for medium lots along the main entry road, retention of wetlands, and retention of existing trees.
Block perimeters in SAP South Plan Area 2 meet the maximum 1,800-foot perimeter and maximum 530-foot street spacing standards except in a few areas where the presence of the SROZ, existing development patterns, Graham Oaks Nature Park, or western property line

at Grahams Ferry Road prevent compliance with this standard. Specific areas that do not meet block perimeter areas are described below.

- Blocks along the west/southwestern portion of Plan Area 2 that are bounded by Grahams Ferry Road, SW Sicily Street, and SW Waterford Lane, as illustrated on the Land Use Key (Sheet 4, Exhibit B2), can only be developed to the property line. Additionally, circulation within these streets is dictated by the 600-foot Grahams Ferry Road spacing standard. These blocks are bordered by the SROZ to the north and south, as well as Graham Oaks Natural Area to the south; local streets cannot be extended into SROZ and Graham Oaks Natural Areas to achieve block and street spacing standards. Therefore, blocks bounded by Grahams Ferry Road, SW Sicily Street, and SW Waterford Lane cannot meet the maximum 1,800-foot block perimeter and maximum 530 street spacing requirements.

- Blocks in the northeastern portion of Plan Area 2, consisting of blocks to the north of SW Amalfi Lane and blocks bounded by SW Amalfi Lane and SW Beaumont Avenue as illustrated on the Land Use Key (Sheet 4, Exhibit B2), are bordered by SROZ area to the west and north. Additionally, an existing residential development of SAP South borders these blocks to the east. Therefore, local street access cannot be extended without adversely impacting the SROZ area. Blocks north of SW Amalfi Lane and blocks bounded by SW Amalfi Lane and SW Beaumont Avenue cannot meet the maximum 1,800-foot maximum block perimeter and 530 maximum street spacing requirements

- Blocks bounded by NW Naples Drive, SW Alta Lane, and SW Alta Court in the southeastern portion of Plan Area 2, as illustrated on the Land Use Key (Sheet 4, Exhibit B2), are bordered by the SROZ and Metro's Graham Oaks Natural Area to the south and east. Therefore, local street access cannot be extended to serve the subject blocks. Blocks bounded by NW Naples Drive, SW Alta Lane, and SW Alta Court cannot meet the 1,800 maximum block perimeter and 530 maximum street spacing requirements.

- Other blocks not mentioned here meet the maximum 1,800 foot block perimeter and maximum 530 street spacing requirements.

Bike/pedestrian connections are provided, where feasible. Due to the surrounding SROZ areas and the intent to minimize adverse impacts to the SROZ, the majority of trails are soft surface nature trails.

Subsection 4.125 (.05) A. 3. Block, Alley, Pedestrian and Bicycle Standards: Intervening Pedestrian and Bicycle Access

A72. **Review Criteria:** "If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard."
Finding: These criteria are satisfied.

Explanation of Finding: The SROZ surrounding the proposed the developed portions of SAP South Plan Area 2 does limit pedestrian and bicycle access improvements. A network of trails is provided but are soft surface in order to minimize impact to the SROZ.

Subsection 4.125 (.05) B. Access

A73. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion is satisfied.
Explanation of Finding: The design of the subdivision shown in the SAP allows this criterion to be met during the review of the subdivision plat.

Subsection 4.125 (.05) D. Fences

A74. **Review Criterion:** This subsection establishes provisions for fences in the Village Zone, including being consistent with the Master Fencing Program and the Architectural Pattern Book.
Finding: This criterion is satisfied.
Explanation of Finding: The SAP South Master Fencing Plan is part of the SAP South Architectural Pattern Book. This application proposes adding the subject area to the SAP South Master Fencing Plan in the SAP South Architectural Pattern Book. This amendment includes the continuation of Enhanced Full View or Partial View Fence w/ Landscaping along Grahams Ferry Road where residential lots are proposed, Monumentation B at the site entrance, and SROZ fencing at lots adjacent to the SROZ. Residential lot fencing occurs when each home is constructed, details of which are provided with Building Permit review. Residential lot fencing will occur in compliance with the fencing specified for the specific lot type and style in accordance with the SAP South Master Fencing Plan.

Subsection 4.125 (.08) Parks & Open Space

A75. **Review Criteria:** This subsection prescribes the open space requirement for development in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: Figure 5 – Parks & Open Space Plan of the Villebois Village Master Plan indicates that approximately 33% of Villebois is in Parks and Open Space. SAP South Plan Area 2 includes 24.06 acres of Parks and Open Space areas, which is in excess of the acreage proposed for the subject area in the Villebois Village Master Plan. Therefore, SAP South Plan Area 2 is consistent with the overall development and will provide the planned parks and open spaces for the subject area.

Subsection 4.125 (.09) Street Alignment and Access Improvements

Subsection 4.125 (.09) A. 1. a. Street Alignment and Access Improvements Conformity with Master Plan, etc.

A76. **Review Criterion:** "All street alignment and access improvements shall conform to the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan . . ."
Finding: This criterion will be satisfied.

Explanation of Finding: The street alignments are generally consistent with those shown in the Villebois Village Master Plan. Some minor refinements are proposed. See Findings A108 through A113.

Subsection 4.125 (.09) A. 1. a. i. Street Improvement: Conformity with Public Works Standards and Continuation of Streets

A77. **Review Criteria:** "All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed street network will enable conformance with the Public Work Standards. The street system is designed to provide for the continuation of streets within Villebois and to adjoining properties or subdivisions according to the Master Plan.

Subsection 4.125 (.09) A. 1. a. ii. Streets Developed According to Master Plan

A78. **Review Criterion:** "All streets shall be developed according to the Master Plan."
Finding: This criterion is satisfied.
Explanation of Finding: All streets are proposed to be developed with cross sections shown in the Master Plan.

Subsection 4.125 (.09) A. 2. a. & b. Intersections of Streets: Angles and Intersections

A79. **Review Criteria:**
- "Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District."

Finding: These criteria are satisfied.
Explanation of Finding: The applicant's drawings in Exhibit B2 show all proposed streets are developed consistent with these standards.

Subsection 4.15 (.09) A. 2. c. Intersection of Streets: Offsets

A80. **Review Criterion:** "Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:
- 1000 ft. for major arterials
- 600 ft. for minor arterials
- 100 ft. for major collector
- 50 ft. for minor collector"

Finding: These criteria are satisfied.
Explanation of Finding: No intersections violating the defined offsets are proposed.

Subsection 4.125 (.09) A. 2. d. Curb Extensions

A81. **Review Criteria:** "Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F) below, and shall:

- Not obstruct bicycle lanes on collector streets.
- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: Proposed curb extensions are shown on the Circulation Plan (Sheet 6 of Exhibit B2), none of which are located on collector streets. The submitted drawings illustrate that all street intersections will have a minimum 20 foot wide clear distance between curb extensions.

Subsection 4.125 (.09) A. 3. Street Grades

A82. **Review Criteria:** "Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%, may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards."

Finding: These criteria are satisfied.

Explanation of Finding: No street grades approaching these maximums are proposed.

Subsection 4.125 (.09) A. 4. Centerline Radius Street Curves

A83. **Review Criterion:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: The submitted plan sheets, see Exhibit B2, show all street curves meet these standards.

Subsection 4.125 (.09) A. 5. Rights-of-way

A84. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for rights-of-way as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: Proposed rights-of-way are shown on the applicant's plan sheets, Exhibit B2. Rights-of-way will also be reviewed as part of the Preliminary Development Plan and Tentative Plat to ensure compliance. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177.

Subsection 4.125 (.09) A. 6. Access Drives

A85. **Review Criteria:** Access drives are required to be 16 feet for two-way traffic. Otherwise, pursuant to subsection (.09) A. above, the provisions of 4.177 apply for access drives as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states in the narrative in Exhibit B1, "Access drives (alleys) will be paved at least 16-feet in width within a 20-foot tract, as shown on the Circulation Plan. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions."

Subsection 4.125 (.09) A. 7. Clear Vision Areas

A86. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for clear vision areas as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that clear vision areas will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 8. Vertical Clearance

A87. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for vertical clearance as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that Vertical clearance will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

A88. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states, "All sidewalks and pathways within SAP South Plan Area 2 will be constructed in accordance with the standards of Section 4.178 and the Villebois Village Master Plan." Sidewalks and pathways are shown in the circulation plan and street cross-sections (Sheets 6 and 7, Exhibit B2).

Subsection 4.125 (.11) Landscaping, Screening and Buffering

A89. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:
- Streets in the Village Zone shall be developed with street trees as described in the Community Elements Book."

Finding: These criteria are satisfied.
Explanation of Finding: The appropriate landscaping is provided. The proposed street trees, except for SW Alta Court are among the choices provided in the Community Elements Book, as proposed to be amended by this application to add SAP South Plan Area 2. Condition of Approval PDF 9 ensures the proper street trees are planted for SW Alta Court.

Subsection 4.125 (.12) Signage and Wayfinding

A90. **Review Criteria:** "Except as this subsection may otherwise be amended, or until such time as a Signage and Wayfinding Plan is approved as required by Section 4.125(.18)(D)(2)(f), signs within the Village zone shall be subject to provisions of Section 4.156."
Finding: These criteria are satisfied.
Explanation of Finding: A Secondary Site Identifier is proposed at the entrance from Grahams Ferry Road with this proposed amendment to SAP South. All signage in the subject area will comply with the proposed amendment to SAP South Master Signage & Wayfinding Plan for the addition of Plan Area 2.

Subsection 4.125 (.13) Design Principles Applying to the Village Zone

A91. **Review Criteria:** "The following design principles reflect the fundamental concepts, and support the objectives of the Villebois Village Master Plan, and guide the fundamental qualities of the built environment within the Village zone.

- The design of landscape, streets, public places and buildings shall create a place of distinct character.
- The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the Villebois Village Master Plan.
- The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.
- The design of exterior lighting shall minimize off-site impacts, yet enable functionality."

Finding: These criteria are satisfied.
Explanation of Finding: The SAP Drawings, Exhibit B2, the Architectural Pattern Book, Exhibit B1, notebook Section IIH, and the Community Elements Book, Exhibit B1, notebook, Section II I, are intended to guide the Preliminary Development Plan and Final Development Plan applications to achieve a built environment that reflects the fundamental concepts and objectives of the Master Plan. The Design Principles of Section (.13) have driven the development of the SAP Drawings, the Architectural Pattern Book and the Community Elements Book, which have previously been approved for the remainder of SAP South, and will work in concert to assure that the vision of Villebois is realized in SAP South Plan Area 2.

Subsection 4.125 (.14) A. 1. a. Design Standards: Flag Lots

A92. **Review Criterion:** "Flag lots are not permitted."
Finding: This criterion is satisfied.
Explanation of Finding: No flag lots are proposed.

Subsection 4.125 (.14) A. 2. a. - e. and h. – k. Building and Site Design Requirements

A93. **Review Criteria:** "Building and site design shall include:

- Proportions and massing of architectural elements consistent with those established in an approved Architectural Pattern Book or Village Center Architectural Standards.

- Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards.
- Protective overhangs or recesses at windows and doors.
- Raised stoops, terraces or porches at single-family dwellings.
- Exposed gutters, scuppers, and downspouts, or approved equivalent.
- Building elevations of block complexes shall not repeat an elevation found on an adjacent block.
- Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.
- A porch shall have no more than three walls.
- A garage shall provide enclosure for the storage of no more than three motor vehicles, as described in the definition of Parking Space."

Finding: These criteria are satisfied.

Explanation of Finding: The Architectural Pattern Book and Community Elements Book previously approved for the remainder of SAP South are proposed to also be applied to SAP South Plan Area 2 ensuring compliance with these standards and consistent with surrounding development.

Subsection 4.125 (.14) A. 3. Lighting and Site Furnishings

A94. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."

Finding: These criteria are satisfied.

Explanation of Finding: The SAP South Architectural Pattern Book and Community Elements Book is proposed to be amended to add Plan Area 2 to provide the necessary details for lighting and site furnishings, compliance with which will be ensured during PDP, FDP, and building/construction plan review.

Subsection 4.125 (.14) A. 4. Building Systems

A95. **Review Criteria:** "Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein. Design creativity is encouraged. The LEED Building Certification Program of the U.S. Green Building Council may be used as a guide in this regard."

Finding: These criteria are satisfied.

Explanation of Finding: Subsequent Building Permit applications will review proposed buildings for consistency with the criteria of Table V-3 and the Architectural Pattern Book, as proposed to be amended to add SAP South Plan Area 2.

Subsection 4.125 (.18) C. Specific Area Plan (SAP) Approval Process

Subsection 4.125 (.18) C. 1. Specific Area Plan Purpose

A96. **Review Criterion:** "Purpose – A SAP is intended to advance the design of the Villebois Village Master Plan."

Finding: This criterion is satisfied.

Explanation of Finding: As shown in Findings A3 through A58 above, the proposed SAP amendment for Plan Area 2 is advancing the design of the Villebois Village Master Plan.

Subsection 4.125 (.18) C. 2.-3. Who Can Initiate a SAP Application

A97. **Review Criterion:** "If not initiated by the City Council, Planning Commission or Development Review Board, an application for SAP approval shall be submitted by the Master Planner, or by landowners pursuant to subsection C.3 below. The application shall be accompanied by payment of a fee established in accordance with the City's fee schedule.
The owners of property representing at least 80 percent of a SAP area may request in writing that the Master Planner submit a SAP application. The Master Planner must provide a written response within thirty days. If the Master Planner agrees to submit a request, the Master Planner shall have 180 days to submit the SAP application. If the Master Planner denies the request, fails to respond within 30 days, or fails as determined by the Planning Director to diligently pursue the application after agreeing to submit it, by providing drafts of a pattern book and all other SAP elements within 60 days and thereafter pursuing approval in good faith, the property owners may submit a SAP application for review and approval. A copy of a SAP application submitted by property owners must be provided to the Master Planner. Once the application has been deemed complete by the City, the Master Planner shall have 30 days to review and comment in writing before the proposed SAP is scheduled for public hearing by the DRB."
Finding: This criterion is satisfied.
Explanation of Finding: The entirety of SAP South Plan Area 2 is under the ownership of Northwest Wilsonville Properties, LLC, who has signed the application. No Master Planner is currently functioning as outlined in this subsection, wherefore the requirement for their involvement does not apply.

Subsection 4.125 (.18) D 1. SAP Submittal Requirements: Existing Conditions

A98. **Review Criterion:** "Existing Conditions – An application for SAP approval shall specifically and clearly show the following features and information on maps, drawings, application form or attachments. The SAP shall be drawn at a scale of 1" = 100' (unless otherwise indicated) and may include multiple sheets depicting the entire SAP area, as follows:" Listed a. through h.
Finding: These criteria are satisfied.
Explanation of Finding: All the required existing condition drawings have been submitted. See Sheet 2 of Exhibit B2.

Subsection 4.125 (.18) D. 2. SAP Submittal Requirements: Development Information

A99. **Review Criterion:** "SAP Development Information – The following information shall also be shown at a scale of 1" = 100' and may include multiple sheets depicting the entire SAP area:" Listed a. through n.
Finding: These criteria are satisfied.
Explanation of Finding: All the required existing condition drawings have been submitted. See Exhibit B2.

Subsection 4.125 (.18) D. 3. SAP Submittal Requirements: Architectural Pattern Book

A100. **Review Criterion:** "Architectural Pattern Book – An Architectural Pattern Book shall be submitted with a SAP application. The Architectural Pattern Book shall apply to all development

outside of the Village Center Boundary, as shown on Figure 1 of the currently adopted Villebois Village Master Plan. An Architectural Pattern Book shall address the following:" Listed a. through h.

Finding: These criteria are satisfied.

Explanation of Finding: The SAP South Architectural Pattern Book (see Exhibit B1, notebook, Section IIH) includes information addressing all of the above items. This application includes a request to amend SAP South Architectural Pattern Book to include Plan Area 2. Specific amendments proposed with Plan Area 2 are as follows:

- Update *Guiding Principles of the Village Master Plan* to include Plan Area 2 in SAP South on Introduction, page A4
- Update SAP South Lot Types & Sustainability plan to include Plan Area 2 on Introduction, page A5
- Update Community Fencing map to include Plan Area 2 in SAP South: continue Enhanced Full or Partial View Fence w/ Landscaping along Grahams Ferry Road, add monumentation B at site entrance, and show SROZ Fencing at lots adjacent to SROZ, page E3 and E4.

Subsection 4.125 (.18) D. 4. SAP Submittal Requirements: Community Elements Book

A101. **Review Criterion:** "Community Elements Book – A Community Elements Book shall be submitted, including the following:" Listed a. through n.

Finding: These criteria are satisfied.

Explanation of Finding: A standardized design for the above listed elements is included in the SAP South Community Elements Book (see Exhibit B1, notebook, Section II I). Specific amendments proposed with Plan Area 2 are listed below:

- • Add lighting detail to Lighting Master Plan Specifications, page 3
- • Update Lighting Master Plan Diagram to add Plan Area 2, page 4
- • Update Curb Extension Concept Plan Diagram to add Plan Area 2, page 5
- • Update Street Tree Master Plan Diagram to add Plan Area 2, page 7

Subsection 4.125 (.18) D. 5. SAP Submittal Requirements: Rainwater Management Program

A102. **Review Criterion:** "Rainwater Management Program – A Rainwater Management Program shall be submitted, addressing the following:" Listed a. through c. vii.

Finding: These criteria are satisfied or will be satisfied by Condition of Approval NR 1.

Explanation of Finding: The previously approved Rainwater Management Program for SAP South is proposed to be applied to SAP South Plan Area 2. Condition of Approval NR 1 requires the plan to be updated to match the proposed utility plan.

Subsection 4.125 (.18) D. 6. SAP Submittal Requirements: Master Signage and Wayfinding

A103. **Review Criterion:** "Master Signage and Wayfinding – A Master Signage and Wayfinding Plan shall be submitted with an SAP application and shall address the following:" Listed a. through e.

Finding: These criteria are satisfied.

Explanation of Finding: A standardized design for the above-listed elements is included in the SAP South Master Signage and Wayfinding Plan (see Exhibit B1, notebook, Section IIJ). Specific amendments proposed with Plan Area 2 include updated Site Plan G0.4 to include Plan Area 2, include Enhanced Full View or Partial View Fence with landscaping along Grahams Ferry Road, secondary site identifier at site entrance, and SROZ fencing where lots are adjacent to SROZ.

Subsection 4.125 (.18) D. 8. SAP Submittal Requirements: SAP Narrative Statement

A104. **Review Criterion:** "SAP Narrative Statement – A narrative statement shall be submitted, addressing the following:" Listed a. through f.
Finding: These criteria are satisfied.
Explanation of Finding: The required narrative has been submitted. See Exhibit B1.

Subsection 4.125 (.18) E. 1. b. i. SAP Elements Consistent with Villebois Village Master Plan

A105. **Review Criteria:** "Is consistent with the Villebois Village Master Plan. Those elements of the Village Master Plan with which the SAP must be consistent are the Plan's Goals, Policies, and Implementation Measures, and, except as the text otherwise provides, Figures 1, 5, 6A, 7, 8, 9A, and 9B."
Finding: These criteria are satisfied.
Explanation of Finding: Findings A3 through A58 above demonstrate compliance of proposed SAP South Plan Area 2 with the Villebois Village

Subsection 4.125 (.18) E. 1. b. ii. SAP Phasing Reasonable

A106. **Review Criteria:** "If the SAP is to be phased, as enabled by Sections 4.125(.18)(D)(2)(g) and (h), that the phasing sequence is reasonable."
Finding: These criteria are satisfied.
Explanation of Finding: Consistent with Figure 3 of the Villebois Village Master Plan the proposal adds an additional phase to SAP South, Phase 7. All other phases of SAP South have been built. The phasing of the subject area as the 7th phase is reasonable as it is the final and only available SAP South Phase to be constructed. Phasing of construction of the phase will be further reviewed under the concurrent PDP request, Request B.

Subsection 4.125 (.18) E. 1. b. iii. DRB Modification of SAP

A107. **Review Criteria:** "The Development Review Board may require modifications to the SAP, or otherwise impose such conditions, as it may deem necessary to ensure conformance with the Villebois Village Master Plan, and compliance with applicable requirements and standards of the Planning and Land Development Ordinance, and the standards of this section."
Finding: These criteria are satisfied.
Explanation of Finding: No specific findings are recommended pursuant to this subsection.

Subsection 4.125 (.18) F. SAP Refinements to Villebois Village Master Plan

Refinement 1 Street Network

Subsection 4.125 (.18) F. 1. a. i. Refinements to the Master Plan: Streets

A108. **Review Criteria:** "Changes to the street network or functional classification of streets that do not significantly reduce circulation system function or connectivity for vehicles, bicycles or pedestrians."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan was amended in October 2013 to update information for the Future Study Area. The street network within proposed SAP South Plan Area 2 is generally consistent with the street network shown in the amended Villebois Village Master Plan. No change in the functional classification of streets is proposed. The only refinements are in relation to SW Waterford Lane, SW Naples Street, and SW Athens Lane. The SROZ analysis, which refines the boundaries of the SROZ based on scientific analysis of the characteristics of the site, identified areas adjacent to the south and east sides of SW Waterford Lane and SW Naples Street that are

not within the SROZ. This allowed for the addition of subtle curves in these roadways. Subtle curvature was also added to SW Athens Lane. This design feature adds aesthetic interest to the streets and allows for the additional and wider linear greens into and throughout the site. This refinement does not affect the function of the circulation system or connectivity for vehicles, bicycles or pedestrians.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A109. **Review Criteria:** "As used herein, "significant" means:

i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: Quantifiable measures related to this refinement request include circulation system function and connectivity. Level of Service (LOS) is the quantifiable performance measure related to circulation system function for motor vehicles. No data is available nor practical to obtain regarding the circulation system function for bicycles and pedestrians. Pedestrian and bicycle connections will be maintained where shown in the master plan with only slightly different alignments. While the traffic study did not compare LOS as various intersections with and without the proposed refinements, LOS of service continues to be met with the proposed changes. The quantifiable measure of connectivity is number of connecting routes. No connecting routes for vehicles are lost.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A110. **Review Criteria:** "As used herein, "significant" means:

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals, policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A111 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A111. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."

Finding: These criteria are satisfied.

Explanation of Finding: The adding of curves does not affect compliance with any of the goals, policies and implementation measures in the Villebois Village Master Plan.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A112. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"
Finding: These criteria are satisfied.
Explanation of Finding: The SROZ analysis, which refines the boundaries of the SROZ based on scientific analysis of the characteristics of the site, identified areas adjacent to the south and east sides of SW Waterford Lane and SW Naples Street that are not within the SROZ. This allowed for the addition of subtle curves in these roadways. The SROZ analysis helps protects from significant detrimental impacts to the natural areas. See also Request G.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A113. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The interaction with adjoining areas of already developed SAP South are consistent with the Master Plan and not affected by the proposed street refinement.

Refinement 2 Parks, Trails, and Open Spaces

Subsection 4.125 (.18) F. 1. a. ii. Refinements to the Master Plan: Parks, Trails, and Open Space

A114. **Review Criteria:** "Changes to the nature or location of park types, trails or open space that do not significantly reduce function, usability, connectivity, or overall distribution or availability of these uses in the Specific Area Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan was amended in October 2013 to update information for the Future Study Area. The parks, trails and open space within proposed SAP South Plan Area 2 are generally consistent with the parks, trails and open spaces shown in the amended Villebois Village Master Plan.

The Master Plan included a total of 23.6 acres of parks and open space, consisting of Open Space 3 (OS-3), Pocket Park 16 (PP-16), and multiple Linear Greens (LG) and landscape tracts. The proposed plan for SAP South Plan Area 2 includes a total of 24.06 acres of parks and open space, also consisting of Open Space 3 (OS-3), Pocket Park 16 (PP-16), and multiple Linear Greens (LG) and landscape tracts.

The *Master Plan* describes **Open Space 3** as follows:

OS-3: Forested Wetland Preserve (Future Study Area SROZ) **(23.05 acres)**
This site contains intact and functioning wetlands within forested areas. While the plan does not include restoration or expansion of the wetlands in this site, any work or impacts within the forested wetland preserve shall comply with SROZ regulations as applicable. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Benches

will be located along nature trails in forested areas, and will be distanced from residential areas and play areas. These areas will offer opportunity for wildlife viewing and quiet contemplation that complements the undeveloped nature of this open space. This open space will also include a creative child play area, benches, and picnic tables. Additionally, connections to trails in Graham Oaks Natural Area will be provided.

OS-3 within the SAP South Plan Area 2 is generally consistent with the *Master Plan*, with refinements that update its size in recognition of the refined SROZ boundaries and remove picnic tables and the play structure previously shown within the SROZ in order to minimize impacts to the SROZ. With this application OS-3 is described as follows:

Open Space 3 (OS-3): Forested Wetland Preserve (21.48 Acres)
Preserves existing functional wetlands and wildlife habitat within SROZ areas. Includes smaller soft surface nature trails, with benches and nature trail activity areas that meander through the forest and link with neighborhoods to the north and east and to trails in the Graham Oaks Nature Area to the east and south. Nature trails, benches and nature trail activity areas will comply with SROZ regulations and any impacts will be mitigated through SROZ enhancement and/or creation.

The Master Plan describes **Pocket Park 16** as follows:

PP-16 **(0.26 acres)**
Pocket Park 16 provides a neighborhood focal point and gathering spot, and connections to the adjacent nature trail system. This pocket park provides nature paths, a picnic table, benches, and a play structure.

PP-16 within the SAP South Plan Area 2 is generally consistent with the Master Plan, with refinements that increase its size and add a shelter and small hardscape area to the park, hardscape paths, an additional child play structure, and creative play opportunities through interaction with natural features (non-significant wetland) within the park and an active lawn area located to complement child play structures. With this application PP-16 is described as follows:

Pocket Park 16 (PP-16) (0.89 Acres)
Provides a neighborhood focal point and gathering spot, connections to nature trail system, and opportunities for creative play through interaction with a non-locally significant wetland and an active lawn area located to complement child play structures. Includes child play structures for younger and older-aged children, a sheltered seating area and hardscape plaza, hardscape paths, and benches.

The Master Plan describes **Linear Greens** as follows:

Miscellaneous Linear Greens (Future Study Area) **(Total 0.29 acres)**
These linear greens offer visual and physical linkages to open space areas and areas adjacent to existing landscaping. Some linear green spaces include lawn areas, benches, and existing trees where feasible.

Linear greens within the SAP South Plan Area 2 are generally consistent with the *Master Plan*, with refinements that increase the overall area of linear greens by adding more linear greens to the plan and adding small creative play feature(s) within linear greens. Linear greens have been added along both sides of the entry road and along the west side of SW Naples Street. With this application, linear greens are described as follows:

Linear Greens (LG) (1.14 Acres)
Provides visual and physical linkages to the neighborhood gathering spot and the nature trail system within Open Space areas. Includes small patches of lawn areas, seating areas, and small creative play features. Provides aesthetic appeal of open space, a sense of place, and safer pedestrian environment along major road from Grahams Ferry Road site entrance.

Landscape tracts have been added throughout the site, in areas between residential lots and the adjacent street or providing pedestrian connections. A total of 0.55 acres of landscape tracts are provided with SAP South Plan Area 2.

Nature Trails are shown throughout the parks and open space within the subject area in both the Master Plan and in SAP South Plan Area 2, with neighborhood connections to the north and east and to Graham Oaks Nature Area to the east and south. The Nature Trails continue to be shown as smaller soft surface trails and continue to provide the network of connections shown in the Master Plan.

The refinements to the parks, trails and open space described above enhance and improve these features. These refinements do not reduce function, usability, connectivity, or overall distribution or availability of these uses.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A115. **Review Criteria:** "As used herein, "significant" means:
i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,
Finding: These criteria are satisfied.
Explanation of Finding: The performance measures, etc. being measured for the purpose of this refinement are the reduction of function, usability, connectivity, or overall distribution or availability of park uses in the Preliminary Development Plan. While a creative play structure and tables are being removed from Open Space 3 to further protect the natural resources of the areas, new amenities are being added to adjacent Pocket Park 16 including a covered seating area and additional play structure. Additional small creative play structures are also proposed in the linear greens. Especially with the addition of the amenities in Pocket Park 16 and the linear greens, the amenities being removed from Open Space 3 remain available in the SAP South Plan Area 2.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A116. **Review Criteria:** "As used herein, "significant" means:
ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."
Finding: These criteria are satisfied.
Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals,

policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A117 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A117. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: As discussed in details in Finding A114 above, goals, policies, and implementation measures related to parks and open space are equally or better met. Protection of natural areas and wildlife habitat are enhanced, the network of pathways continues, trees continue to be preserved, a variety of activities remain, and additional layers of activity are added in Pocket Park 16, the main neighborhood gathering area.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A118. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"
Finding: These criteria are satisfied.
Explanation of Finding: The creative play area and picnic tables are being removed from the SROZ to reduce impacts on the natural area, none of the other changes negatively impact the natural areas.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A119. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed refinements do not impact the surrounding areas. All the surrounding area in the Villebois Village has already been developed.

Refinement 3 Land Use and Density

Subsection 4.125 (.18) F. 1. a. ii. Refinements to the Master Plan: Parks, Trails, and Open Space

A120. **Review Criteria:** "Changes to the location or mix of land uses that do not significantly alter the overall distribution or availability of uses in the affected SAP."
"A change in density that does not exceed ten percent, provided such density change does not result in fewer than 2,300 dwelling units in the Village."
Finding: These criteria are satisfied.
Explanation of Finding: The land uses and density within proposed SAP South Plan Area 2 are generally consistent with the land uses and density shown in the Villebois Village Master Plan.

Figure 1 – Land Use Plan of the Master Plan shows a mix of mediums, standards and larges within the subject area with standards and larges around the edges of the

development and mediums concentrated in the internal blocks. The proposed land use plan for SAP South Plan Area 2 continues this pattern with standards and larges located around the edges of the development and mediums located internally.

Refinements to the mix and locations include fewer mediums with mediums being the primary alley-loaded land use proposed. Mediums are located where they will front onto the main entry road (SW Athens Lane) into the project from Grahams Ferry Road, as well as along SW Waterford Lane, SW Beaumont Avenue, and a portion of SW Naples Street. Refinements have occurred along SW Athens Lane to allow for a wider green space feel along this entry street. The mediums along SW Athens Lane will include courtyards in their front yards. The other areas where mediums were previously shown have been refined to show front loaded standards and larges, which results in fewer lots within these blocks. Additionally, lots have been removed from the south side of SW Waterford Lane in order to open up views into the forest.

SAP South Plan Area 2 proposes a total of 100 residential units, including 40 mediums, 25 standards and 35 larges. The proposed refinements do not significantly alter the overall distribution or availability of uses within SAP South as all of these residential units fall within the same land use category as defined by Wilsonville Code. The table below shows the total number of units (larger land use category) shown within SAP South including the subject area in the Master Plan and the total number with the proposed refinements.

	SAP South Unit Count within MP	**Proposed SAP South Unit Count**	**% Change**
Medium/Standard/ Large/Estate	312	299	-4.2%

The proposed refinements do not exceed the 10% standard. This proposal results in a total of 2,632 units within Villebois, which remains above the minimum density of 2,300 units required to be obtained across Villebois. The refinements described above improve the overall aesthetic of the proposed plan by enhancing the entry street into the project with the addition of linear greens and courtyards in front of these mediums, by increasing views into the forested open space, and by adding linear greens and landscape tracts along several of the internal streets.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A121. **Review Criteria:** "As used herein, "significant" means:
i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,
Finding: These criteria are satisfied.
Explanation of Finding: Quantifiable measures related to this refinement include number of units within the aggregate land use category, which is being reduced within the allowable 10% limit and maintains more than 2300 units in the Villebois Village.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A122. **Review Criteria:** "As used herein, "significant" means:
ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."
Finding: These criteria are satisfied.
Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals, policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A123 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A123. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: For housing in SAP South Plan Area 2, a specific pattern is established in the Master Plan. A mix of mediums, standards and larges within the subject area with standards and larges around the edges of the development and mediums concentrated in the internal blocks. The proposed land use plan for SAP South Plan Area 2 continues this pattern with standards and larges located around the edges of the development and mediums located internally. See also Finding A120.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A124. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"
Finding: These criteria are satisfied.
Explanation of Finding: Part of the unit reduction is to preserve a treed area not in the SROZ helping to maintain and natural and scenic resource.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A125. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: Adjoining areas of the Master Plan have previously been developed.

Section 4.139.01 SROZ Purpose

A126. **Review Criteria:** "The Significant Resource Overlay Zone (SROZ) is intended to be used with any underlying base zone as shown on the City of Wilsonville Zoning Map. The purpose of the Significant Resource Overlay Zone is to implement the goals and policies of the Comprehensive Plan relating to natural resources, open space, environment, flood hazard, and the Willamette River Greenway. In addition, the purposes of these regulations are to achieve compliance with the requirements of the Metro Urban Growth Management Functional Plan (UGMFP) relating to Title 3 Water Quality Resource Areas, and Title 13 Habitat Conservation Areas, and that portion of Statewide Planning Goal 5 relating to significant natural resources. It is not the intent of this ordinance to prevent development where the impacts to significant resources can be minimized or mitigated."
Finding: These criteria are satisfied.
Explanation of Finding: SAP South Plan Area 2 includes a significant amount of area in the SROZ. Request G, being reviewed concurrently with the SAP Amendment, includes a detailed review of SROZ related regulations.

Section 4.139.02 Where the SROZ Regulations Apply

A127. **Review Criteria:** "The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas". The text provisions of the Significant Resource Overlay Zone ordinance take precedence over the Significant Resource Overlay Zone maps. The Significant Resource Overlay Zone is described by boundary lines shown on the City of Wilsonville Significant Resource Overlay Zone Map. For the purpose of implementing the provisions of this Section, the Wilsonville Significant Resource Overlay Zone Map is used to determine whether a Significant Resource Impact Report (SRIR) is required. Through the development of an SRIR, a more specific determination can be made of possible impacts on the significant resources.

Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations. Where the provisions of this Section conflict with other provisions of the City of Wilsonville Planning and Land Development Ordinance, the more restrictive shall apply.

The SROZ represents the area within the outer boundary of all inventoried significant natural resources. The Significant Resource Overlay Zone includes all land identified and protected under Metro's UGMFP Title 3 Water Quality Resource Areas and Title 13 Habitat Conservation Areas, as currently configured, significant wetlands, riparian corridors, and significant wildlife habitat that is inventoried and mapped on the Wilsonville Significant Resource Overlay Zone Map."
Finding: These criteria are satisfied.

Explanation of Finding: The SROZ areas within SAP South Plan Area 2 include wetlands and upland forest habitat. Request G, being reviewed concurrently with the SAP Amendment, includes a detailed review of SROZ related regulations.

Section 4.171 Protection of Natural Features & Other Resources

Subsection 4.171 (.02) General Terrain Preparation

A128. **Review Criteria:**

- "All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.
- All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code, all development shall be planned, designed, constructed and maintained so as to:
    - Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.
    - Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.
    - Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.

Finding: These criteria are satisfied.

Explanation of Finding: The SAP Drawings (see Exhibit B2) demonstrate that SAP South Plan Area 2 is designed with maximum regard to natural terrain features and topography including keeping development focused on the areas disturbed by previous development. No hillside areas or floodplains are located within SAP South Plan Area 2. Plan Area 2 includes non-locally significant wetland areas adjacent to the southwestern portion of the subject area, locally significant wetland areas, and areas within the SROZ Zone, as illustrated by the Existing Conditions (see Sheet 2 of Exhibit B2). These features are proposed to be maintained within open space areas. The Tree Preservation Plan shows proposed tree preservation and the Grading Plan conceptually shows proposed grading within the subject area. All subsequent grading, filling and excavating will be done in accordance with the Uniform Building Code. Disturbance of soils and removal of trees and other native vegetation will be limited to the extent necessary to construct the proposed development. Construction will occur in a manner that avoids substantial probabilities of accelerated erosion; pollution, contamination or siltation of lakes, rivers, streams and wetlands; damage to vegetation; and injury to wildlife and fish habitats.

Subsection 4.171 (.03) Hillsides

A129. **Review Criterion:** "Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:"

Finding: This criterion does not apply.

Explanation of Finding: The subject Preliminary Development Plan does not include any areas of slopes in excess of 25%. Therefore, this standard does not apply to this application.

Subsection 4.171 (.04) Trees and Wooded Area

A130. **Review Criteria:**

- "All developments shall be planned, designed, constructed and maintained so that:
  - Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.
  - Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.
  - Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.
- Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:
  - Avoiding disturbance of the roots by grading and/or compacting activity.
  - Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.
  - Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.
  - Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

Finding: These criteria are satisfied.

Explanation of Finding: The Tree Preservation Plan, Sheet 11 of Exhibit B2, depicts existing trees within the subject area and identifies trees to be retained and to be removed. This application includes a request for approval of a Type "C" Tree Removal Plan. See Request E.

Subsection 4.171 (.05) High Voltage Power Lines

A131. **Review Criteria:** "High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:

- Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage power line easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage power line easements and rights of way and petroleum pipeline easement shall be carefully reviewed.
- Any proposed non-residential development within high voltage power line easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.

Finding: These criteria do not apply.

Explanation of Finding: The development area and surrounding area are not around high voltage power lines.

Subsection 4.171 (.06) Safety Hazards

A132. **Review Criteria:** "

- To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.
- To protect lives and property from damage due to soil hazards.
- To protect lives and property from forest and brush fires.
- To avoid financial loss resulting from development in hazard areas.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states that development of the subject area will occur in a manner that minimizes potential hazards to safety.

Subsection 4.171 (.07) Earth Movement Hazard Areas

A133. **Review Criterion:** "No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions."

Finding: This criterion is satisfied.

Explanation of Finding: No areas of land movement, slump, earth flow, or mud or debris flow have been identified in the project area.

Subsection 4.171 (.08) Standards for Soil Hazard Areas

A134. **Review Criteria:**

- "Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.
- The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Finding: These criteria are satisfied.

Explanation of Finding: No soil hazard areas have been identified within the subject area.

Subsection 4.171 (.09) Historic Protection

A135. **Review Criteria:** This subsection establishes requirements for protection of historic resources.

Finding: This criterion is satisfied.

Explanation of Finding: A Cultural Resources Inventory for SAP South – Plan Area 2 (see Exhibit B2, notebook, Section IIE) describes methods, conditions, findings, and recommendations related to historic, cultural, and archeological resources on the subject site in detail. This report states that one archeological resource was identified on the subject site. However, the resource is an isolated find, which does not qualify for site designation or listing on the National Register of Historical Places. Therefore, no further archeological work or avoidance measures are recommended at this time. If any resources are discovered during construction, activities should be halted and the resource consultant should be notified.

Section 4.178 Sidewalk and Pathway Standards

A136. **Review Criteria:**

- "Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.
- Pathways
    - Bicycle facilities shall be provided using a bicycle lane as the preferred facility design. The other facility designs listed will only be used if the bike lane standard cannot be constructed due to physical or financial constraints. The alternative standards are listed in order of preference.
    - Bike lane. This design includes 12-foot minimum travel lanes for autos and paved shoulders, 5-6 feet wide for bikes that are striped and marked as bicycle lanes. This shall be the basic standard applied to bike lanes on all arterial and collector streets in the City, with the exception of minor residential collectors with less than 1,500 (existing or anticipated) vehicle trips per day."

Finding: These criteria are satisfied.

Explanation of Finding: Sheet 7 of the applicant's plan sheets, Exhibit B2, depict cross-sections of the proposed sidewalks and pathways in compliance with the above standards and Master Plan figures

REQUEST B: DB14-0003 SAP-SOUTH PDP 7, PRELIMINARY DEVELOPMENT PLAN

The applicant's findings in Section IIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Village Zone

Subsection 4.125 (.02) Permitted Uses in Village Zone

B1. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone, including single-family detached dwellings, row houses, and non-commercial parks, playgrounds, and recreational facilities.
Finding: These criteria are satisfied.
Explanation of Finding: The uses proposed includes single-family homes, parks and playgrounds, a sewer pump station, and open space which are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in the Village Zone

"All development in this zone shall be subject to the V Zone and the applicable provisions of the Wilsonville Planning and Land Development Ordinance. If there is a conflict, then the standards of this section shall apply. The following standards shall apply to all development in the V zone:"

Subsection 4.125 (.05) A. Block, Alley, Pedestrian, and Bicycle Standards

B2. **Review Criteria:** This subsection lists the block, alley, pedestrian, and bicycle standards applicable in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan drawings, Exhibit B4, shows blocks, alleys, pedestrian, and bicycle paths consistent with this subsection and the SAP, as proposed to be amended.

Subsection 4.125 (.05) B. Access

B3. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion is satisfied.
Explanation of Finding: A condition of approval for the Tentative Subdivision Plat will ensure compliance with this standard. See Request D.

Table V-1, Development Standards

B4. **Review Criteria:**

Table V-1: Development Standards

Building Type	Min. Lot Size (sq.ft.)	Min. Lot Width (ft.)	Min. Lot Depth (ft.)	Max. Lot Coverage (note)	Min. Frontage Width [10, 17] (%age)	Max. Bldg. Height [9] (ft.)	Setbacks [10, 13, 20] Front Min. (ft.)	Front Max. (ft.)	Rear Min. (ft.)	Side Min. (ft.)	Alley-Loaded Garage (note)	Street-Loaded Garage (note)
Commercial Buildings - Village Center [14]	NR	NR	NR	1	90	60	NR [3]	5	NR	NR	NR	NA
Hotels - Village Center [14]	NR	NR	NR	1	80	60	NR [3]	15	NR	NR	NR	NA
Mixed Use Buildings - Village Center [14]	NR	NR	NR	1	90	60	NR [3]	8	NR	NR	NR	NA
Multi-Family Dwellings - Village Center [14]	NR	NR	NR	1	80	45	5 [4]	15	NR	NR	NR	NA
Row Houses [11] - Village Center [14]	NR	NR	NR	1	80	45	5 [4]	10	NR	NR	NR	NA
Commercial Buildings	NR	NR	NR	1	60	45	NR	15	NR	NR	NR	NA
Mixed Use Buildings	NR	NR	NR	1	60	45	NR	15	NR	NR	NR	NA
Multi-Family Dwellings	NR	NR	NR	1	60	45	8 [4]	15	NR	NR	NR	NA
Row Houses [11]	NR	15	50	1	80	45	8 [5]	15	NR	NR	NR	NA
Duplexes	4,000	45	70	2	60 [16]	35	12 [5, 6]	20 [6]	5	5 [15]	7	8,17,18
Single-Family Dwellings	2,250	35	50	2	60 [16]	35	12 [5, 6]	20 [6]	5	5 [15]	7	8,17

Notes: NR No Requirement

NA Not Allowed

1 Lot <. 8000sf: NR, Lot >. 8000sf: 80% (Max. Lot Coverage)

2 Small lots: 75%, Medium Lots: 65%, Standard and Large Lots: 55%, Estate Lots: 45% Maximum Lot Coverage
On lots where detached accessory buildings are built, maximum lot coverage may be increased by 10%.

3 Bay windows, balconies, and other structural building projections above 8 ft. may encroach up to 5 ft. into the Public Way; canopies, awnings, and other non-structural projections may encroach up to 8 ft. into the Public Way.

4 Porches, stairs, stoops, decks, canopies, balconies, bay windows, chimneys, awnings, and other building projections may encroach up to the Public Way.

5 Porches, stoops, decks, canopies, balconies, bay windows, chimneys, awnings, and other building projections may encroach to within 8 ft. of the Public Way. Stairs may encroach to the Public Way.

6 For Standard, or Large Lots on Collector Avenues, front setbacks are 20 ft. min., (13' setback to porch), side street setbacks are 15' (8' setback to porch). Pie-shaped lots or lots with significant trees or grade banks at frontage have no maximum front setback.

7 The garage setback from alley shall be between 3 and 5 foot or, when as optional parking space is located between the garage and the alley, shall be 16 ft. minimum. Lots with important trees, as identified in the Master Plan, or grade differences at the alley, affecting garage location shall be exempt from this requirement.

8 Street-loaded garages shall be a minimum 20 ft. front setback to face of garage, and located a minimum of 5 ft. behind main façade of the associated dwelling unit.

9 Vertical encroachments are allowed up to ten additional feet, for up to 10% of the building footprint; vertical encroachments shall not be habitable space.

10 For Village Center buildings with lots fronting two or more streets, at least two facades shall be subject to the minimum frontage width and front setback requirements.

11 Row Houses are typically attached, but may be detached within the Village Center Boundary. When attached, no more than ten units shall be contiguous along a street edge. When row houses are detached, the Minimum Frontage Width is 65%. The Minimum Frontage Width for detached row houses may be less than 65% on corner lots or to accommodate the curve radius of street frontage, public utility easements, important trees, grade differences, public open space requirements, or as otherwise approved by the DRB.

12 See Definitions, 4.125 01, for measurement of Minimum Frontage Width.

13 Front Setback is measured as the offset of the front lot line or a vehicular or pedestrian access easement line. On lots with alleys, Rear Setback shall be measured from the rear lot line abutting the alley.

14 See Figure 2A - Village Center Boundary & Land Use Plan in the Villebois Village Master Plan for areas included within the Village Center.

15 On Estate Lots and Large Lots with frontage 70 ft. or wider, the minimum combined side yard setbacks shall total 15 ft. with a minimum of 5 ft. On Small and Medium Lots, minimum side setback shall be 0 ft. or as required by Building Code.

16 For cluster housing with lots arranged on a courtyard, frontage shall be measured at the front door face of the building adjacent to a public right of way or a public pedestrian access easement linking the courtyard with the Public Way.

17 Dwellings on lots without alley access shall be at least 36 feet wide.

18 Duplexes with front-loaded garages are limited to one shared standard-sized driveway apron.

19 Maximum setbacks may be increased as necessary to accommodate deeper porches, building code, public utility easements or public open space requirements.

20 Lots are categorized as small, medium, standard, large or estate as shown in the Pattern Book.

[Table V-1 amended by Ord. 667 on 8/17/09; Ord. 682, 9/9/10]

Finding: These criteria are satisfied.

Explanation of Finding: In previous PDP's it has consistently been interpreted to allow the lot width and lot sizes to be governed by the Pattern Book. All lot dimensions and sizes meet the standards established in the SAP South Pattern Book.

Subsection 4.125 (.07) Table V-2 Off-Street Parking, Loading & Bicycle Parking

B5. **Review Criteria:**

Table V-2: Off Street Parking Requirements				
Permitted or Conditional Use	Min. Vehicle Spaces	Max. Vehicle Spaces	Bicycle Short-term (Spaces)	Bicycle Long-term (Spaces)
Permitted Uses				
Single-Family Detached Dwellings	1.0/DU	NR	NR	NR
Single-Family Accessory Dwelling Units*	1.0/DU	NR	NR	NR
Duplex	1.0/DU	NR	NR	NR
Row Houses	1.0/DU	NR	NR	NR
Multi-Family Dwellings	1.0/1 Bdr 1.5/2 Bdr 1.75/3 Bdr	NR	1 per 20 units Min. of 2	1 per 4 units Min. of 2
Community Housing	1 per 4 residents	1 per unit	None	1 per 8 residents Min. of 2
Commercial Uses				
Convenience Store	2/1000 sf	5/1000 sf	1 per 5000 sf Min. of 2	1 per 12,000 sf Min. of 2
Restaurant/Pub	2/1000 sf	10/1000 sf	1 per 5000 sf Min. of 2	1 per 12,000 sf Min. of 2
Child Day Care	0.2 per student/staff	0.3 per student/staff	None	1 per 10,000 sf Min. of 2
Medical/Dental	3/1000 sf	4/1000 sf	1 per 40,000 sf Min. of 2	1 per 70,000 sf Min. of 2
All other commercial uses	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2
Conditional Uses				
Schools	0.2 per student/staff	0.3 per student/staff	0.3 per student/staff	0.2 per classroom
Recreational Facilities	3/1000 sf [1]	5/1000 sf [1]	1 per 3,000 sf Min. of 4	1 per 3000 sf Min. of 4
Conference Center	0.3 per seat	0.5 per seat	1 per 15 seats Min. of 2	1 per 40 seats Min. of 10
Library/Museum	2/1000 sf	4/1000 sf	1 per 1000 sf Min. of 6	1 per 1000 sf Min. of 6
Religious Institution	.25 per seat	.5 per seat	1 per 2,000 sf Min. of 2	1 per 4,000 sf Min. of 2
Theater	.25 per seat	.5 per seat	1 per 20 seats Min. of 2	1 per 50 seats Min. of 4
Overnight Lodging Facility	1 per room	1.5 per room	1 per 20 rooms Min. of 2	1 per 20 rooms Min. of 2
Light Manufacturing/Research and Development	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2
All other Conditional Uses	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2

Notes: [1] 1/1000 sf min. for court facilities
NR No requirement
* See WC Section 4.113(.11) Assessory Dwelling Units

[Table 4-2 amended by Ord. 677, 3/1/10]

Finding: These criteria are satisfied.

Explanation of Finding: At least two (2) parking spaces are provided for each home, exceeding the minimum of one (1).

Subsection 4.125 (.08) Parks & Open Space

B6. **Review Criteria:** This subsection prescribes the open space requirement for development in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: Figure 5 – Parks & Open Space Plan of the Villebois Village Master Plan states that there are a total of 159.73 acres within Villebois, which is approximately 33% of Villebois. An amendment to SAP South to include Plan Area 2 has been submitted concurrently. See Request A. SAP South Plan Area 2 included minor refinements to park and open space areas, which increased parks and open space areas within the subject site. Parks and open space areas within PDP 7 South are 24.06 acres in size, consistent with the acreage proposed for the subject area with SAP South Plan Area 2. Additionally, parks and open spaces compromise 56% of PDP 7 South, exceeding the minimum requirement of 25%. Therefore, PDP 7 South is consistent with the overall development and will provide the planned parks and open space areas for the subject area.

Subsection 4.125 (.09) Street Alignment and Access Improvements

Subsection 4.125 (.09) A. 1. a. Street Alignment and Access Improvements Conformity with Master Plan, etc.

B7. **Review Criterion:** "All street alignment and access improvements shall conform to the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan . . ."
Finding: This criterion is satisfied.
Explanation of Finding: The street alignments and access improvements conform with SAP South Plan Area 2 plans which have been found to be in compliance with the Villebois Village Master Plans with some minor refinements regarding alignment of the streets. See Request A Findings A76 and Findings A108 through A113.

Subsection 4.125 (.09) A. 1. a. i. Street Improvement: Conformity with Public Works Standards and Continuation of Streets

B8. **Review Criteria:** "All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: All street improvements within this PDP will comply with the applicable Public Works Standards. The connection to Villebois Drive South and Grahams Ferry Road are provided as shown in the Master Plan. No other connections to adjoining properties or subdivisions are planned.

Subsection 4.125 (.09) A. 1. a. ii. Streets Developed According to Master Plan

B9. **Review Criterion:** "All streets shall be developed according to the Master Plan."
Finding: This criterion is satisfied.
Explanation of Finding: All streets within this PDP will be developed with curbs, landscape strips, sidewalks, and bikeways or pedestrian pathways as depicted on the Circulation Plan, Sheet 7.1 of Exhibit B4, and Street Sections, Sheet 7.2 of Exhibit B4,

which are consistent with the cross sections shown in the Master Plan and as approved by the City Engineer for Grahams Ferry Road.

Subsection 4.125 (.09) A. 2. a. & b. Intersections of Streets: Angles and Intersections

B10. **Review Criteria:**

- "Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: The Circulation Plan, Sheet 7.1 of Exhibit B4, demonstrates that all proposed streets will intersect at angles consistent with the above standards.

Subsection 4.15 (.09) A. 2. c. Intersection of Streets: Offsets

B11. **Review Criterion:** "Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:

- 1000 ft. for major arterials
- 600 ft. for minor arterials
- 100 ft. for major collector
- 50 ft. for minor collector"

Finding: These criteria are satisfied.

Explanation of Finding: The Circulation Plan, Sheet 7.1 of Exhibit B4, demonstrate that opposing intersections on public streets are offset, as appropriate, so that no danger to the traveling public is created.

Subsection 4.125 (.09) A. 2. d. Curb Extensions

B12. **Review Criteria:** "Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F) below, and shall:

- Not obstruct bicycle lanes on collector streets.
- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: Curb extensions are shown on the Circulation Plan, Sheet 7.1 of Exhibit B4. Curb extensions will not obstruct bicycle lanes on collector streets. The plan sheets illustrate that all local street intersections will have a minimum 20 foot wide clear distance between curb extensions.

Subsection 4.125 (.09) A. 3. Street Grades

B13. **Review Criteria:** "Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%,

may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards."

Finding: These criteria are satisfied.

Explanation of Finding: No streets are proposed that exceed or approach the maximum grade.

Subsection 4.125 (.09) A. 4. Centerline Radius Street Curves

B14. **Review Criterion:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: Compliance is shown on the Circulation Plan, Sheet 7.1 of Exhibit B4.

Subsection 4.125 (.09) A. 5. Rights-of-way

B15. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for rights-of-way as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: Proposed rights-of-way are shown on the applicant's plan sheets, including Sheets 4.1 and 4.2, Tentative Subdivision Plat, in Exhibit B4. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177.

Subsection 4.125 (.09) A. 6. Access Drives

B16. **Review Criteria:** Access drives are required to be 16 feet for two-way traffic. Otherwise, pursuant to subsection (.09) A. above, the provisions of 4.177 apply for access drives as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states, "Access drives (alleys) will be paved at least 16-feet in width within a 20-foot tract, as shown on the Circulation Plan. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions."

Subsection 4.125 (.09) A. 7. Clear Vision Areas

B17. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for clear vision areas as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that clear vision areas will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 8. Vertical Clearance

B18. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for vertical clearance as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that Vertical clearance will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 9. Interim Improvement Standards

B19. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for interim improvement standards as no other provisions are noted.
Finding: This criterion will be satisfied.
Explanation of Finding: An interim street section improvement will be provided on Grahams Ferry Road to create consistency with street improvements completed previously with phased development of SAP North and SAP South. No other interim street improvements are proposed.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

B20. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: All sidewalks and pathways within SAP South Plan Area 2 will be constructed in accordance with the standards of Section 4.178 and the Villebois Village Master Plan. Sidewalks and pathways are shown in the Circulation Plan and Street Cross-sections. See Sheets 7.1 and 7.2, Exhibit B4.

Subsection 4.125 (.11) Landscaping, Screening and Buffering

B21. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:

- Streets in the Village Zone shall be developed with street trees as described in the Community Elements Book."

Finding: These criteria are satisfied.
Explanation of Finding: The appropriate landscaping is provided. The proposed street trees are among the choices provided in the Community Elements Book, except SW Alta Court which Condition of Approval PDF 9 ensures appropriate street trees are placed.

Subsection 4.125 (.12) Signage and Wayfinding

B22. **Review Criteria:** "Except as this subsection may otherwise be amended, or until such time as a Signage and Wayfinding Plan is approved as required by Section 4.125(.18)(D)(2)(f), signs within the Village zone shall be subject to provisions of Section 4.156."
Finding: These criteria are satisfied.
Explanation of Finding: Signage will be provided consistent with the SAP South Signage & Wayfinding Plan, as amended by Request A.

Subsection 4.125 (.13) Design Principles Applying to the Village Zone

B23. **Review Criteria:** "The following design principles reflect the fundamental concepts, and support the objectives of the Villebois Village Master Plan, and guide the fundamental qualities of the built environment within the Village zone.

- The design of landscape, streets, public places and buildings shall create a place of distinct character.
- The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the Villebois Village Master Plan.
- The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.
- The design of exterior lighting shall minimize off-site impacts, yet enable functionality."

Finding: These criteria are satisfied.
Explanation of Finding: The Architectural Pattern Book and Community Elements Book ensure the design meets the fundamental design concepts and support the objectives of the Villebois Village Master Plan. By complying with an approved Architectural Pattern Book and Community Elements Book, as amended in Request A, the design of the PDP will satisfy these criteria. See also Final Development Plan, Request F.

Subsection 4.125 (.14) A. 1. a. Design Standards: Flag Lots

B24. **Review Criterion:** "Flag lots are not permitted."
Finding: This criterion is satisfied.
Explanation of Finding: No flag lots are proposed.

Subsection 4.125 (.14) A. 2. a. - e. and h. – k. Building and Site Design Requirements

B25. **Review Criteria:** "Building and site design shall include:

- Proportions and massing of architectural elements consistent with those established in an approved Architectural Pattern Book or Village Center Architectural Standards.
- Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards.
- Protective overhangs or recesses at windows and doors.
- Raised stoops, terraces or porches at single-family dwellings.
- Exposed gutters, scuppers, and downspouts, or approved equivalent.
- Building elevations of block complexes shall not repeat an elevation found on an adjacent block.

- Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.
- A porch shall have no more than three walls.
- A garage shall provide enclosure for the storage of no more than three motor vehicles, as described in the definition of Parking Space."

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.

Explanation of Finding: The application requests PDP approval for single family detached houses. Conformance with the Pattern Book and Community Elements Book will assure consistency with the Design Standards of subsection (.14). Conformance with the Architectural Pattern Book will be reviewed at the issuance of each building permit. Expected front elevations of the planned homes are provided which have been found satisfactorily consistent with the Architectural Pattern Book by the city's consultant architect, Steve Coyle. See Section IIG) of Exhibit B3 and Exhibit B6. Compliance with the Community Elements Book is being reviewed as part of Request F Final Development Plan. In order to increase consistency with the Architectural Pattern Book and other development elsewhere in Villebois Condition of Approval PDB 5 requires courtyard fencing consistent with the pattern book and the architectural style of the home for at least 30% of the homes with usable courtyards not exceeding a 5% slope.

Subsection 4.125 (.14) A. 2. g. Landscape Plans

B26. **Review Criterion:** "Building and site design shall include:

- A landscape plan in compliance with Sections 4.125(.07) and (.11), above."

Finding: This criterion is satisfied.

Explanation of Finding: The appropriate landscape plans have been provided. See Exhibit B5.

Subsection 4.125 (.14) A. 2. f. Protection of Significant Trees

B27. **Review Criterion:** "Building and site design shall include:

- The protection of existing significant trees as identified in an approved Community Elements Book."

Finding: This criterion is satisfied.

Explanation of Finding: Tree protection information is provided. See also Request E.

Subsection 4.125 (.14) A. 3. Lighting and Site Furnishings

B28. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."

Finding: These criteria are satisfied or will be required to do so by Condition of Approval PDB 2.

Explanation of Finding: Park plans show furnishings consistent with the Community Elements Book. A condition of approval ensure the final street lighting installation is consistent with the Community Elements Book.

Subsection 4.125 (.14) A. 4. Building Systems

B29. **Review Criteria:** "Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein. Design creativity is encouraged. The LEED Building Certification Program of the U.S. Green Building Council may be used as a guide in this regard."
Finding: These criteria are satisfied.
Explanation of Finding: Subsequent Building Permit applications will review proposed buildings for consistency with the criteria of Table V-3 and the Architectural Pattern Book.

Subsection 4.125 (.18) G. Preliminary Development Plan Approval Process

Subsection 4.125 (.18) G. 1. a. Preliminary Development Plan: Submission Timing

B30. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be filed with the City Planning Division for the entire SAP, or when submission of the SAP in phases has been authorized by the Development Review Board, for a phase in the approved sequence."
Finding: This criterion is satisfied.
Explanation of Finding: This PDP addresses Phase 7 on the SAP South Phasing Plan as amended with Request A.

Subsection 4.125 (.18) G. 1. b. Preliminary Development Plan: Owners' Consent

B31. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be made by the owner of all affected property or the owner's authorized agent;"
Finding: This criterion is satisfied.
Explanation of Finding: This application is made by Fred Gast of Polygon Homes. The PDP is all under the ownership of Northwest Wilsonville Properties, LLC. The application has been signed by managing member Bo Oswald.

Subsection 4.125 (.18) G. 1. c. Preliminary Development Plan Permit Process: Proper Form & Fees

B32. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be filed on a form prescribed by the City Planning Division and filed with said division and accompanied by such fee as the City Council may prescribe by resolution;"
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has used the prescribed form and paid the required application fees.

Subsection 4.125 (.18) G. 1. d. Preliminary Development Plan Permit Process: Professional Coordinator

B33. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall set forth the professional coordinator and professional design team for the project;"
Finding: This criterion is satisfied.
Explanation of Finding: A professional design team is working on the project with Stacy Connery AICP from Pacific Community Design as the professional coordinator.

Subsection 4.125 (.18) G. 1. e. Preliminary Development Plan Permit Process: Mixed Uses

B34. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall state whether the development will include mixed land uses, and if so, what uses and in what proportions and locations."
Finding: This criterion is satisfied.
Explanation of Finding: The proposed PDP includes only residential uses with supporting recreational amenities and utilities, including a sanitary sewer lift station.

Subsection 4.125 (.18) G. 1. f. Preliminary Development Plan Permit Process: Land Division

B35. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall include a preliminary land division (concurrently) per Section 4.400, as applicable."
Finding: This criterion is satisfied.
Explanation of Finding: A preliminary subdivision plat has been submitted concurrently with this request. See Request D.

Subsection 4.125 (.18) G. 1. g. Preliminary Development Plan Permit Process: Zone Map Amendment

B36. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall include a concurrent application for a Zone Map Amendment (i.e., Zone Change) for the subject phase."
Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment request has been submitted concurrently with this request. See Request C.

Subsection 4.125 (.18) G. 2. a. – c. Preliminary Development Plan Permit Process: Information Required

B37. **Review Criteria:** "The application for Preliminary Development Plan approval shall include conceptual and quantitatively accurate representations of the entire development sufficient to demonstrate conformance with the approved SAP and to judge the scope, size and impact of the development on the community and shall be accompanied by the following information:

- A boundary survey or a certified boundary description by a surveyor licensed in the State of Oregon.
- Topographic information sufficient to determine direction and percentage of slopes, drainage patterns, and in environmentally sensitive areas, (e.g., flood plain, wetlands,

forested areas, steep slopes or adjacent to stream banks). Contour lines shall relate to North American Vertical Datum of 1988 and be at minimum intervals as follows:

- One (1) foot contours for slopes of up to five percent (5%);
- Two (2) foot contours for slopes from six percent (6%) to twelve (12%);
- Five (5) foot contours for slopes from twelve percent (12%) to twenty percent (20%). These slopes shall be clearly identified, and
- Ten (10) foot contours for slopes exceeding twenty percent (20%).

- The location of areas designated Significant Resource Overlay Zone (SROZ), and associated 25-foot Impact Areas, within the PDP and within 50 feet of the PDP boundary, as required by Section 4.139.

Finding: These criteria are satisfied.

Explanation of Finding: All of the listed information has been provided. See Exhibits B3 and B4.

Subsection 4.125 (.18) G. 2. d. Preliminary Development Plan Permit Process: Land Area Tabulation

B38. **Review Criteria:** "A tabulation of the land area to be devoted to various uses, and a calculation of the average residential density per net acre."

Finding: These criteria are satisfied.

Explanation of Finding: Following is a tabulation of land area devoted to the various uses and a calculation of net residential density:

Approx. Gross Acreage	42.76 Acres
Parks and Open Space	24.06 Acres
Public Streets	6.83 Acres
Lots and Alleys	11.58 Acres

Net Residential Density: 100 lots / 11.58 Acres = 8.6units per net acre

Subsection 4.125 (.18) G. 2. e. Preliminary Development Plan Permit Process: Streets, Alleys, and Trees

B39. **Review Criteria:** "The location, dimensions and names, as appropriate, of existing and platted streets and alleys on and within 50 feet of the perimeter of the PDP, together with the location of existing and planned easements, sidewalks, bike routes and bikeways, trails, and the location of other important features such as section lines, section corners, and City boundary lines. The plan shall also identify all trees 6 inches and greater d.b.h. on the project site only."

Finding: These criteria are satisfied.

Explanation of Finding: Information on planned alleys and streets are provided or the information is readily available. Easements, sidewalks, bike routes and bikeways, trails, and other relevant features are shown. The required trees are shown. See Exhibit B4.

Subsection 4.125 (.18) G. 2. f. Preliminary Development Plan Permit Process: Building Drawings

B40. **Review Criteria:** "Conceptual drawings, illustrations and building elevations for each of the listed housing products and typical non-residential and mixed-use buildings to be constructed within the Preliminary Development Plan boundary, as identified in the approved SAP, and where required, the approved Village Center Design."
Finding: This criterion is satisfied.
Explanation of Finding: The proposed PDP includes Large, Standard, and Medium, detached single-family housing products. Elevations approved by the city consultant architect, Steve Coyle, have been provided. See Section IIG) of applicant's notebook, Exhibit B3, and Exhibit B6.

Subsection 4.125 (.18) G. 2. g. Preliminary Development Plan Permit Process: Utility Plan

B41. **Review Criterion:** "A composite utility plan illustrating existing and proposed water, sanitary sewer, and storm drainage facilities necessary to serve the SAP."
Finding: This criterion is satisfied.
Explanation of Finding: A composite utility plan has been provided. See applicant's Sheet 6, Exhibit B4.

Subsection 4.125 (.18) G. 2. h. Preliminary Development Plan Permit Process: Phasing Sequence

B42. **Review Criterion:** "If it is proposed that the Preliminary Development Plan will be executed in Phases, the sequence thereof shall be provided."
Finding: This criterion is satisfied.
Explanation of Finding: The PDP is proposed to be executed in two phases. The proposed phases of the subject PDP are shown on the PDP Phasing Plan, Sheet 11 of Exhibit B4.

Subsection 4.125 (.18) G. 2. i. Preliminary Development Plan Permit Process: Security for Capital Improvements

B43. **Review Criterion:** "A commitment by the applicant to provide a performance bond or other acceptable security for the capital improvements required by the project."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant states "the applicant will provide a performance bond or other acceptable security for the capital improvements required by the project."

Subsection 4.125 (.18) G. 2. j. Preliminary Development Plan Permit Process: Traffic Report

B44. **Review Criterion:** "At the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the SAP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire SAP, and it shall meet Subsection 4.140(.09)(J)(2)."
Finding: This criterion is satisfied.

Explanation of Finding: The required traffic report has been provided, and can be found in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) H. PDP Application Submittal Requirements

Subsection 4.125 (.18) H. 1. PDP Application Submittal Requirements: General

B45. **Review Criteria:** "The Preliminary Development Plan shall conform with the approved Specific Area Plan, and shall include all information required by (.18)(D)(1) and (2), plus the following:

- The location of water, sewerage and drainage facilities;
- Conceptual building and landscape plans and elevations, sufficient to indicate the general character of the development;
- The general type and location of signs;
- Topographic information as set forth in Section 4.035;
- A map indicating the types and locations of all proposed uses; and
- A grading and erosion control plan illustrating existing and proposed contours as prescribed previously in this section."

Finding: These criteria are satisfied.

Explanation of Finding: The PDP matches the requested approval of SAP South Plan Area 2 and the application includes all of the requested information.

Subsection 4.125 (.18) H. 2. PDP Application Submittal Requirements: Traffic Report

B46. **Review Criteria:** "In addition to this information, and unless waived by the City's Community Development Director as enabled by Section 4.008(.02)(B), at the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the PDP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire PDP, and it shall meet Subsection 4.140(.09)(J)(2) for the full development of all five SAPs."

Finding: These criteria are satisfied.

Explanation of Finding: The required traffic report is included in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) H. 3. PDP Application Submittal Requirements: Level of Detail

B47. **Review Criterion:** "The Preliminary Development Plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the phase of development. However, approval of a Final Development Plan is a separate and more detailed review of proposed design features, subject to the standards of Section 4.125(.18)(L) through (P), and Section 4.400 through Section 4.450."

Finding: This criterion is satisfied.

Explanation of Finding: The required level of detail has been shown, similar to other PDP's approved throughout Villebois.

Subsection 4.125 (.18) H. 4. PDP Application Submittal Requirements: Copies of Legal Documents

B48. **Review Criterion:** "Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted."
Finding: This criterion is satisfied.
Explanation of Finding: The required legal documents for review have been provided. See Section IIIC in the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) I. PDP Approval Procedures

B49. **Review Criteria:** "An application for PDP approval shall be reviewed using the following procedures:

- Notice of a public hearing before the Development Review Board regarding a proposed PDP shall be made in accordance with the procedures contained in Section 4.012.
- A public hearing shall be held on each such application as provided in Section 4.013.
- After such hearing, the Development Review Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application."

Finding: These criteria are satisfied.
Explanation of Finding: The request is being reviewed according to this subsection.

Subsection 4.125 (.18) K. PDP Approval Criteria

Subsection 4.125 (.18) K. 1. a. PDP Approval Criteria: Consistent with Standards of Section 4.125

B50. **Review Criteria:** "Is consistent with the standards identified in this section."
Finding: These criteria are satisfied.
Explanation of Finding: As shown elsewhere in this request, the proposed Preliminary Development Plan is consistent with the standards of Section 4.125.

Subsection 4.125 (.18) K. 1. b. PDP Approval Criteria: Complies with the Planning and Land Development Ordinance

B51. **Review Criterion:** "Complies with the applicable standards of the Planning and Land Development Ordinance, including Section 4.140(.09)(J)(1)-(3)."
Finding: This criterion is satisfied.
Explanation of Finding: Findings are provided showing compliance with applicable standards of the Planning and Land Development Ordinance. Specifically Findings B57 through B59 address Subsections 4.140 (.09) J. 1. through 3.

Subsection 4.125 (.18) K. 1. c. PDP Approval Criteria: Consistent with Approved SAP

B52. **Review Criterion:** "Is consistent with the approved Specific Area Plan in which it is located."
Finding: This criterion is satisfied.
Explanation of Finding: The requested PDP approval is consistent with the SAP, as requested to be amended by Request A.

Subsection 4.125 (.18) K. 1. d. PDP Approval Criteria: Consistent with Approved Pattern Book

B53. **Review Criterion:** "Is consistent with the approved Pattern Book and, where required, the approved Village Center Architectural Standards."
Finding: This criterion is satisfied.
Explanation of Finding: As stated by the applicant, "No buildings are proposed with this Preliminary Development Plan. Subsequent Building Permit applications for residential buildings in this Preliminary Development Plan will document compliance with the Architectural Pattern Book. However, proposed lots are sized to accommodate proposed uses in a manner consistent with Table V-1 and the Architectural Pattern Book." Exhibit B6 shows front elevations of homes found to be consistent with the Pattern Book by the City's consultant architect, Steve Coyle.

Subsection 4.125 (.18) K. 2. PDP Approval Criteria: Reasonable Phasing Schedule

B54. **Review Criterion:** "If the PDP is to be phased, that the phasing schedule is reasonable and does not exceed two years between commencement of development of the first, and completion of the last phase, unless otherwise authorized by the Development Review Board."
Finding: This criterion is satisfied.
Explanation of Finding: Construction is anticipated to begin in 2014 on the first phase. As the DRB is not otherwise authorizing, completion of the final phase of construction must be completed within two years of the commencement of construction of the first phase.

Subsection 4.125 (.18) K. 3. PDP Approval Criteria: Parks Concurrency

B55. **Review Criterion:** "Parks within each PDP or PDP Phase shall be constructed prior to occupancy of 50% of the dwelling units in the PDP or PDP phase, unless weather or other special circumstances prohibit completion, in which case bonding for such improvements shall be permitted."
Finding: This criterion will be satisfied by Condition of Approval PDB 3.
Explanation of Finding: A condition of approval ensures the parks within phase 1 and phase 2 of PDP 7S as shown on Sheet 11 of Exhibit B4 will be completed prior to occupancy of 50% of the housing units of the phase or bonding will be provided if special circumstances prevent completion. Specifically, park improvement shown in Phase 1 must be completed prior to the granting of the building permit for the 28th house in the phase. Park improvements in Phase II must be completed prior to granting the building permit for the 22nd house in the phase.

Subsection 4.125 (.18) K. 5. PDP Approval Criteria: DRB Conditions

B56. **Review Criterion:** "The Development Review Board may require modifications to the PDP, or otherwise impose such conditions as it may deem necessary to ensure conformance with the approved SAP, the Villebois Village Master Plan, and compliance with applicable requirements and standards of the Planning and Land Development Ordinance, and the standards of this section."
Finding: This criterion is satisfied.
Explanation of Finding: No additional conditions of approval are recommended.

Subsection 4.140 (.09) J. Planned Development Permit Review Criteria

"A planned development permit may be granted by the Development Review Board only if it is found that the development conforms to all the following criteria, as well as to the Planned Development Regulations in Section 4.140:"

Subsection 4.140 (.09) J. 1. Consistency with Comprehensive Plan and Other Plans, Ordinances

B57. **Review Criteria:** "The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council."
Finding: These criteria are satisfied.
Explanation of Finding: The applicant's findings demonstrate the location, design, size, and uses proposed with the PDP are both separately and as a whole consistent with SAP South as proposed to be amended in Request A, and thus the Villebois Village Master Plan, the City's Comprehensive Plan designation of Residential – Village for the area, and any other applicable ordinance of which staff is aware.

Subsection 4.140 (.09) J. 2. Meeting Traffic Level of Service D

B58. **Review Criteria:** That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.
Finding: These criteria are satisfied.
Explanation of Finding: The location, design, size and uses are such that traffic generated within the PDP at the most heavily used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D. The proposed uses and the circulation system are consistent with the requested SAP South amendment in Request A, which included an Internal Circulation Evaluation including an assessment of intersection performance by DKS Associates. A copy of the Traffic Impact Analysis is included in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.140 (.09) J. 3. Concurrency for Other Facilities and Services

B59. **Review Criteria:** "That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services."
Finding: These criteria are satisfied.
Explanation of Finding: As shown in the Utility and Drainage Report, Section IIC of the applicant's notebook, Exhibit B3, and the applicant's Composite Utility Plan, Sheet 6 of Exhibit B4, adequate or immediately planned facilities and services are sufficient to serve the planned development.

Section 4.171 Protection of Natural Features & Other Resources

Subsection 4.171 (.02) General Terrain Preparation

B60. **Review Criteria:**

- "All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.
- All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code, all development shall be planned, designed, constructed and maintained so as to:
    - Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.
    - Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.
    - Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.

Finding: These criteria are satisfied.
Explanation of Finding: The PDP matches the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Subsection 4.171 (.03) Hillsides

B61. **Review Criterion:** "Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:"
Finding: This criterion does not apply.
Explanation of Finding: No development is proposed on such slopes.

Subsection 4.171 (.04) Trees and Wooded Area

B62. **Review Criteria:**

- "All developments shall be planned, designed, constructed and maintained so that:
    - Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.

- Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.
- Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.

- Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:
  - Avoiding disturbance of the roots by grading and/or compacting activity.
  - Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.
  - Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.
  - Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

Finding: These criteria are satisfied.

Explanation of Finding: The Tree Preservation Plan, Section V of Exhibit B3 and Sheets 9.1 and 9.2 of Exhibit B4, depicts existing trees within the subject area and identifies trees to be retained and to be removed. This application includes a request for approval of a Type "C" Tree Removal Plan. See Request E.

Subsection 4.171 (.05) High Voltage Power Lines

B63. **Review Criteria:** "High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:

- Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage power line easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage power line easements and rights of way and petroleum pipeline easement shall be carefully reviewed.
- Any proposed non-residential development within high voltage power line easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.

Finding: These criteria do not apply.

Explanation of Finding: The development area and surrounding area are not around high voltage power lines.

Subsection 4.171 (.06) Safety Hazards

B64. **Review Criteria:** "

- To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.
- To protect lives and property from damage due to soil hazards.
- To protect lives and property from forest and brush fires.
- To avoid financial loss resulting from development in hazard areas.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states that development of the subject area will occur in a manner that minimizes potential hazards to safety.

Subsection 4.171 (.07) Earth Movement Hazard Areas

B65. **Review Criterion:** "No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions."
Finding: This criterion is satisfied.
Explanation of Finding: No areas of land movement, slump, earth flow, or mud or debris flow have been identified in the project area.

Subsection 4.171 (.08) Standards for Soil Hazard Areas

B66. **Review Criteria:**

- "Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.
- The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Finding: These criteria are satisfied.
Explanation of Finding: No soil hazard areas have been identified within the subject area.

Subsection 4.171 (.09) Historic Protection

B67. **Review Criteria:** This subsection establishes requirements for protection of historic resources.
Finding: This criterion is satisfied.
Explanation of Finding: The PDP matches the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Section 4.176 Landscaping, Screening, and Buffering

B68. **Review Criteria:** This section establishes landscape, screening, and buffering requirements for development within the City.
Finding: These criteria are satisfied.
Explanation of Finding: Landscaping will be provided in accordance with the standards in Section 4.176. The Street Tree/Lighting Plan depicts street trees along rights-of-way within the subject Preliminary Development Plan area. The plan has been developed in conformance with the *Community Elements Book* and the applicable standards of Section 4.176. The variety of street tree shown for SW Alta Court is not consistent for the street type as shown in the Community Elements Book. However, Condition of Approval PDF 9 ensures appropriate street trees are planted consistent with the Community Elements Book. Landscaping in the parks and linear green areas will be reviewed with Request F, Final Development Plan.

Section 4.177 Street Improvement Standards

B69. **Review Criteria:** This section establishes street improvements standards for development within the City.

Finding: These criteria are satisfied.

Explanation of Finding: The PDP is consistent with the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Section 4.178 Sidewalk and Pathway Standards

B70. **Review Criteria:**

- "Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.
- Pathways
    - Bicycle facilities shall be provided using a bicycle lane as the preferred facility design. The other facility designs listed will only be used if the bike lane standard cannot be constructed due to physical or financial constraints. The alternative standards are listed in order of preference.
    - Bike lane. This design includes 12-foot minimum travel lanes for autos and paved shoulders, 5-6 feet wide for bikes that are striped and marked as bicycle lanes. This shall be the basic standard applied to bike lanes on all arterial and collector streets in the City, with the exception of minor residential collectors with less than 1,500 (existing or anticipated) vehicle trips per day."

Finding: These criteria are satisfied.

Explanation of Finding: The PDP is consistent with the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

REQUEST C: DB14-0004 ZONE MAP AMENDMENT

The applicant's findings in Section IVA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Comprehensive Plan

Compact Urban Development-Implementation Measures

Implementation Measure 4.1.6.a

C1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
Finding: These criteria are satisfied.
Explanation of Finding: Development in this area is being guided by all the listed plans and codes.

Implementation Measure 4.1.6.b.

C2. **Review Criteria:** This implementation measure identifies the elements the Villebois Village Master Plan must contain.
Finding: These criteria are not applicable
Explanation of Finding: The concurrent proposal for a preliminary development plan implements the procedures as outlined by the Villebois Village Master Plan, as previously approved.

Implementation Measure 4.1.6.c.

C3. **Review Criterion:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
Finding: This criterion is satisfied.
Explanation of Finding: The Village Zone zoning district is being applied to an area designated as Residential-Village in the Comprehensive Plan.

Implementation Measure 4.1.6.d.

C4. **Review Criterion:** "The "Village" Zone District shall allow a wide range of uses that befit and support an "urban village," including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses."
Finding: This criterion is satisfied.
Explanation of Finding: The area covered by the proposed zone change is proposed for residential uses, parks and open space, and sanitary sewer lift station as shown in the Villebois Village Master Plan.

Planning and Land Development Ordinance

Section 4.029 Zoning to be Consistent with Comprehensive Plan

C5. **Review Criterion:** "If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant is applying for a zone change concurrently with a Preliminary Development Plan, which is equivalent to a Stage II Final Plan for a planned development.

Subsection 4.110 (.01) Base Zones

C6. **Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.
Finding: This criterion is satisfied.
Explanation of Finding: The requested zoning designation of Village "V" is among the base zones identified in this subsection.

Subsection 4.125 (.01) Village Zone Purpose

C7. **Review Criteria:** "The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The subject lands are designated Residential-Village on the Comprehensive Plan map and are within the Villebois Village Master Plan area and the zoning designation thus being applied is the Village "V".

Subsection 4.125 (.02) Village Zone Permitted Uses

C8. **Review Criteria:** This subsection lists the uses permitted in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed residential, park and open space, and utility uses are consistent with the Village Zone designation and Villebois Village Master Plan.

Subsection 4.125 (.18) B. 2. Zone Change Concurrent with PDP Approval

C9. **Review Criterion:** "... Application for a zone change shall be made concurrently with an application for PDP approval..."
Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment is being requested concurrently with a request for PDP approval. See Request B.

Subsection 4.197 (.02) Zone Change Review

Subsection 4.197 (.02) A. Zone Change Procedures

C10. **Review Criteria:** "That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;"
Finding: These criteria are satisfied.
Explanation of Finding: The request for a zone map amendment has been submitted as set forth in the applicable code sections.

Subsection 4.197 (.02) B. Zone Change: Conformance with Comprehensive Plan Map, etc.

C11. **Review Criteria:** "That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: The proposed zone map amendment is consistent with the Comprehensive Map designation of Residential-Village and as shown in Findings C1 through C4 comply with applicable Comprehensive Plan text.

Subsection 4.197 (.02) C. Zone Change: Specific Findings Regarding Residential Designated Lands

C12. **Review Criteria:** "In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: Implementation Measure 4.1.6.c. states the "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation. Since the Village Zone must be applied to areas designated "Residential Village" on the Comprehensive Plan Map and is the only zone that may be applied to these areas, its application is consistent with the Comprehensive Plan.

Subsection 4.197 (.02) D. Zone Change: Public Facility Concurrency

C13. **Review Criteria:** "That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized."
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan compliance report and the plan sheets demonstrate that the existing primary public facilities are available or can be provided in conjunction with the project. Section IIC of the applicant's notebook, Exhibit B3, includes supporting utility and drainage reports. In addition, the applicant has provided a Traffic Impact Analysis, which is in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.197 (.02) E. Zone Change: Impact on SROZ Areas

C14. **Review Criteria:** "That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;"
Finding: These criteria are satisfied.
Explanation of Finding: A portion of the subject property is within the SROZ. Request G is reviewing SROZ regulations and ensuring the development does not have a significant adverse effect on natural resources. The proposed development is being focused on areas of the site previously disturbed by the development.

Subsection 4.197 (.02) F. Zone Change: Development within 2 Years

C15. **Review Criterion:** "That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant has provided information stating they reasonably expect to commence development within two (2) years of the approval of the zone change, beginning construction in 2014. However, in the scenario where the applicant or their successors due not commence development within two (2) years allow related land use approvals to expire, the zone change shall remain in effect.

Subsection 4.197 (.02) G. Zone Change: Development Standards and Conditions of Approval

C16. **Review Criteria:** "That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards."
Finding: These criteria are satisfied.
Explanation of Finding: As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

REQUEST D: DB14-0005 TENTATIVE SUBDIVISION PLAT

The applicant's findings in Section IIIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.125 (.02) Permitted Uses in the Village Zone

D1. **Review Criteria:** This subsection lists the permitted uses in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed subdivision is for uses including single family homes and row homes, parks and open space, and a sanitary sewer lift station are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in Village Zone

Subsection 4.125 (.05) A. Block, Alley, Pedestrian, and Bicycle Standards

D2. **Review Criteria:** This subsection lists the block, alley, pedestrian, and bicycle standards applicable in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows blocks, alleys, pedestrian, and bicycle paths consistent with this subsection and the proposed PDP.

Subsection 4.125 (.05) B. Access Standards

D3. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion will be satisfied by Condition of Approval PDD 6.
Explanation of Finding: Condition of Approval PDD 6 requires a non-access reservation strip on the street side of lots with street access helping to ensure this criterion is met.

Table V-1: Development Standards in the Village Zone

D4. **Review Criteria:** This table shows the development standards, including setback for different uses in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: As been consistently interpreted for PDP approvals in Villebois, lot dimensions in the Architectural Pattern Book can govern such things as lot width and size even when it is not consistent with the table. The proposed lots facilitate the construction that meets relevant standards of the table.

Subsection 4.125 (.07) Off-Street Parking, Loading and Bicycle Parking

D5. **Review Criteria:** "Except as required by Subsections (A) through (D), below, the requirements of Section 4.155 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: Nothing concerning the tentative subdivision would prevent the required parking from being built.

Subsection 4.125 (.08) Open Space Requirements

D6. **Review Criteria:** This subsection establishes the open space requirements for the Village Zone.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDD 9.
Explanation of Finding: The tentative subdivision plat shows open space consistent with the requirements of the Village Zone and the proposed PDP. Consistent with the requirements of (.08) C. the condition of approval require the City Attorney to review and approve pertinent bylaws, covenants, or agreements prior to recordation.

Subsection 4.125 (.09) A. 1. Street and Improvement Standards: General Provisions

D7. **Review Criteria:** "Except as noted below, the provisions of Section 4.177 shall apply within the Village zone:

- General Provisions:
  - All street alignment and access improvements shall conform to Figures 7, 8, 9A, and 9B of the Villebois Village Master Plan, or as refined in an approved Specific Area Plan, Preliminary Development Plan, or Final Development Plan, and the following standards:
  - All street improvements shall conform to the Public Works Standards and the Transportation Systems Plan, and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan.
  - All streets shall be developed according to the Master Plan."

Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows street alignments, improvements, and access improvements consistent with the approved PDP and SAP found to be consistent with the Master Plan and Transportation Systems Plan.

Subsection 4.125 (.09) A. 2. Street and Improvement Standards: Intersection of Streets

D8. **Review Criteria:** "Intersections of streets:

- Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of a thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety 90 degrees shall require approval by the City Engineer after consultation with the Fire District.
- Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:
  - 1000 ft. for major arterials
  - 600 ft. for minor arterials
  - 100 ft. for major collector
  - 50 ft. for minor collector
- Curb Extensions:
  - Curb extensions at intersections shall be shown on the Specific Area Plans required in Subsection 4.125(.18)(C) through (F), below, and shall:
    - Not obstruct bicycle lanes on collector streets.

- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections, meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows street intersections as proposed in the proposed PDP consistent with these standards.

Subsection 4.125 (.09) A. 4. Street and Improvement Standards: Centerline Radius Street Curves

D9. **Review Criteria:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by the City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows streets found to meet these standards under Requests A and B.

Subsections 4.125 (.09) A. 5. and 4.177 (.01) C. Street and Improvement Standards: Rights-of-way

D10. **Review Criteria:**

- "Prior to issuance of a Certificate of Occupancy Building permits or as a part of the recordation of a final plat, the City shall require dedication of rights-of-way in accordance with the Street System Master Transportation Systems Plan. All dedications shall be recorded with the County Assessor's Office.
- The City shall also require a waiver of remonstrance against formation of a local improvement district, and all non-remonstrances shall be recorded in the County Recorder's Office as well as the City's Lien Docket, prior to issuance of a Certificate of Occupancy Building Permit or as a part of the recordation of a final plat.
- In order to allow for potential future widening, a special setback requirement shall be maintained adjacent to all arterial streets. The minimum setback shall be 55 feet from the centerline or 25 feet from the right-of-way designated on the Master Plan, whichever is greater."

Finding: These criteria are satisfied.

Explanation of Finding: As stated by the applicant, "rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177."

Subsections 4.125 (.09) A. 6.and 4.177 (.01) E. Street and Improvement Standards: Access Drives

D11. **Review Criteria:**

- Access drives are required to be 16 feet for two-way traffic.
- An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.

- Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.
- Secondary or emergency access lanes may be improved to a minimum 12 feet with an all-weather surface as approved by the Fire District. All fire lanes shall be dedicated easements.
- Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.
- Where access drives connect to the public right-of-way, construction within the right-of-way shall be in conformance to the Public Works Standards.

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows alleys of sufficient width to meet the width standards. The applicant states easements for fire access will be dedicated as required.

Subsections 4.125 (.09) A. 7. and 4.177 (.01) F. Street and Improvement Standards: Clear Vision Areas

D12. **Review Criteria:** "A clear vision area which meets the Public Works Standards shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. However, the following items shall be exempt from meeting this requirement:" Listed 1. a.-f.

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows streets found to meet these standards under Requests A and B.

Subsections 4.125 (.09) A. 8.and 4.177 (.01) G. Street and Improvement Standards: Vertical Clearance

D13. **Review Criterion:** "a minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives."

Finding: This criterion is satisfied.

Explanation of Finding: Nothing shown on the tentative subdivision plat would preclude the required clearance from being provided.

Subsections 4.125 (.09) A. 9.and 4.177 (.01) H. Street and Improvement Standards: Interim Improvement Standards

D14. **Review Criteria:** "It is anticipated that all existing streets, except those in new subdivisions, will require complete reconstruction to support urban level traffic volumes. However, in most cases, existing and short-term projected traffic volumes do not warrant improvements to full Master Plan standards. Therefore, unless otherwise specified by the Planning Commission, the following interim standards shall apply.

- Arterials - 24 foot paved, with standard sub-base. Asphalt overlays are generally considered unacceptable, but may be considered as an interim improvement based on the recommendations of the City Engineer, regarding adequate structural quality to support an overlay.
- Half-streets are generally considered unacceptable. However, where the Development Review Board finds it essential to allow for reasonable development, a half-street may be

approved. Whenever a half-street improvement is approved, it shall conform to the requirements in the Public Works Standards:

- When considered appropriate in conjunction with other anticipated or scheduled street improvements, the City Engineer may approve street improvements with a single asphalt lift. However, adequate provision must be made for interim storm drainage, pavement transitions at seams and the scheduling of the second lift through the Capital Improvements Plan.

Finding: These criteria are satisfied.

Explanation of Finding: The area covered by the tentative subdivision plat does not include any interim improvements addressed by this subsection.

Subsection 4.202 (.01) through (.03) Plats Reviewed by Planning Director or DRB

D15. **Review Criteria:** "Pursuant to ORS Chapter 92, plans and plats must be approved by the Planning Director or Development Review Board (Board), as specified in Sections 4.030 and 4.031, before a plat for any land division may be filed in the county recording office for any land within the boundaries of the City, except that the Planning Director shall have authority to approve a final plat that is found to be substantially consistent with the tentative plat approved by the Board.

The Development Review Board and Planning Director shall be given all the powers and duties with respect to procedures and action on tentative and final plans, plats and maps of land divisions specified in Oregon Revised Statutes and by this Code.

Approval by the Development Review Board or Planning Director of divisions of land within the boundaries of the City, other than statutory subdivisions, is hereby required by virtue of the authority granted to the City in ORS 92."

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat is being reviewed by the Development Review Board according to this subsection. The final plat will be reviewed by the Planning Division under the authority of the Planning Director to ensure compliance with the DRB review of the tentative subdivision plat.

Subsection 4.202 (.04) A. Lots must be Legally Created for Issuing Development Permit

D16. **Review Criterion:** "No person shall sell any lot or parcel in any condominium, subdivision, or land partition until a final condominium, subdivision or partition plat has been approved by the Planning Director as set forth in this Code and properly recorded with the appropriate county."

Finding: This criterion is satisfied.

Explanation of Finding: It is understood that no lots will be sold until the final plat has been approved by the Planning Director and recorded.

Subsection 4.202 (.04) B. Prohibition of Creating Undersized Lots

D17. **Review Criterion:** "It shall be a violation of this Code to divide a tract of land into a parcel smaller than the lot size required in the Zoning Sections of this Code unless specifically approved by the Development Review Board or City Council. No conveyance of any portion of a lot, for other than a public use, shall leave a structure on the remainder of the lot with less than the minimum lot size, width, depth, frontage, yard or setback requirements, unless specifically authorized through the Variance procedures of Section 4.196 or the waiver provisions of the Planned Development procedures of Section 4.118."
Finding: This criterion is satisfied.
Explanation of Finding: No lots will be divided into a size smaller than allowed by the proposed Village "V" zoning designation.

Subsection 4.210 (.01) Pre-Application Conference

D18. **Review Criterion:** "Prior to submission of a tentative condominium, partition, or subdivision plat, a person proposing to divide land in the City shall contact the Planning Department to arrange a pre-application conference as set forth in Section 4.010."
Finding: This criterion is satisfied.
Explanation of Finding: A pre-application meeting has been held. See case file PA13-0007.

Subsection 4.210 (.01) A. Preparation of Tentative Plat

D19. **Review Criterion:** "The applicant shall cause to be prepared a tentative plat, together with improvement plans and other supplementary material as specified in this Section. The Tentative Plat shall be prepared by an Oregon licensed professional land surveyor or engineer. An affidavit of the services of such surveyor or engineer shall be furnished as part of the submittal."
Finding: This criterion is satisfied.
Explanation of Finding: Sheets 4.1 and 4.2 of Exhibit B4, as shown modified in Exhibit B9, is a tentative subdivision plat prepared in accordance with this subsection.

Subsection 4.210 (.01) B. Tentative Plat Submission

D20. **Review Criteria:** "The design and layout of this plan plat shall meet the guidelines and requirements set forth in this Code. The Tentative Plat shall be submitted to the Planning Department with the following information:" Listed 1. through 26.
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat has been submitted with the required information.

Subsection 4.210 (.01) D. Land Division Phases to Be Shown

D21. **Review Criteria:** "Where the applicant intends to develop the land in phases, the schedule of such phasing shall be presented for review at the time of the tentative plat. In acting on an application for tentative plat approval, the Planning Director or Development Review Board may set time limits for the completion of the phasing schedule which, if not met, shall result in an expiration of the tentative plat approval."
Finding: These criteria are satisfied.

Explanation of Finding: Phasing is shown on Sheet 11 of the applicant's plan set, Exhibit B4.

Subsection 4.210 (.01) E. Remainder Tracts

D22. **Review Criteria:** "Remainder tracts to be shown as lots or parcels. Tentative plats shall clearly show all affected property as part of the application for land division. All remainder tracts, regardless of size, shall be shown and counted among the parcels or lots of the division."
Finding: These criteria are satisfied.
Explanation of Finding: All affected property has been incorporated into the tentative subdivision plat.

Subsection 4.236 (.01) Conformity to the Master Plan or Map

D23. **Review Criteria:** "Land divisions shall conform to and be in harmony with the Transportation Master Plan (Transportation Systems Plan), the Bicycle and Pedestrian Master Plan, the Parks and Recreation Master Plan, the Official Plan or Map and especially to the Master Street Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat is consistent with applicable plans including the Transportation Systems Plan and Villebois Village Master Plan.

Subsection 4.236 (.02) Relation to Adjoining Street System

D24. **Review Criteria:**

- A land division shall provide for the continuation of the principal streets existing in the adjoining area, or of their proper projection when adjoining property is not developed, and shall be of a width not less than the minimum requirements for streets set forth in these regulations. Where, in the opinion of the Planning Director or Development Review Board, topographic conditions make such continuation or conformity impractical, an exception may be made. In cases where the Board or Planning Commission has adopted a plan or plat of a neighborhood or area of which the proposed land division is a part, the subdivision shall conform to such adopted neighborhood or area plan.
- Where the plat submitted covers only a part of the applicant's tract, a sketch of the prospective future street system of the unsubmitted part shall be furnished and the street system of the part submitted shall be considered in the light of adjustments and connections with the street system of the part not submitted.
- At any time when an applicant proposes a land division and the Comprehensive Plan would allow for the proposed lots to be further divided, the city may require an arrangement of lots and streets such as to permit a later resubdivision in conformity to the street plans and other requirements specified in these regulations.

Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows streets meeting these standards consistent with the proposed PDP. See Request B.

Subsection 4.236 (.03) Streets: Conformity to Standards Elsewhere in the Code

D25. **Review Criteria:** "All streets shall conform to the standards set forth in Section 4.177 and the block size requirements of the zone."
Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows streets consistent with the proposed SAP Amendment and PDP under Requests A and B which meets Section 4.177 and the block requirements of the zone.

Subsection 4.236 (.04) Creation of Easements

D26. **Review Criteria:** "The Planning Director or Development Review Board may approve an easement to be established without full compliance with these regulations, provided such an easement is the only reasonable method by which a portion of a lot large enough to allow partitioning into two (2) parcels may be provided with vehicular access and adequate utilities. If the proposed lot is large enough to divide into more than two (2) parcels, a street dedication may be required."
Finding: These criteria are satisfied.
Explanation of Finding: No specific easements are requested pursuant to this subsection.

Subsection 4.236 (.05) Topography

D27. **Review Criterion:** "The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of these regulations."
Finding: This criterion is satisfied.
Explanation of Finding: The tentative subdivision plat shows street alignments recognizing topographic conditions consistent with the requested PDP.

Subsection 4.236 (.06) Reserve Strips

D28. **Review Criteria:** "The Planning Director or Development Review Board may require the applicant to create a reserve strip controlling the access to a street. Said strip is to be placed under the jurisdiction of the City Council, when the Director or Board determine that a strip is necessary:" Reasons listed A. through D.
Finding: These criteria are satisfied.
Explanation of Finding: No reserve strips are being required for the reasons listed in this subsection. However, reserve strips are being required by Condition of Approval PDD 6 to prevent access to the front side of lots served by an alley. See also Findings D3.

Subsection 4.236 (.07) Future Expansion of Street

D29. **Review Criteria:** When necessary to give access to, or permit a satisfactory future division of, adjoining land, streets shall be extended to the boundary of the land division and the resulting dead-end street may be approved without a turn-around. Reserve strips and street plugs shall be required to preserve the objective of street extension.
Finding: These criteria are satisfied.
Explanation of Finding: No street extensions are necessary pursuant to this subsection. Adjacent properties are either already developed or are preserved as a nature park.

Subsection 4.236 (.08) Additional Right-of-Way for Existing Streets

D30. **Review Criteria:** "Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall conform to the designated width in this Code or in the Transportation Systems Plan."

Finding: These criteria are satisfied.
Explanation of Finding: The necessary right-of-way for Grahams Ferry Road is being dedicated.

Subsection 4.236 (.09) Street Names

D31. **Review Criteria:** "No street names will be used which will duplicate or be confused with the names of existing streets, except for extensions of existing streets. Street names and numbers shall conform to the established name system in the City, and shall be subject to the approval of the City Engineer."
Finding: These criteria are satisfied.
Explanation of Finding: Street names will be reviewed by Engineering staff and be subject to approval by the City Engineer consistent with this subsection.

Subsection 4.237 (.01) Blocks

D32. **Review Criteria:**

- The length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control, and safety of pedestrian, bicycle, and motor vehicle traffic, and recognition of limitations and opportunities of topography.
- Sizes: Blocks shall not exceed the sizes and lengths specified for the zone in which they are located unless topographical conditions or other physical constraints necessitate larger blocks. Larger blocks shall only be approved where specific findings are made justifying the size, shape, and configuration.

Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows blocks consistent with those proposed Preliminary Development Plan. See Request B.

Subsection 4.237 (.02) Easements

D33. **Review Criteria:**

- Utility lines. Easements for sanitary or storm sewers, drainage, water mains, electrical lines or other public utilities shall be dedicated wherever necessary. Easements shall be provided consistent with the City's Public Works Standards, as specified by the City Engineer or Planning Director. All of the public utility lines within and adjacent to the site shall be installed within the public right-of-way or easement; with underground services extending to the private parcel constructed in conformance to the City's Public Works Standards. All franchise utilities shall be installed within a public utility easement. All utilities shall have appropriate easements for construction and maintenance purposes.
- Water courses. Where a land division is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the water course, and such further width as will be adequate for the purposes of conveying storm water and allowing for maintenance of the facility or channel. Streets or parkways parallel to water courses may be required.

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.
Explanation of Finding: As shown on the applicant's sheets 4.1 and 4.2 of their plan set, Exhibit B4, the required easements have been provided. Condition of Approvals ensures all easements dealing with utilities are on the final plat.

Subsection 4.237 (.03) Mid-block Pedestrian and Bicycle Pathways

D34. **Review Criteria:** "An improved public pathway shall be required to transverse the block near its middle if that block exceeds the length standards of the zone in which it is located.

- Pathways shall be required to connect to cul-de-sacs or to pass through unusually shaped blocks.
- Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.

Finding: These criteria are satisfied.

Explanation of Finding: Pathways are being provided consistent with the Village Zone requirements and the Villebois Village Master Plan. See Finding A4.

Subsection 4.237 (.04) Tree Planting & Tree Access Easements

D35. **Review Criteria:** "Tree planting plans for a land division must be submitted to the Planning Director and receive the approval of the Director or Development Review Board before the planting is begun. Easements or other documents shall be provided, guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees that are located on private property."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed street trees are within the proposed public right-of-way.

Subsection 4.237 (.05) Lot Size and Shape

D36. **Review Criteria:** "The lot size, width, shape and orientation shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots shall meet the requirements of the zone where they are located."

Finding: These criteria are satisfied.

Explanation of Finding: Proposed lot sizes, widths, shapes and orientations are appropriate for the proposed development and are in conformance with the Village Zone requirements as discussed under Requests A and B.

Subsection 4.237 (.06) Access

D37. **Review Criteria:** "The division of land shall be such that each lot shall have a minimum frontage on a street or private drive, as specified in the standards of the relative zoning districts. This minimum frontage requirement shall apply with the following exceptions:" Listed A. and B.

Finding: These criteria are satisfied.

Explanation of Finding: Each lot has the minimum frontage on a street or greenbelt, as allowed in the Architectural Pattern Book, as proposed to be amended in Request A.

Subsection 4.237 (.07) Through Lots

D38. **Review Criteria:** "Through lots shall be avoided except where essential to provide separation of residential development from major traffic arteries or adjacent non-residential activity or to overcome specific disadvantages of topography and orientation."

Finding: These criteria are satisfied.
Explanation of Finding: No through lots are proposed. The lots on Sicily Street backing up to Grahams Ferry Road have a common tract between the rear lot line and the Grahams Ferry Road right-of-way.

Subsection 4.237 (.08) Lot Side Lines

D39. **Review Criteria:** "The side lines of lots, as far as practicable for the purpose of the proposed development, shall run at right angles to the street or tract with a private drive upon which the lots face."
Finding: These criteria are satisfied.
Explanation of Finding: Generally side lot lines are at right angles with the front lot line. Where they do not, they run at the closest possible angle to 90 degrees as allowed by block shape, adjacent lot shape, required alley orientation, and natural resource preservation.

Subsection 4.237 (.09) Large Lot Land Divisions

D40. **Review Criteria:** "In dividing tracts which at some future time are likely to be re-divided, the location of lot lines and other details of the layout shall be such that re-division may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of buildings within future street locations shall be made a matter of record if the Development Review Board considers it necessary."
Finding: These criteria are satisfied.
Explanation of Finding: No future divisions of the lots included in the tentative subdivision plat.

Subsection 4.237 (.10) and (.11) Building Line and Built-to Line

D41. **Review Criteria:** The Planning Director or Development Review Board may establish special:
- building setbacks to allow for the future redivision or other development of the property or for other reasons specified in the findings supporting the decision. If special building setback lines are established for the land division, they shall be shown on the final plat.
- build-to lines for the development, as specified in the findings and conditions of approval for the decision. If special build-to lines are established for the land division, they shall be shown on the final plat.

Finding: These criteria are satisfied.
Explanation of Finding: No building lines or built-to lines are proposed or recommended.

Subsection 4.237 (.12) Land for Public Purposes

D42. **Review Criterion:** "The Planning Director or Development Review Board may require property to be reserved for public acquisition, or irrevocably offered for dedication, for a specified period of time."
Finding: This criterion is satisfied.
Explanation of Finding: No property reservation is recommended as described in this subsection.

Subsection 4.237 (.13) Corner Lots

D43. **Review Criterion:** "Lots on street intersections shall have a corner radius of not less than ten (10) feet."
Finding: This criterion is satisfied.
Explanation of Finding: All proposed corner lots meet the minimum corner radius of ten (10) feet.

Section 4.250 Lots of Record

D44. **Review Criteria:** "All lots of record that have been legally created prior to the adoption of this ordinance shall be considered to be legal lots. Tax lots created by the County Assessor are not necessarily legal lots of record."
Finding: These criteria are satisfied.
Explanation of Finding: The parcels being divided are of record, and the resulting subdivision lots will be lots of record.

Section 4.260 Improvements-Procedures

D45. **Review Criteria:** "In addition to other requirements, improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this Code and improvement standards and specifications of the City. The improvements shall be installed in accordance with the City's Public Works Standards."
Finding: These criteria are satisfied.
Explanation of Finding: The rights-of-way shown on the tentative subdivision plat are sufficient for installation of improvements to City standards. Conformance of the improvements with the City's Public Works Standards and other applicable standards will be ensured through the Engineering Division's permit and inspection process.

Section 4.262 Improvements-Requirements

D46. **Review Criteria:** This section establishes requirements for a number of different improvements including curbs, sidewalks, sanitary sewers, drainage, underground utility and service facilities, streetlight standards, street signs, monuments, and water.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has stated their intent to meet the requirements for all the types of improvements indicated in this subsection. Conformance with these requirements will be ensured through the Engineering Division's, and Building Division's where applicable, permit and inspection process.

REQUEST E: DB14-0006 TYPE C TREE PLAN

The applicant's findings in Section VA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.600.50 (.03) A. Access to Site for Tree Related Observation

E1. **Review Criterion:** "By submission of an application, the applicant shall be deemed to have authorized City representatives to have access to applicant's property as may be needed to verify the information provided, to observe site conditions, and if a permit is granted, to verify that terms and conditions of the permit are followed."
Finding: This criterion will be satisfied by Condition of Approval PDE 2.
Explanation of Finding: Condition of Approval PDE 2 ensures the required access is allowed including easement to inspect preserved Oregon White Oaks in private yards.

Subsection 4.610.00 (.03) B. Type C Tree Removal Review Authority

E2. **Review Criterion:** "Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council."
Finding: This criterion is satisfied.
Explanation of Finding: The requested tree removal is connected to site plan review by the Development Review Board for the proposed development. The tree removal is thus being reviewed by the DRB.

Subsection 4.610.00 (.06) A. Conditions Attached to Type C Tree Permits

E3. **Review Criterion:** "Conditions. Attach to the granting of the permit any reasonable conditions considered necessary by the reviewing authority including, but not limited to, the recording of any plan or agreement approved under this subchapter, to ensure that the intent of this Chapter will be fulfilled and to minimize damage to, encroachment on or interference with natural resources and processes within wooded areas;"
Finding: This criterion will be satisfied by a condition of approval.
Explanation of Finding: The condition requires tree preservation easements to be recorded with the final plat to protect important and good Oregon White Oak trees identified in the arborist report that are not otherwise within a conservation easement or HOA tract. The easements shall allow City access to inspect the tree and the area within the easement. The responsibility for landscaping and tree maintenance within the easement areas shall be held by the Homeowners Association. Landscaping within easement areas shall be limited to native plantings compatible with Oregon White Oaks. Drainage and irrigation shall be designed to optimize the amount of water in the root zone of the oak trees for the health of the oaks. In the event one of the preserved Oak dies a replacement Oregon White Oak shall be planted in its place. An additional condition requires tree protective fencing around all preserved important and good Oregon White Oaks to have a legible sign be placed on the tree protective fencing stating "Penalty for damaging this tree

may be up to $(assessed value)" or substantially similar language. The assessed value shall be that shown in a tree valuation report for the preserved important and good Oregon White Oaks prepared by the appropriate arboriculture professional and given to the City's Planning Division with the Type C Tree Permit request. These conditional are reasonable in consideration of the aesthetic, historical, and natural importance of the preserved Oregon White Oak trees and in consideration that the conditions are based on issues arising around preserved trees in previous phases of Villebois development including inappropriate landscaping and irrigation within drip lines of preserved trees leading to tree decline and death, and construction damage, especially from utility installation and grading leading to excessive pooling of storm water. In addition, Conditions of Approval PDE ~~10~~***9*** and PDE ~~11~~***10*** require special procedures are followed to protect the preserved trees during fence and utility installation within the root zone.

Subsection 4.610.00 (.06) B. Completion of Operation

E4. **Review Criterion:** "Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:" "Fix a reasonable time to complete tree removal operations;"
Finding: This criterion is satisfied.
Explanation of Finding: It is understood the tree removal will be completed by the time construction of all homes, parks, and other improvements in the PDP are completed, which is a reasonable time frame for tree removal.

Subsection 4.610.00 (.06) C. Security

E5. **Review Criterion:** "Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:" "Require the Type C permit grantee to file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount determined necessary by the City to ensure compliance with Tree Removal Permit conditions and this Chapter.
1. This requirement may be waived by the Planning Director if the tree removal must be completed before a plat is recorded, and the applicant has complied with WC 4.264(1) of this Code."
Finding: This criterion ~~will be satisfied by Condition of Approval PDE 5~~***is satisfied***.
Explanation of Finding: ~~The condition of approval ensures the security requirement of this subsection is met.~~ ***As allowed by Subsection 1 the bonding requirement is being waived as the application is required to comply with WC 4.264(1).***

Subsection 4.610.10 (.01) Standards for Tree Removal, Relocation or Replacement

Subsection 4.610.10 (.01) A. Standards for the Significant Resource Overlay Zone

E6. **Review Criteria:** "Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this chapter."
Finding: These criteria are satisfied.
Explanation of Finding: Request G fully reviews any impact to the Significant Resource Overlay Zone, including any tree removal.

Subsection 4.610.10 (.01) B. Standards for Preservation and Conservation

E7. **Review Criteria:** "No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a principle shall be equal in concern and importance as other design principles."
Finding: These criteria are satisfied.
Explanation of Finding: The preservation of on-site trees was an important factor in the design of PDP 7 South. To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within the areas of the site previously impacted by development. Care has been taken to preserve trees, especially good and important trees. Review of the site plan by staff has not produced any additional suggestions for reasonable design alternatives that would preserve additional trees.

Subsection 4.610.10 (.01) C. Standards for Development Alternatives

E8. **Review Criteria:** "Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements."
Finding: These criteria are satisfied.
Explanation of Finding: To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within the areas previously impacted by development. Care has been taken to preserve trees, especially good and important trees. Review of the site plan by staff has not produced any additional suggestions for reasonable design alternatives that would preserve additional trees.

Subsection 4.610.10 (.01) D. Standards for Land Clearing

E9. **Review Criteria:** "Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements."
Finding: These criteria are satisfied.
Explanation of Finding: This standard is being followed as shown in the applicant's plan set, Exhibit B4.

Subsection 4.610.10 (.01) E. Standards for Residential Development

E10. **Review Criteria:** "Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed development footprint is focused the areas previously impacted by development maintaining much of the surrounding natural setting.

Subsection 4.610.10 (.01) F. Standards for Compliance with Statutes and Ordinances

E11. **Review Criteria:** "The proposed activity shall comply with all applicable statutes and ordinances."
Finding: These criteria are satisfied.

Explanation of Finding: This standard is broad and duplicative. As found elsewhere in this report, the applicable standards are being applied.

Subsection 4.610.10 (.01) G. Standards for Relocation and Replacement

E12. **Review Criteria:** "The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not removed, in accordance with WC 4.620.10.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed tree activity is being reviewed in accordance to the referenced sections related to replacement and protection.

Subsection 4.610.10 (.01) H. Limitation on Tree Removal

E13. **Review Criteria:** "Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection." Listed 1. through 4.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed tree removal is either necessary for construction or is due to the health and condition of the trees.

Subsection 4.610.10 (.01) I. 1. Additional Standards for Type C Permits: Tree Survey

E14. **Review Criteria:** "For all site development applications reviewed under the provisions of Chapter 4 Planning and Zoning, the developer shall provide a Tree Survey before site development as required by WC 4.610.40 , and provide a Tree Maintenance and Protection Plan, unless specifically exempted by the Planning Director or DRB, prior to initiating site development."
Finding: These criteria are satisfied.
Explanation of Finding: The required Tree Maintenance and Protection Plan has been submitted.

Subsection 4.610.10 (.01) I. 2. Additional Standards for Type C Permits: Platted Subdivision

E15. **Review Criteria:** "The recording of a final subdivision plat whose preliminary plat has been reviewed and approved after the effective date of Ordinance 464 by the City and that conforms with this subchapter shall include a Tree Survey and Maintenance and Protection Plan, as required by this subchapter, along with all other conditions of approval."
Finding: These criteria are satisfied.
Explanation of Finding: The required plan has been submitted, and additional conditions of approval are being attached to further protect "Important" and "Good" Oregon White Oaks trees.

Subsection 4.610.10 (.01) I. 3. Additional Standards for Type C Permits: Utilities

E16. **Review Criteria:** "The City Engineer shall cause utilities to be located and placed wherever reasonably possible to avoid adverse environmental consequences given the circumstances of existing locations, costs of placement and extensions, the public welfare, terrain, and preservation

of natural resources. Mitigation and/or replacement of any removed trees shall be in accordance with the standards of this subchapter."

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.

Explanation of Finding: The Composite Utility Plan, Sheet 6 of Exhibit B4, shows the site has been designed to minimize the impact upon the environment to the extent feasible given existing conditions. Utility placement in relation to trees will be further reviewed during review of construction drawings and utility easement placement on the final plat. Conditions of Approval PDE ~~11~~ ***10*** and PF 57 require boring to be used, and prohibits trenching, as necessary to avoid the root zone of preserved trees.

Subsection 4.610.40 (.01) Type C Tree Plan Reviewed with Stage II Final Plan

E17. **Review Criteria:** "Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any plan changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed Type C Tree Plan is being reviewed concurrently with the Preliminary Development Plan, which is the equivalent of a Stage II Final Plan in the Village Zone.

Section 4.610.40 (.02) Submission of Tree Maintenance and Protection Plan

E18. **Review Criteria:** "The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:" Listed A. 1. through A. 7.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant has submitted the necessary copies of a Tree Maintenance and Protection Plan. See Section V of the applicant's notebook, Exhibit B3 and Sheets 9.1 and 9.2 of the applicant's plan set, Exhibit B4.

Subsection 4.620.00 (.01) Tree Replacement Requirement

E19. **Review Criterion:** "A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal."

Finding: This criterion is satisfied.

Explanation of Finding: The tree mitigation requirements will be more than exceeded by the planned street tree and trees in parks and linear greens.

Subsection 4.620.00 (.02) Basis for Determining Replacement

E20. **Review Criteria:** "The permit grantee shall replace removed trees on a basis of one (1) tree replanted for each tree removed. All replacement trees must measure two inches (2") or more in diameter."

Finding: These criteria are satisfied.

Explanation of Finding: More trees are planned to be planted that proposed to be removed. Each tree, including street trees and trees in parks and linear greens will meet the minimum diameter requirement.

Subsection 4.620.00 (.03) Replacement Tree Requirements

E21. **Review Criteria:** "A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.

A. Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better.

B. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date.

C. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced.

D. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat."

Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDE ~~6~~**5**.

Explanation of Finding: The condition of approval will ensure the relevant requirements of this subsection are met.

Subsection 4.620.00 (.04) Replacement Tree Stock Requirements

E22. **Review Criteria:** "All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade."

Finding: These criteria will be satisfied by Condition of Approval PDE ~~6~~**5**.

Explanation of Finding: Condition of Approval PDE ~~6~~**5** assures this is met.

Subsection 4.620.00 (.05) Replacement Trees Locations

E23. **Review Criteria:** "The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed."

Finding: These criteria are satisfied.

Explanation of Finding: The applicant proposes to mitigate for all removed trees on site and in the appropriate locations for the proposed development.

Section 4.620.10 Tree Protection During Construction

E24. **Review Criteria:** "Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:" Listed A. through D.

Finding: These criteria are satisfied or will be satisfied by Condition of Approvals PDE ~~7~~***6*** and PDE ~~8~~*7*.

Explanation of Finding: The conditions of approval assure the applicable requirements of this Section will be met.

REQUEST F: DB14-0007 FINAL DEVELOPMENT PLAN FOR PARKS AND OPEN SPACE

The applicant's findings in Section VIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.125 (.02) Permitted Uses in the Village Zone

F1. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone including "Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association."
Finding: These criteria are satisfied.
Explanation of Finding: The requested Final Development Plan is for parks and open space allowed within the Village Zone.

Subsection 4.125 (.08) A. Parks and Open Space in the Village Zone-Amount Required

F2. **Review Criteria:** "In all residential developments and in mixed-use developments where the majority of the developed square footage is to be in residential use, at least twenty-five percent (25%) of the area shall be open space, excluding street pavement and surface parking. In multi-phased developments, individual phases are not required to meet the 25% standard as long as an approved Specific Area Plan demonstrates that the overall development shall provide a minimum of 25% open space. Required yard areas shall not be counted towards the required open space area."
Finding: These criteria are satisfied.
Explanation of Finding: PDP 7S includes open space areas that are 24.06 acres in size, or approximately 56% of the total PDP area. This FDP application is included with the PDP 7S submittal. Therefore, the FDP is consistent with the open space area in PDP 7S with open space area in excess of the 25% minimum requirement.

Subsection 4.125 (.08) B. Parks and Open Space in the Village Zone-Ownership

F3. **Review Criteria:** "Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City of Wilsonville standards. The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage."
Finding: These criteria are satisfied.
Explanation of Finding: This discretion of the DRB is understood. Ownership will be according to agreements reached between the developer and the City.

Subsection 4.125 (.08) C. Parks and Open Space in the Village Zone-Protection and Maintenance

F4. **Review Criteria:** "The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or

maintenance are the responsibility of a private party or homeowners' association, the City Attorney shall review and approve any pertinent bylaws, covenants, or agreements prior to recordation."
Finding: These criteria are satisfied.
Explanation of Finding: Protection and maintenance of the open space and recreational areas are covered in the CCR's being reviewed by the City, and Operation and Maintenance Agreements between the developer and the City.

Subsection 4.125 (.09) Street and Access Improvement Standards

F5. **Review Criteria:** This section lists street and access improvement standards for the Village Zone including vision clearance standards.
Finding: These criteria are satisfied.
Explanation of Finding: This code section does not apply to the proposed parks and open space, except for vision clearance for vegetation which is met.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

F6. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: Findings regarding Compliance with the standards of Section 4.178 can be found in Findings A88 and B20.

Subsection 4.125 (.11) Landscaping Screening and Buffering

F7. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:" "Streets in the Village zone shall be developed with street trees as described in the Community Elements Book."
Finding: These criteria are satisfied.
Explanation of Finding: Findings F18 through F29 pertain to Section 4.176. Street trees are proposed consistent with the Community Elements Book as proposed with Request A.

Section 4.125 (.12) A. Signs Compliance with Master Sign and Wayfinding Plan for SAP

F8. **Review Criterion:** "All signage and wayfinding elements within the Village Zone shall be in compliance with the adopted Signage and wayfinding Master Plan for the appropriate SAP."
Finding: This criterion does not apply.
Explanation of Finding: The SAP South Signage & Wayfinding Plan indicates the provision of Secondary Site Identifier at the site entrance from Grahams Ferry Road. The FDP set, Exhibit B5, show provision of the 'Secondary Site Identifier' with the future construction of the site entrance.

Subsection 4.125 (.14) Design Standards Applying to the Village Zone

The following Design Standards implement the Design Principles found in Section 4.125(.13), above, and enumerate the architectural details and design requirements applicable to buildings and other features within the Village (V) zone. The Design Standards are based primarily on the features, types, and details of the residential traditions in the Northwest, but are not intended to mandate a particular style or fashion. All development within the Village zone shall incorporate the following:

Subsection 4.125 (.14) A. 2. b. Details to Match Architectural Pattern Book and Community Elements Book

F9. **Review Criteria:** "Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards."
Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.
Explanation of Finding: The Architectural Pattern Book is not applicable to the parks except that any retaining walls within the public view shed must be consistent with the materials in the Architectural Pattern Book. Condition of Approval PDF 11 ensures park elements are consistent with the Community Elements Book including playground equipment, nature path directional bollards, benches, tables, and trash cans.

Subsection 4.125 (.14) A. 2. f. Protection of Significant Trees

F10. **Review Criterion:** "The protection of existing significant trees as identified in an approved Community Elements Book."
Finding: This criterion is satisfied.
Explanation of Finding: Significant trees are being protected. See Request E.

Subsection 4.125 (.14) A. 2. g. Landscape Plan

F11. **Review Criterion:** "A landscape plan in compliance with Sections 4.125(.07) and (.11), above."
Finding: This criterion is satisfied.
Explanation of Finding: Landscape plans have been provided in compliance with the referenced sections.

Subsection 4.125 (.14) C. Lighting and Site Furnishings

F12. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."
Finding: These criteria will be satisfied by a condition of approval.
Explanation of Finding: The condition of approval requires the lighting and site furnishings to be consistent with the Community Elements Book.

Subsection 4.125 (.18) L. Final Development Plan Approval Procedures

F13. **Review Criteria:** This subsection establishes the approval procedures for Final Development Plans.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has followed the applicable procedures set out in this subsection for approval of a FDP.

Subsection 4.125 (.18) M. Final Development Plan Submittal Requirements

F14. **Review Criteria:** "An application for approval of a FDP shall be subject to the provisions of Section 4.034."
Finding: These criteria are satisfied.
Explanation of Finding: The necessary materials have been submitted for review of the FDP.

Subsections 4.125 (.18) N. and P. 1. Final Development Plans Subject to Site Design Review Criteria

F15. **Review Criteria:** "An application for approval of a FDP shall be subject to the provisions of Section 4.421"
Finding: These criteria are satisfied.
Explanation of Finding: The provisions of Section 4.421 are being used as criteria in the review of the FDP. See Findings F30 through F37.

Subsection 4.125 (.18) O. Refinements to Preliminary Development Plan as part of Final Development Plan

F16. **Review Criteria:** This subsection identifies the process and requirements for refinements to a preliminary development plan as party of a final development plan.
Finding: These criteria are satisfied.
Explanation of Finding: No refinements are proposed as part of the requested FDP.

Subsection 4.125 (.18) P.2. Final Development Plan Compliance with Architectural Pattern Book, Community Elements Book, and PDP Conditions of Approval

F17. **Review Criteria:** "An application for an FDP shall demonstrate that the proposal conforms to the applicable Architectural Pattern Book, Community Elements Book, Village Center Architectural Standards and any conditions of a previously approved PDP."
Finding: These criteria are satisfied or will be satisfied by a Condition of Approval PDF 11.
Explanation of Finding: Overall, as demonstrated by Finding F9 above, the FDP demonstrates compliance with the SAP South Community Elements Book. The applicant has provided sufficient information to show that playground equipment meeting the Community Elements Book can be provided. However, Condition of Approval PDF 11 ensures the detailed requirements on page 15 of the Community Elements Book are met. There are no relevant portions of the Architectural Pattern Book, or Conditions of Approval for a previously approved PDP to which to demonstrate compliance.

Landscape Standards Section 4.176

Subsection 4.176 (.02) B. Landscape Standards and Compliance with Code

F18. **Review Criterion:** "All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length"
Finding: This criterion is satisfied.
Explanation of Finding: No waivers or variances to landscape standards have been requested. Thus all landscaping and screening must comply with standards of this section.

Subsection 4.176 (.03) Landscape Area and Locations

F19. **Review Criteria:** "Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to define, soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed parks are predominantly covered with vegetative plant materials other than areas for walkways, play structures, benches, tables, etc. The plantings are in a variety of areas.

Subsection 4.176 (.04) Buffering and Screening

F20. **Review Criteria:** "Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.
C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.
D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.
E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.
F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fenceline shall require Development Review Board approval."
Finding: These criteria are satisfied.
Explanation of Finding: No conditions requiring buffering and screening are within the area covered by the subject FDP request.

Subsection 4.176 (.06) A. Plant Materials-Shrubs and Groundcover

F21. **Review Criteria:** This subsection establishes plant material and planting requirements for shrubs and ground cover.
Finding: These criteria are satisfied.
Explanation of Finding: Applicant's Sheet L8 in their plan set, Exhibit B5, indicates the requirements established by this subsection will be met by the proposed plantings.

Subsection 4.176 (.06) B. Plant Materials-Trees

F22. **Review Criteria:** This subsection establishes plant material requirements for trees.
Finding: These criteria are satisfied.
Explanation of Finding: Applicant's Sheet L8 in their plan set, Exhibit B5, indicates the requirements established by this subsection will be met by the proposed plantings.

Subsection 4.176 (.06) D. Plant Materials-Street Trees

F23. **Review Criteria:** This subsection establishes plant material requirements for street trees.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDF 9.
Explanation of Finding: Applicant's Sheets L2 and L3 of their plan set, Exhibit B5, as shown modified in Exhibit B9, indicate the requirements established by this subsection as well as the Community Elements Book will be met by the proposed plantings except for Alta Court. A variety of tree listed for secondary residential streets in the Community Elements Book approved with Request A is required by a condition of approval to be placed along Alta Court rather than the Green Vase Zelkova.

Subsection 4.176 (.06) E. Types of Plant Species

F24. **Review Criteria:** This subsection discusses use of existing landscaping or native vegetation, selection of plant materials, and prohibited plant materials.
Finding: These criteria are satisfied.
Explanation of Finding: The allowed plant materials are governed by the Community Elements Book. All proposed plant materials will be consistent with the SAP South Community Elements Book.

Subsection 4.176 (.06) F. Tree Credit

F25. **Review Criteria:** "Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows: Existing trunk diameter Number of Tree Credits

18 to 24 inches in diameter	3 tree credits
25 to 31 inches in diameter	4 tree credits
32 inches or greater	5 tree credits:"

Maintenance requirements listed 1. through 2.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant is not requesting any of the preserved trees be counted as tree credits pursuant to this subsection.

Subsection 4.176 (.06) G. Exceeding Plant Material Standards

F26. **Review Criterion:** "Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met."
Finding: This criterion is satisfied.
Explanation of Finding: The selected landscape materials do not violate any height or visions clearance requirements.

Subsection 4.176 (.07) Installation and Maintenance of Landscaping

F27. **Review Criteria:** This subsection establishes installation and maintenance standards for landscaping.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDF 2.
Explanation of Finding: The installation and maintenance standards are or will be met as follows:

- Plant materials are required to be installed to current industry standards and be properly staked to ensure survival
- Plants that die are required to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City.
- A note on the applicant's Sheet L8 in their plan set, Exhibit B5, indicates "coordinate landscape installation with installation of underground sprinkler and drainage systems."

Subsection 4.176 (.09) Landscape Plans

F28. **Review Criterion:** "Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated."
Finding: This criterion is satisfied.
Explanation of Finding: Landscape plans have been submitted with the required information. See Exhibit B5 and B9.

Subsection 4.176 (.10) Completion of Landscaping

F29. **Review Criterion:** "The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages. In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review."
Finding: This criterion is satisfied.
Explanation of Finding: As a condition of PDP approval the parks for the PDP or PDP phase must be completed prior to fifty percent (50%) of the house permits are issued unless

certain conditions exist, similar to what is described in this subsection, in which case a bond can be posted. See finding B57 and Condition of Approval PDB 3.

Site Design Review

Subsection 4.400 (.01) Excessive Uniformity, Inappropriateness of Design, Etc.

F30. **Review Criteria:** "Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor."

Finding: These criteria are satisfied.

Explanation of Finding:

Excessive Uniformity: A variety of parks with a variety of features and amenities are provided consistent with the diversity of park uses described in the Villebois Village Master Plan avoiding excessive uniformity in park and open space design. The unique setting of the proposed development will provide for a number of unique park and open space experiences.

Inappropriate or Poor Design of the Exterior Appearance of Structures: Park structures, including the shelter and play structures, are being required to conform to the Community Elements Book ensuring quality design appropriate for the Villebois context.

Inappropriate or Poor Design of Signs: Signs within parks and open spaces are required to be consistent with the Master Sign and Wayfinding program which is a comprehensive signage package that ensures signs in parks and open spaces, like elsewhere in Villebois, are of a quality design and appropriate for the Villebois context.

Lack of Proper Attention to Site Development: The appropriate professional services have been used to design the park and open spaces incorporating unique features of the site including natural features, demonstrating appropriate attention being given to site development.

Lack of Proper Attention to Landscaping: Landscaping has been professionally designed by a landscape architect, and includes a variety of plant materials, all demonstrating appropriate attention being given to landscaping.

Subsection 4.400 (.02) Purposes of Objectives of Site Design Review

F31. **Review Criterion:** "The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:" Listed A through J.

Finding: These criteria are satisfied.

Explanation of Finding: It is staff's professional opinion that the applicant has provided sufficient information demonstrating compliance with the purposes and objectives of site design review. This includes designing the site to keep more formal improvements focused on areas of the site that were previously impacted by development, and preserving and enhancing the abundant natural areas of the site. In addition, site structures and features are

consistent with the Community Element Book, which has previously been reviewed to ensure consistency with the Villebois Village Master Plan which has similar purposes and objectives as site design review.

Section 4.420 Site Design Review-Jurisdiction and Power of the Board

F32. **Review Criteria:** The section states the jurisdiction and power of the Development Review Board in relation to site design review including the application of the section, that development is required in accord with plans, and variance information.
Finding: These criteria will be satisfied by Condition of Approval PDF 3.
Explanation of Finding: A condition of approval has been included to ensure construction, site development, and landscaping are carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. No grading or other permits will be granted prior to development review board approval. No variances are requested from site development requirements.

Subsection 4.421 (.01) Site Design Review-Design Standards

F33. **Review Criteria:** "The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards." Listed A through G.
Finding: These criteria are satisfied.
Explanation of Finding: The scope of design standards refers only to the parks and open spaces, as the single-family homes are not subject to site design review. The parks and open space areas have minimized grading and preserved a large amount of natural area and significant native trees. More formal parks that include structures are focused on areas of the development that have been previously impacted by development. Surface water drainage has been thoroughly reviewed consistent with the Villebois Village Master Plan and the Rainwater Master Plan for SAP South.

Subsection 4.421 (.02) Applicability of Design Standards to Various Site Features

F34. **Review Criteria:** "The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures."
Finding: These criteria are satisfied.
Explanation of Finding: Design standards have been applied to all applicable site features, which does not include single-family homes.

Subsection 4.421 (.03) Objectives of Section 4.400 Serve as Additional Criteria and Standards

F35. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards."
Finding: These criteria are satisfied.

Explanation of Finding: The purposes and objectives in Section 4.400 are being used as additional criteria and standards. See Finding F31 above.

Subsection 4.421 (.05) Site Design Review-Conditions of Approval

F36. **Review Criterion:** "The Board may attach certain development or use conditions in granting an approval that are determined necessary to insure the proper and efficient functioning of the development, consistent with the intent of the Comprehensive Plan, allowed densities and the requirements of this Code."
Finding: This criterion is satisfied.
Explanation of Finding: No additional conditions of approval are recommended.

Subsection 4.421 (.06) Color or Materials Requirements

F37. **Review Criterion:** "The Board or Planning Director may require that certain paints or colors of materials be used in approving applications. Such requirements shall only be applied when site development or other land use applications are being reviewed by the City."
Finding: This criterion will be satisfied by Condition of Approvals PDF 4 and PDF 5.
Explanation of Finding: The Conditions of Approval requires specific materials for any retaining walls or hand rails to ensure a quality of design consistent with the Architectural Pattern Book.

Section 4.440 Site Design Review-Procedures

F38. **Review Criteria:** "A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:" Listed A through F.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has submitted the required additional materials, as applicable.

Section 4.442 Time Limit on Approval

F39. **Review Criterion:** "Site design review approval shall be void after two (2) years unless a building permit has been issued and substantial development pursuant thereto has taken place; or an extension is granted by motion of the Board.
Finding: This criterion is satisfied.
Explanation of Finding: It is understood that the approval will expire after 2 years if a building permit hasn't been issued unless an extension has been granted by the board.

Subsection 4.450 (.01) Landscape Installation or Bonding

F40. **Review Criterion:** "All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its

designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant."

Finding: This criterion is satisfied.

Explanation of Finding: As a condition of PDP approval the parks for the PDP or PDP phase must be completed prior to fifty percent (50%) of the house permits being issued. See Finding B57 in Request B and Condition of Approval PDB 3.

Subsection 4.450 (.02) Approved Landscape Plan Binding

F41. **Review Criterion:** "Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval shall provide ongoing assurance this criterion is met.

Subsection 4.450 (.03) Landscape Maintenance and Watering

F42. **Review Criterion:** "All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval will ensure landscaping is continually maintained in accordance with this subsection.

Subsection 4.450 (.04) Addition and Modifications of Landscaping

F43. **Review Criterion:** "If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that has been accepted or approved through the City's development review process, that removal or modification must first be approved through the procedures of Section 4.010."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval shall provide ongoing assurance that this criterion is met by preventing modification or removal without the appropriate City review.

REQUEST G: SI14-0002 SROZ MAP REFINEMENT, SRIR REVIEW, SROZ MAP VERIFICATION

The applicant's findings in Section IIA of their SAP notebook, Exhibit B1, respond to the majority of the applicable criteria.

The following was prepared by Kerry Rappold, Natural Resources Program Manager

Findings of Fact:

1. The area designated Significant Resource Overlay Zone (SROZ) within SAP South Plan Area 2 is upland wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) and wetlands (Site ID Numbers 6.01d, 6.02d, and 6.03d). In addition, a previously unmapped wetland was identified in the southwest corner of the property. Of the four wetland areas, only wetland 6.03d is considered locally significant. The other wetlands are not considered locally-significant, but are regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

2. The upland wildlife habitat consists of a mixed coniferous/deciduous forest containing primarily Douglas fir, Oregon white oak, bigleaf maple, balsam poplar, and red alder. The forest understory contains a diversity of native shrubs and groundcovers, which include red osier dogwood, common snowberry, black hawthorn, and salal. Non-native invasive plant species include Himalayan blackberry, English ivy, and bull thistle. The forest provides habitat for a variety of wildlife, and connections to the 250-acre Graham Oaks Nature Park to the south and east of the property.

3. A wetland delineation was prepared by SWCA Environmental Consultants, and approved by the Oregon Department of State Lands, which identified and delineated the wetlands on the property.

4. The Significant Resource Overlay Zone ordinance prescribes regulations for development within the SROZ and its associated 25 foot Impact Area. Setbacks from significant natural resources implement the requirements of Metro Title 3 Water Quality Resource Areas, Metro Title 13 Nature in Neighborhoods, and Statewide Planning Goal 5. Wetlands, streams and riparian corridors shall have at least a minimum 50-foot buffer, but buffers may extend to the top of the slope for riparian corridors. All significant natural resources have a 25 foot Impact Area. Development or other alteration activities may be permitted within the SROZ and its associated 25 foot Impact Area through the review of a Significant Resource Impact Report (SRIR).

5. Pursuant to the city's SROZ ordinance, development is only allowed within the Area of Limited Conflicting Use (ALCU). The ALCU is located between the riparian corridor boundary, riparian impact area or the Metro Title 3 Water Quality Resource Area boundary, whichever is furthest from the wetland or stream, and the outside edge of the SROZ, or an isolated significant wildlife habitat (upland forest) resource site.

6. The applicant's Significant Resource Impact Report delineated specific resource boundaries and analyzed the impacts of development within the SROZ. The applicant's SRIR contained the required information, including a physical and ecological analysis, a justification of the proposed impacts, and a mitigation plan. **These code provisions are satisfied provided the conditions of approval are met.**

7. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resources Inventory (NRI). Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

8. The SROZ map will be amended, pursuant to Section 4.139.09.01 (D), as part of the land use approval for Villebois SAP South Plan Area 2.

Description of Request:
The applicant has requested approval of a Significant Resource Impact Report (SRIR) for non-exempt development that is located within the Significant Resource Overlay Zone and its associated 25 foot Impact Area, and a map refinement to the designated upland wildlife habitat in SAP South Plan Area 2.

Background:

Wetlands:

In May 2013, the applicant conducted a wetland delineation of the site. Four wetlands were delineated (A-D), which primarily correspond with the wetlands identified in the City's Natural Resources Inventory (Site ID Numbers 6.01d, 6.02d, and 6.03d). A new wetland area (Wetland D) was identified in southwest corner of the property. The wetland delineation was concurred by DSL on October 8, 2013.

To be deemed a locally significant wetland (and included in the SROZ), as specified in the City of Wilsonville Natural Resource Inventory, a wetland must satisfy the following functional criteria: diverse wildlife habitat, water quality, and hydrologic control. In addition, they shall be over one-half acre in size.

Wetland A (Site ID Number 6.02d) is located in the far northwest corner of the property. It is a small (0.05 acre) isolated forested wetland with a seasonally saturated/shallowly ponded hydrologic condition. Slough sedge, red osier dogwood and Oregon ash are the most common vegetation. The Natural Resource Inventory classified it as a non-locally significant wetland due to it being less than 0.5 acre in size.

Wetland B (Site ID Number 6.03d) is located in the north-central portion of the property. The wetland forms the headwaters of a tributary to Mill Creek and extends off-site (upstream) to the

north. The vegetation includes slough sedge, Pacific water-dropwort, red osier dogwood, rose, cascara, and Oregon ash.

The northern portion of Wetland B (0.89 acre) was identified in the Natural Resources Inventory, and determined to be a locally significant wetland. A southern, approximately 75-foot section of Wetland B, was not included in the NRI but was identified during the on-site wetland delineation. The southern portion is an emergent wetland community dominated by Pacific water-dropwort, Siberian springbeauty, and lamp rush. Lacking in tree and shrub layers, the southern portion is more sparsely vegetated and does not provide the diverse wildlife habitat that is provided in the northern portion of the wetland.

Because the southern portion of Wetland B is less than one-half acre in size and does not meet the criteria for adding a wetland, it is not considered locally significant. However, it is regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

Wetland C (Site ID Number 6.01d) is connected (i.e., by hydrology) to Wetland B through a stormwater pipe. It is located downstream in the south-central part of the property. The wetland is primarily situated in an old excavated channel and pond. Two invasive plant species, yellow flag iris and reed canarygrass, comprise a majority of the wetland vegetation. Native vegetation includes red alder, western arborvitae, and Pacific water-dropwort. Wetland C was identified in the NRI and determined to be a non-locally significant wetland because it is less than one-half acre in size.

Wetland D was not included in the NRI but was identified during the on-site wetland delineation. It is a small emergent wetland (0.48 acres) located in the southwest corner of the property. The dominant vegetation is lamp rush, taper-fruit short-scale sedge, thick-head sedge, dense sedge, fringed willowherb, and scattered Scouler's willow. Due to its size (i.e., less than one-half acre in size), Wetland D is a non-locally significant wetland.

	Type of Wetland	Size (acres)	Locally Significant
Wetland A	Forested	0.05	N
Wetland B - Northern	Forested	0.89	Y
Wetland B - Southern	Emergent	0.07	N
Wetland C	Forested/emergent	0.27	N
Wetland D	Emergent	0.48	N

Staff concurs with the applicant's wetland delineation and determination of local significance. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the wetland areas.

Upland Forested Wildlife Habitat:

The applicant has provided an assessment of the upland forested wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) located on the property. As part of the SRIR, they prepared a verification of the SROZ boundary. This boundary verification takes into account the current condition of the upland forested wildlife habitat and any deviation from the NRI mapping. In

verifying the boundary, the applicant documented two areas where the drip line of the mature forest canopy was different than the NRI map. This difference in boundaries was due to the scale of the mapping used for the NRI, which was not verified as accurately as the applicant's inventory and mapping.

The upland forested wildlife habitat is a mixed coniferous/deciduous forest, which includes both upland and wetland forest. The overstory is primarily Oregon white oak, Douglas fir, bigleaf maple, balsam poplar, and red alder. In the understory, red osier dogwood, beaked hazelnut, black hawthorn, common snowberry, salal, and Pacific poison oak are the dominant species.

In reassessing the upland forested wildlife habitat on the property, it is necessary to revisit the functional criteria used to originally determine local significance. Five functions were assessed for upland wildlife habitat in the NRI, which include: habitat diversity, water quality protection, ecological integrity, connectivity, and uniqueness. Each one of these criteria was assigned a high, medium or low rating. In regards to Site Numbers 6.02U and 6.03U, one of the criteria was rated as high, and four were rated as medium. In reassessing the upland forested wildlife habitat, the applicant has revisited these ratings.

For the upland forested wildlife habitat areas (0.58 acres in size) proposed to be removed from the SROZ (i.e., through a map refinement), none of the functional criteria are rated as "High" in the revised assessment. The areas were rated lower due to the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry. Staff concurs with the applicant's revised assessment. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the upland forested wildlife habitat.

Summary of Issues:
The proposed non-exempt development will encroach into the Significant Resource Overlay Zone and its associated 25 foot Impact Area. All non-exempt development will occur within the Area of Limited Conflicting Use of the isolated significant wildlife habitat (i.e., upland forest). The impacted area totals 34,730 square feet and is situated along the edge of the upland forest. The impact to the SROZ is necessary to accommodate street improvements, residential lots, and a trail connection.

Proposed exempt development in the SROZ and its associated 25 foot Impact Area includes the following:

1) A series of nature trails and nature trail activity areas within the upland forested wildlife habitat.

Section 4.139.04 Use and Activities Exempt from These Regulations

Proposed exempt development in the SROZ and its associated 25 foot Impact Area comply with the following exemptions:

(.08) The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as minimize and repair disturbance to existing vegetation and slope stability.

G1. The construction of the nature trails and nature trail activity areas will have minimal impacts to the resource area, and is consistent with the requirements of this exemption.

Section 4.139.06.03 SRIR Review Criteria:

In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.

A. Except as specifically authorized by this code, development shall be permitted only within the Area of Limited Conflicting Use (see definition) found within the SROZ;

G2. The proposed non-exempt development is located within the Area of Limited Conflicting Use found within the SROZ. The total area of all other encroachments within the SROZ or its associated Impact Area has been deemed exempt or proposed only within the Impact Area.

B. Except as specifically authorized by this code, no development is permitted within Metro's Urban Growth Management Functional Plan Title 3 Water Quality Resource Areas boundary;

G3. The proposed development for SAP-South Plan Area 2 will not be located within Metro's Title 3 Water Quality Resource Areas boundary.

C. No more than five (5) percent of the Area of Limited Conflicting Use (see definition) located on a property may be impacted by a development proposal. On properties that are large enough to include Areas of Limited Conflicting Use on both sides of a waterway, no more than five (5) percent of the Area of Limited Conflicting Use on each side of the riparian corridor may be impacted by a development proposal. This condition is cumulative to any successive development proposals on the subject property such that the total impact on the property shall not exceed five (5) percent;

G4. The applicant has identified the proposed development within the Area of Limited Conflicting Use, and calculated the percentage for this development. The following information has been provided on the Area of Limited Conflicting Use (ALCU):

Total ALCU	=	866,388 square feet
Allowed Impact (5%)	=	43,319 square feet
Proposed Impact	=	34,730 square feet (4%)

D. Mitigation of the area to be impacted shall be consistent with Section 4.139.06 of this code and shall occur in accordance with the provisions of this Section;

G5. The applicant has identified the mitigation area necessary to offset impacts to the SROZ, and has proposed to enhance 195,195 square feet. Based on the required mitigation ratio of 2.5:1, only 86,825 square feet is required. In addition, the applicant is proposing to create additional SROZ areas totaling 61,697 square feet. The SROZ creation areas were previously encumbered by development. Pavement will be removed in these areas, and native trees, shrubs, and groundcovers will be installed in accordance with the mitigation planting plan.

E. The impact on the Significant Resource is minimized by limiting the degree or magnitude of the action, by using appropriate technology or by taking affirmative steps to avoid, reduce or mitigate impacts;

G6. The impacts to the SROZ will be from the encroachment of street improvements, residential lots, and a trail connection. The applicant has minimized permanent impacts to very mature trees, and other native vegetation. The grading and erosion control plan will ensure areas within the SROZ are protected during construction activities. No stormwater runoff will discharge into the SROZ.

F. The impacts to the Significant Resources will be rectified by restoring, rehabilitating, or creating enhanced resource values within the "replacement area" (see definitions) on the site or, where mitigation is not practical on-site, mitigation may occur in another location approved by the City;

G7. Impacts to the SROZ will be mitigated for on-site and will satisfy the mitigation ratios and other requirements of Section 4.139.07.

G. Non-structural fill used within the SROZ area shall primarily consist of natural materials similar to the soil types found on the site;

G8. Any non-structural fill will primarily consist of natural materials similar to the soil types found on the site.

H. The amount of fill used shall be the minimum required to practically achieve the project purpose;

G9. Fill used within the SROZ area will be limited to the minimum amount necessary to achieve the intended purpose.

I. Other than measures taken to minimize turbidity during construction, stream turbidity shall not be significantly increased by any proposed development or alteration of the site;

G10. All proposed grading activities on-site will be managed pursuant to guidelines established and identified in the applicant's approved erosion control plan and a 1200-C Erosion Control Permit issued by the Oregon Department of Environmental Quality. Stream turbidity is regulated under the City's Grading and Erosion Control Permit and the DEQ's 1200-C Erosion Control Permit.

J. Appropriate federal and state permits shall be obtained prior to the initiation of any activities regulated by the U.S. Army Corps of Engineers and the Oregon Division [Department] of State Lands in any jurisdictional wetlands or water of the United States or State of Oregon, respectively.

G11. The applicant is proposing minor impacts (1,258 square feet) to the northern portion of Wetland C. A wetland removal/fill permit will be submitted to the Oregon Department of State Lands and the U.S. Army Corps of Engineers. The compensatory wetland mitigation will be addressed through the purchase of credits from the Mud Slough Mitigation Bank.

Section 4.139.07 Mitigation Standards

(.01) The applicant shall review the appropriate Goal 5 Inventory Summary Sheets for wildlife habitat (i.e. upland) contained in the *City of Wilsonville Natural Resource Inventory and Goal 5/Title 3/ESA Compliance and Protection Plan* ("Compliance and Protection Plan"- May 2000) to determine the resource function ratings at the time the inventory was conducted.

G12. The applicant has reviewed the appropriate Upland Summary Sheet (Site ID Numbers 6.02U, 6.03U, and 6.011U) to determine the resource function ratings at the time the inventory was conducted.

(.02) The applicant shall prepare a Mitigation Plan document containing the following elements:

A. The Mitigation Plan shall contain an assessment of the existing natural resource function ratings at the time of the proposed encroachment for the site compared to the function ratings recorded in the Compliance and Protection Plan.

G13. The applicant has addressed the resource function ratings for the impact area and also correctly documented the resource function ratings in the Compliance and Protection Plan. The impact area has a medium function rating due to non-native invasive plant species.

B. The Mitigation Plan shall contain an assessment of the anticipated adverse impacts to significant wildlife habitat resources. The impact assessment shall discuss impacts by resource functions (as listed in the Compliance and Protection Plan, May 2000) for each resource type, and shall map the area of impact (square feet or acres) for each function.

G14. The applicant has determined the impact to the significant resource area based on the resource functions. The applicant has calculated the square feet of the impact to the Significant Resource. The applicant's site plan in the SRIR depicts the area of impact.

C. The Mitigation Plan shall present a proposed mitigation action designed to replace the lost or impacted resource functions described in Subsection B, above. The mitigation plan shall be designed to replace lost or impacted functions by enhancement of existing resources on, or off the impact site, or creation of new resource areas.

G15. The applicant has submitted a mitigation plan consistent with the requirements in Section 4.139.07. The mitigation will occur on-site, and within close proximity to the areas of impact.

D. For mitigation projects based on resource function enhancement, the area ratios presented in Table NR - 2 shall be applied. These ratios are based on the resource function ratings at the time of the proposed action, as described in Subsection A, above. The mitigation action shall be conducted on the appropriate size area as determined by the ratios in Table NR - 2.

G16. The applicant has estimated the resource function ratings for the "existing rating at mitigation site" and "proposed rating at mitigation site."

(.03) Proposals for mitigation action where new natural resource functions and values are created (i.e. creating wetland or wildlife habitat where it does not presently exist) will be reviewed and may be approved by the Development Review Board or Planning Director if it is determined that the proposed action will create

natural resource functions and values that are equal to or greater than those lost by the proposed impact activity.

G17. The applicant proposes to create forested wildlife habitat where it does not presently exist, however, since it is not part of the required mitigation it is not subject to this requirement.

(.04) Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.

G18. A condition of approval requires the mitigation actions to be implemented prior to or at the same time as the impact activity is conducted.

(.05) Mitigation plans shall have clearly stated goals and measurable performance standards.

G19. The applicant has submitted a mitigation plan with goals and measurable performance standards.

(.06) All mitigation plans shall contain a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes, the new owners will have the continued responsibilities established by this section.

G20. The applicant has submitted information regarding monitoring and maintenance of the proposed mitigation. A condition of approval requires the applicant to submit a monitoring and maintenance report to be conducted for a period of five years following mitigation implementation.

(.07) The Mitigation Plan document shall be prepared by a natural resource professional.

G21. The applicant's team has the necessary credentials to implement a mitigation plan for the proposed impacts.

(.08) Prior to any site clearing, grading or construction, the SROZ area shall be staked, and fenced per approved plan. During construction, the SROZ area shall remain fenced and undisturbed except as allowed by an approved development permit.

G22. A condition of approval requires the SROZ to be fenced and undisturbed.

(.09) For any development which creates multiple parcels intended for separate ownership, the City shall require that the SROZ areas on the site be encumbered with a conservation easement or tract.

G23. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.10) The City may require a conservation easement over the SROZ that would prevent the owner from activities and uses inconsistent with the purpose of this Section and any easements therein. The purpose of the conservation easement is to conserve and protect resources as well as to prohibit certain activities that are inconsistent with the purposes of this section. Such conservation easements do not exclude the installation of utilities.

G24. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.11) At the Planning Directors discretion, mitigation requirements may be modified based on minimization of impacts at the impact activity site. Where such modifications are granted by the Planning Director, the Director shall clearly indicate the reasons for doing so in the record, citing the relevant information relied upon in reaching the decision.

G25. The applicant has not requested a modification of mitigation requirements.

(.12) The Director may study the possibility of a payment-in-lieu-of system for natural resource impact mitigation. This process would involve the public acquisition and management of natural resource properties partially funded by these payments.

G26. The applicant has not requested a payment-in-lieu.

Section 4.139.09(.01)(D) Map Refinement Process

D. Map Refinement process. The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are as follows:

1. **Any map refinement must be evaluated by considering the riparian corridor types contained in this ordinance.**

2. **Other supporting documents to be considered in evaluating a proposal to refine a map include, but are not limited to:**

   a. **Natural Resources Inventories (LWI/RCI);**
   b. **The Economic, Social, Environmental and Energy (ESEE) Analysis;**
   c. **Metro Functional Plans;**
   d. **Wilsonville Comprehensive Plan;**
   e. **State approved wetland delineations;**
   f. **Detailed slope analysis.**

3. **An SRIR must be prepared by the applicant in conformance with the provisions of this Section.**

4. **The Hearing Body (including City Council) may amend the Significant Resource Overlay Zone (in or out) upon making a determination that the land area in question is or is not a significant resource. The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resource Function Rating Matrices.**

Upland Forested Wildlife Habitat:

G27. Finding: The applicant proposes to amend the Significant Resource Overlay Zone (SROZ) boundary. A Significant Resource Impact Report (SRIR) has been submitted to justify the refinement. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The land area to be amended includes upland forested wildlife habitat (Site Numbers 6.02U, 6.03U and 6.01U), which were identified as part of the city's Natural Resources Inventory.

In regards to the upland forested wildlife habitat, the Natural Resources Inventory listed two of the criteria as high, and three were rated as medium. In reassessing the wildlife habitat on the property, SWCA rated none of the function criteria as "high" for the map refinement areas. The rationale for lowering the ratings was based primarily on the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry.

Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

ORD. 741

ZONE MAP AMENDMENT
Zoning Order DB14-0004
Villebois Phase 7 South "Grande Pointe at Villebois"

INDEX of RECORD

1. City Council Staff Report for May 5, 2014 Meeting

2. Council Exhibit A: Ordinance No. 741 approving and adopting Zoning Order DB14-0004

3. Council Exhibit A, Attachment A: Zoning Order DB14-0004
   - Attachment 1, Legal Description
   - Attachment 2, Map Depicting Zone Amendment

4. Council Exhibit A, Attachment B: Zone Map Amendment Findings, April 28, 2014

5. Council Exhibit A, Attachment C: Development Review Board Panel A's Resolution No. 275 recommending approval of the Zone Map Amendment.

6. Council Exhibit B: DRB amended and adopted staff report (Exhibit A1) digital sent and on compact disk.

➢ Additional Materials from DRB Record for Zone Map Amendment and Applications Contingent on Zone Map Amendment Approval (Already posted on the City's website at http://www.ci.wilsonville.or.us/421/Villebois---Grande-Pointe-at-Villebois No need to reproduce in Council Packet) Paper copies available to review upon request from City Recorder or Planning Division Staff. Paper copy to be available at hearing.

❖ New exhibits entered into the record at the April 14, 2014 DRB Panel A meeting
- Exhibit A3 - Planning Division Memorandum dated April 14, 2014 recommending various corrections and changes to the DRB Staff Report
- Exhibit B11 - Lot 91 Preliminary Utility Layout

❖ Packet items for the April 14, 2014 DRB Panel A meeting, including staff report and exhibits and:
- Exhibit B3 (PDP-7 South submittal documents)
- Exhibit B4 (PDP-7 South PDP Plans)
- Exhibit B5 (FDP Plans)
- Exhibits B6-B10

City of
WILSONVILLE
in OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject: Ordinance No. 741,** Zone Map Amendment from PF to V, "Grande Pointe at Villebois", Phase 7 of SAP South, Villebois. Polygon Northwest, applicant. **Staff Members:** Daniel Pauly AICP, Associate Planner. **Department:** Planning Division
Action Required	**Development Review Board Recommendation**
☐ Motion ☒ Public Hearing Date: ☒ Ordinance 1st Reading Date: May 5. ☒ Ordinance 2nd Reading Date: May 19 ☐ Resolution ☐ Information or Direction ☐ Information Only ☐ Council Direction ☐ Consent Agenda	☒ Approval ☐ Denial ☐ None Forwarded ☐ Not Applicable **Comment:** Following their review at the April 14th meeting, the Development Review Board, Panel A recommends approval of the Zone Map Amendment.
Staff Recommendation: Staff recommends that the City Council adopt Ordinance No. 741.	
Recommended Language for Motion: I move to adopt Ordinance No. 741 on the 1st reading.	
PROJECT / ISSUE RELATES TO: Comprehensive Plan, Zone Code and Villebois Master Plan.	

☐Council Goals/Priorities	☒Adopted Master Plan(s) Villebois Master Plan	☐Not Applicable

ISSUE BEFORE COUNCIL: Approve, deny or modify Ordinance No. 741 for a Zone Map Amendment from the PF (Public Facility) zone to Village zone on approximately 42.76 acres southwest of Arbor Villebois and next to Graham Oaks Nature Park on the east side of SW Grahams Ferry Road. Conforming the V Zone to the established densities on the Villebois Village Master Plan Map is a routine item, for which the City Council is the final local authority.

EXECUTIVE SUMMARY: In October of 2013 the Council approved amending the Villebois Village Master Plan to set the stage for the development of area designated as "Future Study Area" for development of single-family residences along with associated parks and open space.

Polygon Northwest has subsequently continued to work with the neighborhood and staff to refine the design of the project which includes a total of 100 residential lots following the pattern established in the Master Plan Amendment. Development Review Board Panel A unanimously approved various component applications with a recommendation the City Council recommend the associated zone map amendment.

EXPECTED RESULTS: Adoption of Ordinance No.741.

TIMELINE: Construction of the subdivision is planned to begin this summer.

CURRENT YEAR BUDGET IMPACTS: Proposed is 100-lot single family detached house subdivision. This project is a private development so the applicant is responsible to make all public and private improvements, pay city application fees and systems development charges for parks, water, sewer, storm sewer and streets.

FINANCIAL REVIEW / COMMENTS:
Reviewed by: __CAR___, Date: April 22 , 2014

LEGAL REVIEW / COMMENT:
Reviewed by: MEK, Date: April 22, 2014
The Resolution is approved as to form.

COMMUNITY INVOLVEMENT PROCESS: The required public hearing notices have been sent.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY Ordinance No. 741 will provide:

- Continued build-out of the Villebois Master Plan as amended by the Council in October 2013.
- 100 larger detached single-family houses.
- Construction jobs for several years.
- Development of a number of private parks and open space.
- Preservation of 24.06 acres of Open Space

ALTERNATIVES: The Applicant seeks to develop the subject property within the allowed V Zone housing density and does not seek a Comprehensive Plan Map Amendment.

CITY MANAGER COMMENT:

ATTACHMENTS:

Exhibit A – Ordinance No. 741 and Attachments
- Attachment A, Zoning Order DB14-0004.
  - Attachment 1, Legal Description
  - Attachment 2, Map Depicting Zone Amendment
- Attachment B Zone Map Amendment Findings, May 5, 2014.
- Attachment C DRB Resolution No. 275

Exhibit B – Amended Adopted Staff Report and DRB Recommendation (Exhibit A1)

ORDINANCE NO. 741

AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING A ZONE MAP AMENDMENT FROM THE PUBLIC FACILITY (PF) ZONE TO THE VILLAGE (V) ZONE ON APPROXIMATELY 42.76 - ACRES COMPRISING TAX LOTS 2800 AND 2890 OF SECTION 15, T3S, R1W, CLACKAMAS COUNTY, OREGON, POLYGON NORTHWEST COMPANY, APPLICANT.

RECITALS

WHEREAS, Polygon Northwest Company ("Applicant") has made a development application requesting, among other things, a Zone Map Amendment of the Property; and

WHEREAS, the development application form has been signed by Northwest Wilsonville Properties LLC ("Owner"), as owner of the real property legally described and shown on Exhibits A and B, attached hereto and incorporated by reference herein ("Property"); and

WHEREAS, the City of Wilsonville Planning Staff analyzed the request and prepared a staff report for the Development Review Board, finding that the application met the requirements for a Zone Map Amendment and recommending approval of the Zone Map Amendment, which staff report was presented to the Development Review Board on April 14, 2014;

WHEREAS, the Development Review Board Panel 'A' held a public hearing on the application for a Zone Map Amendment on April 14, 2014, and after taking public testimony and giving full consideration to the matter, adopted Resolution No. 275 which recommends that the City Council approve a request for a Zone Map Amendment (Case File DB14-0004), adopts the staff report with modified findings and recommendation, all as placed on the record at the hearing, certain of which are contingent on City Council approval of the Zone Map Amendment and authorizes the Planning Director to issue approvals to the Applicant consistent with the amended staff report, as adopted by DRB Panel A; and

WHEREAS, on May 5, 2014, the Wilsonville City Council held a public hearing regarding the above described matter, wherein the City Council considered the full public record made before the Development Review Board, including the Development Review Board and

City Council staff reports; took public testimony; and, upon deliberation, concluded that the proposed Zone Map Amendment meets the applicable approval criteria under the City of Wilsonville Development Code;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section 1. Findings. The City Council adopts, as findings and conclusions, the forgoing Recitals and the Development Review Board staff report, as contained in the record of the above described DRB hearing and incorporates it by reference herein, as if fully set forth.

Section 2. Order. The official City of Wilsonville Zone Map is hereby amended by Zoning Order DB14-0004, attached hereto as Exhibit A, from the Public Facility (PF) Zone to the Village (V) Zone.

SUBMITTED to the Wilsonville City Council and read the first time at a meeting thereof on the 5th day of May 2014, and scheduled for the second and final reading on May 19, 2014, commencing at the hour of 7 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, OR.

_____
Sandra C. King, CMC, City Recorder

ENACTED by the City Council on the 5th day of May, 2014, by the following votes:
Yes:___ No:___

_____
Sandra C. King, CMC, City Recorder

DATED and signed by the Mayor this ____day of ___, 2014.

_____
Tim Knapp, MAYOR

SUMMARY OF VOTES:

Mayor Knapp
Council President Starr
Councilor Goddard
Councilor Stevens
Councilor Fitzgerald

Attachments:

Attachment A, Zoning Order DB14-0004.
Attachment 1, Legal Description
Attachment 2, Map Depicting Zone Amendment
Attachment B Zone Map Amendment Findings, May 5, 2014.
Attachment C DRB Resolution No. 275

EXHIBIT A

BEFORE THE CITY COUNCIL OF THE CITY OF WILSONVILLE, OREGON
POLYGON NORTHWEST COMPANY

In the Matter of the Application of Pacific Community Design, Inc., Agent for the Applicant, Polygon Northwest Company for a Rezoning of Land and Amendment of the City of Wilsonville Zoning Map Incorporated in Section 4.102 of the Wilsonville Code.	))))))))	**ZONING ORDER DB14-0004**

The above-entitled matter is before the Council to consider the application of DB14-0004, for a Zone Map Amendment and an Order, amending the official Zoning Map as incorporated in Section 4.102 of the Wilsonville Code.

The Council finds that the subject property ("Property"), legally described and shown on the attached Exhibits 1 and 2, has heretofore appeared on the City of Wilsonville Zoning Map as Public Facility (PF).

The Council having heard and considered all matters relevant to the application for a zone Map Amendment, including the Development Review Board record and recommendation, finds that the application should be approved.

THEREFORE IT IS HEREBY ORDERED that The Property, consisting of approximately 42.76 acres comprising Tax Lots 2800 and 2890 of Section 15, as more particularly shown in the Zone Map Amendment Map, Attachment 2 and described in Attachment 1 is hereby rezoned to Village (V), subject to conditions detailed in this Order's adopting Ordinance. The foregoing rezoning is hereby declared an amendment to the Wilsonville Zoning Map (Section 4.102 WC) and shall appear as such from and after entry of this Order.

Dated: This 5th day of May, 2014.

Council Exhibit A

Attachment A

_____
TIM KNAPP, MAYOR

APPROVED AS TO FORM:

_____
Michael E. Kohlhoff, City Attorney

ATTEST:

_____
Sandra C. King, CMC, City Recorder

Attachment 1: Legal Description
Attachment 2: Map depicting Zone Map Amendment

Pacific Community Design

EXHIBIT "A"

July 9, 2013

LEGAL DESCRIPTION Job No. 395-021
Zone Change

A tract of land in the Southwest quarter of Section 15 and the Southeast quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the City of Wilsonville, County of Clackamas and the State of Oregon, described as follows:

BEGINNING at the southwest corner of the plat of "Arbor Villebois No. 4";

thence along the southerly plat boundary line of "Arbor Villebois No. 4", South 88°18'41" East, a distance of 804.79 feet to the northwest corner of Lot 181 of "Arbor Villebois No. 3";

thence along the westerly plat boundary line of "Arbor Villebois No. 3", South 01°13'44" West, a distance of 603.57 feet to the southwest corner of the plat of "Arbor Villebois No. 3";

thence leaving said plat boundary line, South 02°51'59" West, a distance of 744.00 feet;

thence South 75°44'45" West, a distance of 266.08 feet;

thence South 75°20'01" West, a distance of 969.44 feet;

thence North 64°57'40" West, a distance of 323.02 feet;

thence North 45°06'47" West, a distance of 256.11 feet to a point on the easterly right-of-way line of SW Grahams Ferry Road;

thence along said easterly right-of-way line, on a 2894.79 foot radius non-tangential curve, concave northwesterly, with a radius point bearing North 44°41'37" West, arc length of 355.76 feet, central angle of 07°02'29", chord bearing of North 41°47'08" East, and chord distance of 355.53 feet to a point of tangency;

thence continuing along said easterly right-of-way line, North 38°15'53" East, a distance of 678.81 feet to a point of tangential curvature;

thence continuing along said easterly right-of-way line, on a 1175.92 foot radius tangential curve to the left, arc length of 426.78 feet, central angle of 20°47'40", chord bearing of North 27°52'03" East, and chord distance of 424.44 feet to a point of tangency;

12564 SW Main Street, Tigard, OR 97223 • (T) 503-941-9484 (F) 503-941-9485

Attachment 1

thence continuing along said easterly right-of-way line, North 17°27'18" East, a distance of 199.63 feet to the POINT OF BEGINNING.

Containing 42.75 acres, more or less.

Basis of bearings per plat of "Arbor Villebois No. 4", Clackamas County Survey Records.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
TRAVIS C. JANSEN
57751

RENEWS: 6/30/2015

Pacific Community Design, Inc.
12564 SW Main Street, Tigard, OR 97223 • [T] 503-941-9484 [F] 503-941-9485

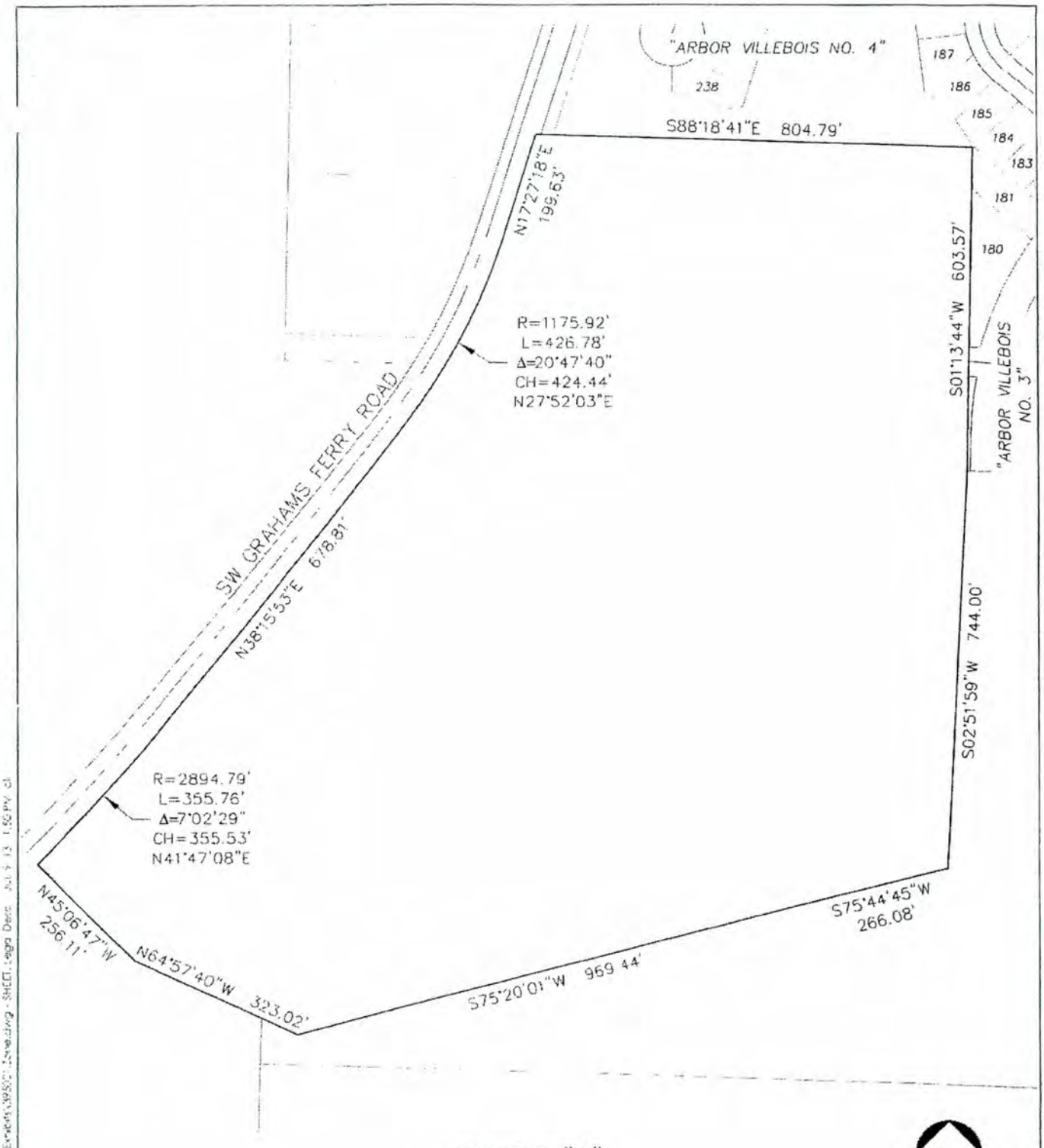
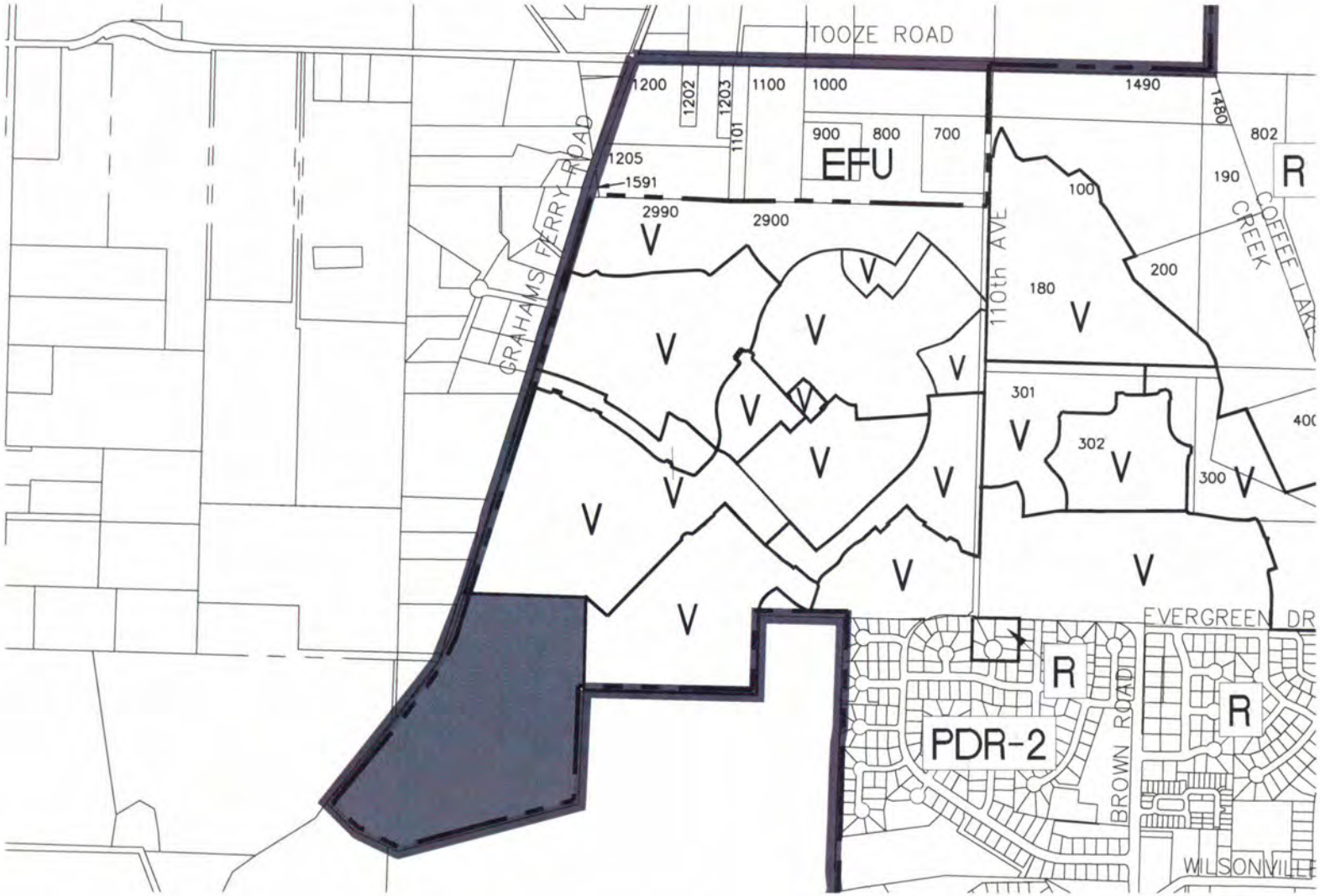


EXHIBIT "A"

DRAWN BY: CLL DATE: 7/9/13
REVIEWED BY: TCJ DATE: 7/9/13
PROJECT NO.: 395-021
SCALE: 1"=250'
PAGE 3 OF 3

Pacific Community Design
12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485



LEGEND

- SUBJECT AREA – PROPOSED VILLAGE (V) ZONE (42.76 AC)
- ZONE LINE
- EXISTING UGB
- EXISTING CITY BOUNDARY
- PF EXISTING ZONING DESIGNATION

1" = 1000'

PROPOSED ZONE MAP AMENDMENT

Attachment 2

N:\pro\395-021\09 Drawings\03 Planning\Exhibits\395021 Zoning Plan Exhibit PDP 7 South.dwg - SHEET: 8x11 Feb 26, 2014 - 3:27pm jmh

Exhibit B

STAFF REPORT
WILSONVILLE PLANNING DIVISION

Polygon Northwest Company
"Grande Pointe at Villebois"
Zone map amendment

CITY COUNCIL
QUASI-JUDICIAL PUBLIC HEARING

HEARING DATE May 5, 2014

DATE OF REPORT April 28, 2014

APPLICATION NOS.: DB14-0004 Zone Map Amendment

REQUEST/SUMMARY: The City Council is being asked to review a Zone Map Amendment that will enable the development of a 100-lot residential subdivision, and associated parks and open space and other improvements.

LOCATION: 29500 SW Grahams Ferry Road. East side of road ¾ miles south of SW Tooze Road. Southwest of current Villebois development, northwest of Graham Oaks Nature Park.. The property is specifically known as Tax Lots 2800 and 2890, Section 15, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon.

PROPERTY OWNER: Bo Oswald, Northwest Wilsonville Properties LLC

APPLICANT: Fred Gast, Polygon NW Company

APPLICANT'S REP.: Stacy Connery AICP, Pacific Community Design, Inc.

COMPREHENSIVE PLAN MAP DESIGNATION: Residential-Village

ZONE MAP CLASSIFICATIONS: PF (Public Facility)

STAFF REVIEWERS: Daniel Pauly AICP, Associate Planner

DRB RECOMMENDATIONS: **Approve** the requested Zone Map Amendment.

APPLICABLE REVIEW CRITERIA

DEVELOPMENT CODE	
Section 4.008	**Application Procedures-In General**
Section 4.009	**Who May Initiate Application**
Section 4.010	**How to Apply**
Section 4.011	**How Applications are Processed**
Section 4.014	**Burden of Proof**
Section 4.033	**Authority of City Council**

Subsection 4.035 (.05)	**Complete Submittal Requirement**
Section 4.110	**Zones**
Section 4.125	**V-Village Zone**
Sections 4.139.00 through 4.139.11 as applicable	**Significant Resource Overlay Zone (SROZ)**
Section 4.177	**Street Improvement Standards**
Section 4.197	**Zone Changes and Amendments to Development Code-Procedures**
COMPREHENSIVE PLAN	
Implementation Measure 4.1.6.a.	
Implementation Measure 4.1.6.b.	
Implementation Measure 4.1.6.c.	
Implementation Measure 4.1.6.d.	
OTHER PLANNING DOCUMENTS	
Comprehensive Plan	
Villebois Village Master Plan	
SAP South Approval Documents	

Vicinity Map

BACKGROUND/SUMMARY:

PDP 7S Preliminary Development Plan (DB14-0003)

The proposed Preliminary Development Plan 7 of Specific Area Plan South (also known as Grande Pointe at Villebois) comprises 42.76 acres. The applicant proposes a variety of larger single-family housing types totaling 100 units, 24.06 acres of parks and open space, 6.83 acres of public streets, and associated infrastructure improvements. The front of all the houses will face

tree lined streets, parks and green spaces. The applicant plans on building the project in two phases, Phase 1 being 56 homes in the western portion of the project, Pocket Park 16 and the northern and southern open space, and Phase II being 44 homes on the eastern portion of the project and the remaining open space and linear greens.

Proposed Housing Type	Number of Units
Large Size Single Family	35
Standard Size Single Family	25
Medium Size Single Family	40
Total	100

Zone Map Amendment (DB14-0004)

The zoning proposal is to change the current PF zone, a remnant of the former uses, to the Village (V) zone. The proposed residential and park uses are permitted in the Village zone. The Village zone has been applied to all of Villebois as it has developed.

CONCLUSION AND CONDITIONS OF APPROVAL:

Staff and the DRB have reviewed the applicant's analysis of compliance with the applicable criteria. This Staff report adopts the applicant's responses as Findings of Fact except as noted in the Findings.

FINDINGS OF FACT:

1. The statutory 120-day time limit applies to this application. The application was received on January 17, 2014. On February 13, 2014, staff conducted a completeness review within the statutorily allowed 30-day review period, and, on February 21, 2014, the Applicant submitted new materials. On February 26, 2014 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 26, 2014.

2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	V	Single-family residential
East:	V	Single-family residential/ Graham Oaks Nature Park
South:	PF/V	Graham Oaks Nature Park
West:	--	Unincorporated Rural Residential

3. Prior land use actions include:

Legislative:
02PC06 - Villebois Village Concept Plan
02PC07A - Villebois Comprehensive Plan Text
02PC07C - Villebois Comprehensive Plan Map
02PC07B - Villebois Village Master Plan
02PC08 - Village Zone Text
04PC02 – Adopted Villebois Village Master Plan
LP-2005-02-00006 – Revised Villebois Village Master Plan
LP-2005-12-00012 – Revised Villebois Village Master Plan (Parks and Recreation)
LP10-0001 – Amendment to Villebois Village Master Plan (School Relocation from SAP North to SAP East)
LP13-0005 – Amendment to Villebois Village Master Plan (Future Study Area)

Quasi-Judicial:
03DB21 - SAP-South

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

GENERAL INFORMATION

Section 4.008 Application Procedures-In General

Review Criteria: This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.
Finding: These criteria are met.
Explanation of Finding: The application is being processed in accordance with the applicable general procedures of this Section.

Section 4.009 Who May Initiate Application

Review Criterion: "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."
Finding: This criterion is satisfied.
Explanation of Finding: The application has been submitted on behalf of contract purchaser Polygon Homes, and is signed by Bo Oswald, an authorized member of the current owner, Northwest Wilsonville Properties, LLC.

Subsection 4.010 (.02) Pre-Application Conference

Review Criteria: This section lists the pre-application process
Finding: These criteria are satisfied.
Explanation of Finding: A pre-application conference was held on May 2, 2013 in accordance with this subsection.

Subsection 4.011 (.02) B. Lien Payment before Application Approval

Review Criterion: "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."
Finding: This criterion is satisfied.
Explanation of Finding: No applicable liens exist for the subject property. The application can thus move forward.

Subsection 4.035 (.04) A. General Site Development Permit Submission Requirements

Review Criteria: "An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code." Listed 1. through 6. j.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has provided all of the applicable general submission requirements contained in this subsection.

Section 4.110 Zoning-Generally

Review Criteria: "The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192." "The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise."
Finding: These criteria are satisfied.
Explanation of Finding: This proposed development is in conformity with the Village zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

CONCLUSIONARY FINDINGS, REQUEST C: DB14-0004 ZONE MAP AMENDMENT

Comprehensive Plan

Compact Urban Development-Implementation Measures

Implementation Measure 4.1.6.a

1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
   Finding: These criteria are satisfied.
   Explanation of Finding: Development in this area is being guided by all the listed plans and codes.

Implementation Measure 4.1.6.b.

2. **Review Criteria:** This implementation measure identifies the elements the Villebois Village Master Plan must contain.
   Finding: These criteria are not applicable
   Explanation of Finding: The concurrent proposal for a preliminary development plan implements the procedures as outlined by the Villebois Village Master Plan, as previously approved.

Implementation Measure 4.1.6.c.

3. **Review Criterion:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
   Finding: This criterion is satisfied.
   Explanation of Finding: The Village Zone zoning district is being applied to an area designated as Residential-Village in the Comprehensive Plan.

Implementation Measure 4.1.6.d.

4. **Review Criterion:** "The "Village" Zone District shall allow a wide range of uses that befit and support an "urban village," including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses."

Finding: This criterion is satisfied.
Explanation of Finding: The area covered by the proposed zone change is proposed for residential uses, parks and open space, and sanitary sewer lift station as shown in the Villebois Village Master Plan.

Planning and Land Development Ordinance

Section 4.029 Zoning to be Consistent with Comprehensive Plan

5. **Review Criterion:** "If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant is applying for a zone change concurrently with a Preliminary Development Plan, which is equivalent to a Stage II Final Plan for a planned development.

Subsection 4.110 (.01) Base Zones

6. **Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.
Finding: This criterion is satisfied.
Explanation of Finding: The requested zoning designation of Village "V" is among the base zones identified in this subsection.

Subsection 4.125 (.01) Village Zone Purpose

7. **Review Criteria:** "The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The subject lands are designated Residential-Village on the Comprehensive Plan map and are within the Villebois Village Master Plan area and the zoning designation thus being applied is the Village "V".

Subsection 4.125 (.02) Village Zone Permitted Uses

8. **Review Criteria:** This subsection lists the uses permitted in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed residential, park and open space, and utility uses are consistent with the Village Zone designation and Villebois Village Master Plan.

Subsection 4.125 (.18) B. 2. Zone Change Concurrent with PDP Approval

9. **Review Criterion:** "... Application for a zone change shall be made concurrently with an application for PDP approval..."

Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment is being requested concurrently with a request for PDP approval. See Request B.

Subsection 4.197 (.02) Zone Change Review

Subsection 4.197 (.02) A. Zone Change Procedures

10. **Review Criteria:** "That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;"
Finding: These criteria are satisfied.
Explanation of Finding: The request for a zone map amendment has been submitted as set forth in the applicable code sections.

Subsection 4.197 (.02) B. Zone Change: Conformance with Comprehensive Plan Map, etc.

11. **Review Criteria:** "That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: The proposed zone map amendment is consistent with the Comprehensive Map designation of Residential-Village and as shown in Findings C1 through C4 comply with applicable Comprehensive Plan text.

Subsection 4.197 (.02) C. Zone Change: Specific Findings Regarding Residential Designated Lands

12. **Review Criteria:** "In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: Implementation Measure 4.1.6.c. states the "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation. Since the Village Zone must be applied to areas designated "Residential Village" on the Comprehensive Plan Map and is the only zone that may be applied to these areas, its application is consistent with the Comprehensive Plan.

Subsection 4.197 (.02) D. Zone Change: Public Facility Concurrency

13. **Review Criteria:** "That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized."
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan compliance report and the plan sheets demonstrate that the existing primary public facilities are available or can be

provided in conjunction with the project. Section IIC of the applicant's notebook, Exhibit B3, includes supporting utility and drainage reports. In addition, the applicant has provided a Traffic Impact Analysis, which is in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.197 (.02) E. Zone Change: Impact on SROZ Areas

14. **Review Criteria:** "That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;"
Finding: These criteria are satisfied.
Explanation of Finding: A portion of the subject property is within the SROZ. Request G is reviewing SROZ regulations and ensuring the development does not have a significant adverse effect on natural resources. The proposed development is being focused on areas of the site previously disturbed by the development.

Subsection 4.197 (.02) F. Zone Change: Development within 2 Years

15. **Review Criterion:** "That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant has provided information stating they reasonably expect to commence development within two (2) years of the approval of the zone change, beginning construction in 2014. However, in the scenario where the applicant or their successors due not commence development within two (2) years allow related land use approvals to expire, the zone change shall remain in effect.

Subsection 4.197 (.02) G. Zone Change: Development Standards and Conditions of Approval

16. **Review Criteria:** "That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards."
Finding: These criteria are satisfied.
Explanation of Finding: As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

Council Exhibit A

Attachment C

DEVELOPMENT REVIEW BOARD
RESOLUTION NO. 275

A RESOLUTION ADOPTING FINDINGS RECOMMENDING APPROVAL OF A ZONE MAP AMENDMENT FROM PUBLIC FACILITIES (PF) TO VILLAGE (V) AND ADOPTING FINDINGS AND CONDITIONS APPROVING AN AMENDMENT TO SAP SOUTH TO ADD PLAN AREA 2, A PRELIMINARY DEVELOPMENT PLAN FOR SAP-SOUTH PDP-7, A TENTATIVE SUBDIVISION PLAT, A TYPE C TREE PLAN, A FINAL DEVELOPMENT PLAN FOR PARKS AND OPEN SPACE, A SROZ MAP REFINEMENT, A SRIR REVIEW AND A SROZ BOUNDARY VERIFICATION FOR A 100-LOT SINGLE FAMILY SUBDIVISION IN VILLEBOIS AND ASSOCIATED IMPROVEMENTS. THE SUBJECT SITE IS LOCATED AT 29500 SW GRAHAMS FERRY ROAD ON TAX LOTS 2800 AND 2890, OF SECTION 15, TOWNSHIP 3 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON. STACY CONNERY, AICP, PACIFIC COMMUNITY DESIGN, INC. – REPRESENTATIVE FOR FRED GAST, POLYGON NW COMPANY- APPLICANT.

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code, and

WHEREAS, the Planning Staff has prepared staff report on the above-captioned subject dated April 7, 2014, and

WHEREAS, said planning exhibits and staff report were duly considered by the Development Review Board Panel A at a scheduled meeting conducted on April 14, 2014, at which time exhibits, together with findings and public testimony were entered into the public record, and

WHEREAS, the Development Review Board considered the subject and the recommendations contained in the staff report, and

WHEREAS, interested parties, if any, have had an opportunity to be heard on the subject.

NOW, THEREFORE, BE IT RESOLVED that the Development Review Board of the City of Wilsonville does hereby adopt the staff report dated April 7, 2014, attached hereto as Exhibit A1, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations, subject to City Council approval of the Zone Map Amendment Request (DB14-0004) as applicable, for:

DB14-0002, DB14-0003, DB14-0005 through DB14-0007, and SI14-0002 SAP Amendment, Preliminary Development Plan, Tentative Subdivision Plat, Type C Tree Plan, Final Development Plan, SROZ Map Refinement, Significant Resource Impact Report Review, and SROZ Boundary Verification for a 100-lot single-family residential subdivision, and associated parks and open space and other improvements..

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 14th day of April, 2014 and filed with the Planning Administrative Assistant on April 17, 2014. This resolution is final on the 15th calendar day after the postmarked date of the written notice of decision per *WC Sec 4.022(.09)* unless appealed per *WC Sec 4.022(.02)* or called up for review by the council in accordance with *WC Sec 4.022(.03)*.

Mary Fierros Bower Chair, Panel A
Wilsonville Development Review Board

Attest:

Shelley White, Planning Administrative Assistant

King, Sandy

From: Kohlhoff, Mike
Sent: Monday, May 05, 2014 3:34 PM
To: scottstarr97070@gmail.com; Mayor Tim Knapp; Richard Goddard (richardgoddard2010@gmail.com); Fitzgerald, Julie; Stevens, Susie
Cc: Cosgrove, Bryan
Subject: FW: Ord. 741 Responses

Scott,

Here are the answers to your questions with copies to the Mayor and Councilors as we discussed. I am sorry that it is so close to the meeting time, but it took a little bit to search the record so we could be accurate and to double check with Mr. Gast on the swimming pool question. So everyone tonight.

Mike

Michael E. Kohlhoff
City Attorney
City of Wilsonville
29799 SW Town Center Loop E
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503-570-1508
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kohlhoff@ci.wilsonville.or.us

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Circular 230 Disclaimer: If any portion of this communication is interpreted as providing federal tax advice, Treasury Regulations require that we inform you that we neither intended nor wrote this communication for you to use in avoiding federal tax penalties that the IRS may attempt to impose and that you may not use it for such purpose.

From: Callaway, Tamara
Sent: Monday, May 05, 2014 2:22 PM
To: Kohlhoff, Mike
Subject: RE: Ord. 741 Responses

From: Pauly, Daniel
Sent: Monday, May 05, 2014 11:14 AM
To: Jacobson, Barbara; Edmonds, Blaise; Neamtzu, Chris; Kohlhoff, Mike
Cc: Adams, Steve
Subject: Ord. 741 Responses

See my responses in Red

Please note the SAP Amendment and SROZ applications are not contingent on the zone change and the City Council call-up period on these issues has lapsed (the DRB decision was mailed April 15th).

I don't see a map of the streets in the packet that show the interface of the streets in Villebois matching up with the streets in Grande Pointe. If citizens were worried about speed coming in and out, I think a map would help my decision.

Staff will provide a map and will also describe the discussion with respect to traffic that occurred at DRB. Here are relevant staff comments from the DRB hearing on this issue:

Steve Adams discussed traffic related to the proposed development, which had been studied with the Planning Commission application last fall. The study estimated that about 30 to 40 percent of the traffic would go up Villebois Dr and the other 60 to 70 percent would access Grahams Ferry Rd. He believed the estimates were fairly accurate considering homes in the upper northeast corner would likely exit onto Villebois Dr. The other homes, unless one was going to the elementary school, were facing 25 mile per hour streets in Villebois versus 40 mile per hour streets on Grahams Ferry Rd, so he believed people going to work or shop would probably exit onto Grahams Ferry Rd and head north or south.

- A baseline study was completed on Villebois Dr two weeks ago to determine traffic levels between Grenoble St and Lausanne St, and the average daily traffic was 450 vehicles. An additional 30 to 40 percent of traffic would increase that by 300 to 400 vehicles per day, resulting in 800 to 900 vehicles.
- The traffic engineer informed him that in the national standards, concern was only raised on residential streets when traffic loading reached more than 1,600 vehicles per day. The subject traffic levels were only about 50 percent of what national standards consider a serious concern, so he believed the City was fine.
- Quite a bit of contact had come from citizens concerned about traffic. He believed connectivity, Council goal, and TSP were the best way of having connections both on Grahams Ferry Rd and at Amalfi Ln and Villebois Dr.

Mr. Adams believed the traffic calming features were more directed towards Villebois Dr and Normandy Ln. If a problem developed with cars driving too fast to get to Barber St, a condition was included that the City would consider traffic calming devices, such as bulb outs. Normandy Ln had no curb extension, so it was a straight, 28-ft wide street that appeared big and vast. So if people started driving too fast, the City could add a curb extension, crosswalk and signage, etc. to calm traffic speeds. which was what the condition entailed.

Mr. Adams reiterated that traffic calming was covered in the Planning Commission traffic report last fall in that the City would observe the flow of traffic and if it became a problem, he and Community Development Director Nancy Kraushaar would offer traffic calming at the City's expense, because it was not part of the development and on a separate street that was already completed. Staff's view was not to throw it out there right away, but see how things developed. The street that connects to Villebois Dr was part of Phase II and was still one to two years away from completion when the traffic would actually access that back area.

Mr. Gast believed Mr. Adams was accurate in the sense that the City would have to consider how all these streets functioned and try to enhance and/or mitigate. From the Polygon's perspective, the connection would be made in Phase II and he did not mind setting aside some financial contributions to address this issue or another. In order to deal with the Dolan issue, he agreed, as a condition, to target $20,000 for traffic mitigation in Phase II. (It was determined this contribution would be addressed in the development agreement.)

In short, no capacity issues. Baseline speed studies have or will be completed. If issues develop, money will be set aside to address. As stated in the hearing, it is better to target the money to specific issues as they develop rather than try to solve problems that may not develop.

Also, will Grande Pointe adopt cc&r's and become part of Villebois?

Yes, they are required to adopt CC&R's. While part of Villebois, they will have their own HOA separate from other phases and subdivisions.

Will they have use of the new community pool?

No. Although Polygon made substantial contribution to the pool construction, which was critical in getting the pool built, due to concerns expressed by a few residents that adding more residents who were allowed to use the pool might make the pool overcrowded, Mr. Gast voluntarily agreed that residents of Grand Point will not have access to the pool.

Haven't all the density issue already been met?

Yes, they have been met, which is why this development can be zoned PDP 7, which is the lowest density provided for Villebois. It should also be noted that Grand Point will have the lowest density of any neighborhood in Villebois.

Wasn't the intent of Villebois to have estate lots on the edge of the master plan?

No, the intent was to have larger lots, but not necessarily estate lots. There is nothing in the adopted Master Plan that would support a requirement for estate lots at Grande Pointe. Private property rights must be respected and staff cannot go beyond the requirements of the Comprehensive Plan and the Master Plan for Villebois. Throughout the process, based on meetings with the residents, input from the Planning Commission and from the DRB, Mr. Gast voluntarily agreed to reduce the originally proposed 121 lots down to 113 lots (which is the number that was presented to City Council) and most recently he has agreed to reduce the number of lots further, now to only 100 lots. This is more than approximately 20% voluntary reduction on the part of Polygon. The exact language of the Master Plan that governs this reads, " The residential land uses in the Future Study Area will be limited to single-family lots in the medium to estate land use category identified in Wilsonville Code Subsection 4.125(.18)F.1.a.iv., arranged in a similar pattern as other areas on the edges of Villebois." Note this language includes "estate" in reference to the Development code land use category, not in reference to what is Planned in the Future Study Area. In short, while estate lots are an option, they are not a requirement. The existing edges of Villebois referred to in the language "a similar pattern as other areas on the edges of Villebois" do not involve any estate lots. The following was the staff response to a similar question at DRB, and reads as follows from the minutes:

Mr. Springall asked what happened to the estate-sized lots and how that decision process went.

Mr. Pauly stated in the original Master Plan, residences at the end of San Remo Ct were shown as estate lots. He explained that flexibility existed within the larger aggregate land use category, as defined by the Development Code. As noted in the Master Plan, this large and standard pattern around the edges was consistent with the rest of Villebois, including the most closely neighboring areas of Arbor Villebois.

The only estate lots left on the Master Plan were located in a portion of SAP North, where there were many trees and some slope which might drive those lots to be estate lots, but that area of planning was a ways off. There was discussion about doing a Street of Dreams, but this was the product the Applicant had elected to pursue, and it was consistent with similar areas of Villebois, as noted in the findings.

Daniel Pauly, AICP | Associate Planner | City of Wilsonville | Planning Division
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King, Sandy

From: Kohlhoff, Mike
Sent: Monday, May 05, 2014 9:25 AM
To: Neamtzu, Chris; Edmonds, Blaise; Jacobson, Barbara
Cc: Cosgrove, Bryan
Subject: FW: Ord 741

See Councilor Starr's questions. Is there an overview exhibit that sows the adjacent street system? The packet shows where the street joins, but not the adjacent streets. I understand there will be CC&R's and Grande Point is part of Villebois. I don't know about the pool, however. Can you address the estate lot question? The project meets density.

Mike

Michael E. Kohlhoff
City Attorney
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-----Original Message-----
From: Scott Starr [mailto:scottstarr97070@gmail.com]
Sent: Sunday, May 04, 2014 10:52 PM
To: Kohlhoff, Mike
Subject: Ord 741

I don't see a map of the streets in the packet that show the interface of the streets in Villebois matching up with the streets in Grande Pointe. If citizens were worried about speed coming in and out, I think a map would help my decision.

Also, will Grande Pointe adopt cc&r's and become part of Villebois? Will they have use of the new community pool? Haven't all the density issue already been met? Wasn't the intent of Villebois to have estate lots on the edge of the master plan?

Sent from my iPad

King, Sandy

From: Kohlhoff, Mike
Sent: Monday, May 05, 2014 11:19 AM
To: Cosgrove, Bryan
Subject: FW: Ord. 741 Responses

Just keeping you in the information loop.

Mike

Michael E. Kohlhoff
City Attorney
City of Wilsonville
29799 SW Town Center Loop E
Wilsonville OR 97070
503-570-1508
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kohlhoff@ci.wilsonville.or.us

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From: Pauly, Daniel
Sent: Monday, May 05, 2014 11:14 AM
To: Jacobson, Barbara; Edmonds, Blaise; Neamtzu, Chris; Kohlhoff, Mike
Cc: Adams, Steve
Subject: Ord. 741 Responses

See my responses in Red

Please note the SAP Amendment and SROZ applications are not contingent on the zone change, and fifteen days have lapsed since the DRB decision was mailed (April 15th)

I don't see a map of the streets in the packet that show the interface of the streets in Villebois matching up with the streets in Grande Pointe. If citizens were worried about speed coming in and out, I think a map would help my decision.

I can add a map. I can describe the discussion at DRB. Here are relevant staff comments from DRB:

Steve Adams discussed traffic related to the proposed development, which had been studied with the Planning Commission application last fall. The study estimated that about 30 to 40 percent of the traffic would go up Villebois Dr and the other 60 to 70 percent would access Grahams Ferry Rd. He believed the estimates were fairly accurate considering homes in the upper northeast corner would likely exit onto Villebois Dr. The other homes, unless one was going to the elementary school, were facing 25 mile per hour streets in Villebois versus 40 mile per hour streets on Grahams Ferry Rd, so he believed people going to work or shop would probably exit onto Grahams Ferry Rd and head north or south.

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Mr. Adams believed the traffic calming features were more directed towards Villebois Dr and Normandy Ln. If a problem developed with cars driving too fast to get to Barber St, a condition was included that the City would consider traffic calming devices, such as bulb outs. Normandy Ln had no curb extension, so it was a straight, 28-ft wide street that appeared big and vast. So if people started driving too fast, the City could add a curb extension, crosswalk and signage, etc. to calm traffic speeds which was what the condition entailed.

Mr. Adams reiterated that traffic calming was covered in the Planning Commission traffic report last fall in that the City would observe the flow of traffic and if it became a problem, he and Community Development Director Nancy Kraushaar would offer traffic calming at the City's expense, because it was not part of the development and on a separate street that was already completed. Staff's view was not to throw it out there right away, but see how things developed. The street that connects to Villebois Dr was part of Phase II and was still one to two years away from completion when the traffic would actually access that back area.

Mr. Gast believed Mr. Adams was accurate in the sense that the City would have to consider how all these streets functioned and try to enhance and/or mitigate. From the Polygon's perspective, the connection would be made in Phase II and he did not mind setting aside some financial contributions to address this issue or another. In order to deal with the Dolan issue, he agreed, as a condition, to target $20,000 for traffic mitigation in Phase II. (It was determined this contribution would be addressed in the development agreement).

In short, no capacity issues. Baseline speed studies have or will be completed. If issues develop money will be set aside to address. As stated in the hearing, it is better to target the money to specific issues as they develop rather than try to solve problems that may not develop.

Also, will Grande Pointe adopt cc&r's and become part of Villebois?

Yes, they are required to adopt CC&R's. While part of Villebois, they will have their own HOA separate from other phases and subdivisions.

Will they have use of the new community pool?

No

Haven't all the density issue already been met?

The density requirements for Villebois would be met regardless of the number of lots at Grande Pointe.

Wasn't the intent of Villebois to have estate lots on the edge of the master plan?

No, the intent was to have larger lots, but not necessarily estate lots. There is nothing in the adopted Master Plan that would support a requirement for estate lots at Grande Pointe. The exact language of the Master Plan that governs this reads, " The residential land uses in the Future Study Area will be limited to single-family lots in the medium to estate land use category identified in Wilsonville Code Subsection 4.125 (.18) F. 1. a. iv. arranged in a similar pattern as other

areas on the edges of Villebois." Note this language includes "estate" in reference to the Development code land use category, not in reference to what is Planned in the Future Study Area. In short, while estate lots are an option, they are not a requirement. The existing edges of Villebois referred to in the language "a similar pattern as other areas on the edges of Villebois" do not involve any estate lots. My response to a similar question at DRB reads as follows from the minutes

Mr. Springall asked what happened to the estate-sized lots and how that decision process went.

Mr. Pauly stated in the original Master Plan, residences at the end of San Remo Ct were shown as estate lots. He explained that flexibility existed within the larger aggregate land use category, as defined by the Development Code. As noted in the Master Plan, this large and standard pattern around the edges was consistent with the rest of Villebois, including the most closely neighboring areas of Arbor Villebois. The only estate lots left on the Master Plan were located in a portion of SAP North, where there were many trees and some slope which might drive those lots to be estate lots, but that area of planning was a ways off. There was discussion about doing a Street of Dreams, but this was the product the Applicant had elected to pursue, and it was consistent with similar areas of Villebois, as noted in the findings.

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ORDINANCE NO. 737

AN ORDINANCE OF THE CITY OF WILSONVILLE AMENDING CHAPTER 10 OF THE WILSONVILLE CODE BY ADDING SECTION 10.240 CONTROL OF DOGS AND AMENDING SECTION 10.430 PENALTIES

WHEREAS, it is in the interest of public safety and animal welfare that a new **Section 10.240 Dog Control** be added to the Wilsonville City Code and amending **Section 10.430 Penalties**.

WHEREAS, Pursuant to Resolution No. 1977, the City granted approval to Clackamas County to administer the County's Dog Control and Licensing Ordinance within the City; and

WHEREAS, the foregoing consent remains in place but, due to funding constraints, Clackamas County does not have personnel to administer said Ordinance; and

WHEREAS, numerous citizen complaints have been made regarding safety for both people and pets due to dogs being allowed to roam off leash, at large, or unsupervised within public areas of the City; and

WHEREAS, numerous citizen complaints have also been made regarding dog owners' failure to pick up and properly dispose of their dog's fecal discharge materials within public areas of the City; and

WHEREAS, to promote good and safe relationships between people and pets by avoiding confrontations between citizens; and

WHEREAS, to assist Wilsonville law enforcement officers in educating the public and in enforcing responsible dog control, as warranted, the City believes it in the best interest of the public to enact its own specific Ordinance regarding the prohibition of off leash and at large dogs within all public areas of the City, except as set forth herein, and to require owners to clean up after their dogs.

NOW THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

1. **Chapter 10 ANIMALS** is hereby amended by adding the following:

"**Section 10.240 Control of Dogs**.

(1) Except as expressly provided herein, it is unlawful to permit or allow a dog to be off leash or at large on or in any public street, park or other public property

within the City of Wilsonville. Dogs may be allowed off leash in the following circumstances only:

(a) Within a posted off leash area, as long as under the direction and control of their owner or another person in control of the dog, so long as the dog is not known to be a dangerous or vicious dog.

(b) Working dogs, including but not limited to guide dogs and service dogs recognized as such by State law, so long as the dog is wearing a locating device and is within the near vicinity of the person in control of the dog.

(2) It is unlawful for a dog owner to fail to pick up fecal excrement deposited by the dog owner's dog on public property. For purposes of this subsection "dog owner" shall mean the person having control of the dog at the time of deposit, whether or not the actual legal owner of the dog.

(3) It is unlawful to permit a dog to be unrestrained in an open portion of a vehicle, such as the back of a pick-up truck, or to be tethered in a vehicle in a way that is dangerous to the dog or to traffic.

(4) It is unlawful to leave a dog unattended in a motor vehicle at any location under such condition as may endanger the health or well-being of the dog, including but not limited to dangerous temperature, lack of food, water or attention.

(5) Additional provisions concerning Control of Dogs, as set forth in Clackamas County Code Chapter 5.01, will continue to apply, are enforceable within the City, and are incorporated by reference herein."

2. **Section 10.430(1)** is amended to add reference to **Section 10.240(1)**, to now read as follows:

"(1) Any person who violates the provisions of *WC 10.240(1), WC 10.240(2)* WC 10.410 or WC 10.425 shall be punished as follows:"

(Penalties for any violations of **Sections 10.240(3) through (5)** remain governed by **Section 10.530 Penalties**.)

3. The City Recorder is directed to amend Wilsonville Code **Section 10**, as approved above, and to make such format, style, and conforming changes to match the format and style of the Animal section of the Wilsonville Code.

4. Except as set forth above, **Section 10** of the Wilsonville City Code remains in full force and effect, as written.

SUBMITTED to the Wilsonville City Council and read for the first time at a meeting thereof on the 21st day of April, 2014, and scheduled for second reading on _____, commencing at the hour of 7 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon.

_____
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the ____ day of _____, 2014, by the following votes: Yes: _____ No: _____

_____
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this _____ day of _____, 2014.

_____
TIM KNAPP, MAYOR

SUMMARY OF VOTES:

Mayor Knapp
Council President Starr
Councilor Goddard
Councilor Fitzgerald
Councilor Stevens

City of
WILSONVILLE
OREGON

CITY COUNCIL MEETING
STAFF REPORT

Meeting Date: May 5, 2014	**Subject: Resolution No. 2468** Wilsonville Tourism Development Strategy **Staff Member**: Mark Ottenad, Public/Government Affairs Director **Department:** Administration
Action Required	**Advisory Board/Commission Recommendation**
☒ Motion ☐ Public Hearing Date: ☐ Ordinance 1st Reading Date: ☐ Ordinance 2nd Reading Date: ☒ Resolution ☐ Information or Direction ☐ Information Only ☒ Council Direction ☐ Consent Agenda	☒ Approval ☐ Denial ☐ None Forwarded ☐ Not Applicable **Comments:** Consultants from Total Destination Marketing have worked with Tourism Development Strategy Task Force members to craft a Draft Strategy document for public comment March 21-31, and potential Council adoption on May 5, 2014.
Staff Recommendations: City Council adopts Tourism Development Strategy via Resolution.	
Recommended Language for Motion: I move to adopt Resolution No. 2468	
PROJECT / ISSUE RELATES TO:	
☐ Council Goals/Priorities	☐ Adopted Master Plan(s) ☒ Not Applicable

ISSUE BEFORE COUNCIL

The issue before Council is consideration of the draft Wilsonville Tourism Development Strategy.

BACKGROUND

On April 24, 2014, members of the Tourism Development Strategy Task Force recommended to the City Council adoption of the *Wilsonville Tourism Development Strategy, May 2014.* Members of the Task Force reviewed the *Revised Draft Wilsonville Tourism Development Strategy, April 2014,* on April 24 and made a number of suggestions that have been incorporated into the final, May 2014 version of the document.

At direction of the City Council, staff recruited a diverse, 17-member volunteer advisory task force during the summer of 2013 and retained the professional tourism-consulting firm of Total Destination Marketing (TDM) in October 2013 after conducting a competitive RFP process.

Starting in October 2013, the Tourism Development Strategy Task Force has conducted two public workshops, held five meetings open to the public, reviewed a 201-page Fieldwork Research Report released in December 2013, and discussed on March 20 the recommendations contained in the 62-page "Draft Tourism Development Strategy" document prepared by TDM and released in March 2014.

Following a meeting of the Task Force held on March 20 where the Draft Strategy was reviewed in detail, a public-comment period on the Draft Strategy was held March 21-31. Following the close of public comment, staff and consultants compiled and analyzed the comments and presented a report to the Council at the April 7 Council work session. Also during this time period the Task Force was surveyed regarding the relative priorities of various recommendations and this input was incorporated into the *Revised Draft.*

After hearing from the City Council on April 7, consultants and staff utilized the public comments, additional task force feedback on priorities, and Council direction to modify the March *Draft* and produce an April *Revised Draft*. Task Force suggestions at the April 24 meeting were then further incorporated into the April *Revised Draft* for producing the final May version.

CURRENT YEAR BUDGET IMPACTS

A portion of the City's Hotel/Motel Tax (also known as Transient Lodging Tax) is used to fund tourism-related programs. State law requires that the City expend at least 40% of the tax on tourism-related programs. Following is a break-out of the current and next fiscal year budgets:

Hotel/Motel Tax (aka Transient Lodging Tax) Budget Data, Finance Dept.	**2013-14 Estimate**	**2014-15 Budget**
REVENUE: Tax Collections	$245,000	$250,000
EXPENSES		
• VIC Chamber Contract	45,656	-
• Tourism Development	50,225	125,000
• Tourism Grants Program	25,000	25,000
Sub-total: Tourism Exp.	**120,881**	**150,000**
% of Revenue	**49%**	**60%**
• General Fund / Law Enforcement	124,119	100,000
TOTAL EXPENSES	**245,000**	**250,000**

Future budget impacts will be dependent on Council action with respect to the recommended Tourism Development Strategies.

FINANCIAL REVIEW / COMMENTS:
Reviewed by: _____CAR_____ Date: ___4/23/14___

LEGAL REVIEW / COMMENT:
Reviewed by: _MEK____ Date: ___4/23/14___
The Resolution is approved as to form.

COMMUNITY INVOLVEMENT PROCESS

The Tourism Development Strategy effort has had an extensive community-engagement process that includes the following activities in chronological order:

1. Diverse 17-member stakeholder advisory task force recruited during summer of 2013.
2. Public survey of tourism issues to be considered early in process; open Oct. 9 – Dec. 4, 2013.
3. Two public, community workshops with 34 participants held in the evenings on Oct. 16 and Oct. 23, 2013.
4. Five public meetings of the Task Force with a news reporter in attendance and public-comment time set aside in each meeting: Oct. 24 and Nov. 12, 2013; Jan 29, March 20, and April 24, 2014.
5. A total of 27 in-person interviews with local-area tourism stakeholders, plus phone interviews with experts outside of the Wilsonville, conducted by consultants from TDM.
6. Wilsonville Spokesman announcements and articles, including "Task force aims to put Wilsonville on the map," Oct. 16, 2013; "How can Wilsonville market itself to tourists?," Oct. 23, 2013; "What exactly is a tourist, anyway?," Nov. 6, 2013; "Destination Wilsonville," Nov. 20, 2013; "Tourism report identifies key local markets, attractions," April 2, 2014.
7. City *Boones Ferry Messenger* December 2013 newsletter full-page report on the tourism development work, "Wilsonville Tourism Development Strategy Advances."
8. Email notices to over 50 interested members of the public of all workshops, meetings, surveys and document releases.
9. Mailing of hard-copy prints of *Fieldwork Research Report* and *Draft Strategy* and *Revised Draft Strategy* documents to task force members and key stakeholders, such as chamber of commerce representatives.
10. Public comment period, March 21-31, 2014, on Draft Strategy.
11. Survey of task force members on priorities of recommendations, March 25 – April 4, 2014.

More details on public-outreach efforts are contained in the Fieldwork Research Report that was distributed to the Council in December 2013.

ATTACHMENTS

- Resolution No. 2468
- Memo to Task Force: Changes to *Draft Tourism Development Strategy, March 2014,* Incorporated into the *Revised Draft Tourism Development Strategy, April 2014*
- Wilsonville Tourism Development Strategy, May 2014
- Memo to Task Force: Changes to *Revised Draft Tourism Development Strategy, April 2014,* Incorporated into the final *Wilsonville Tourism Development Strategy, May 2014*

RESOLUTION NO. 2468

A RESOLUTION OF THE WILSONVILLE CITY COUNCIL ADOPTING THE WILSONVILLE TOURISM DEVELOPMENT STRATEGY, MAY 2014

WHEREAS, the Wilsonville City Council adopted an *Economic Development Strategy* in August 2012 that was recommended for adoption by the Economic Development Advisory Committee; and

WHEREAS, the Economic Development Advisory Committee indicated to the City Council that the *Economic Development Strategy* focused primarily on economic development programs oriented towards major employers in the manufacturing sector and did not address the needs of small businesses in the service and retail sectors; and

WHEREAS, the City Council sought to leverage existing assets and planned developments to create a strategic plan that would identify opportunities and provide recommendations to increase the City's market-share of tourism-related expenditures that benefit primarily small businesses in the retail, services and hospitality sectors; and

WHEREAS, the City Council in March 2013 requested that the City Manager recruit a volunteer task force to assist with creation of a Tourism Development Strategy and appointed City Councilor Julie Fitzgerald in an ex-officio position to chair the task force; and

WHEREAS, the City Manager recruited a diverse 17-member task force comprised of a wide range of stakeholders, including representatives of local lodging, dining and entertainment establishments; operators of agri-tourism, golf and sporting-tournaments venues; chamber of commerce principals; officials with regional tourism agencies; and residents; and

WHEREAS, the City Manager issued a request for qualifications and through a competitive selection process selected Total Destination Marketing, an international tourism consulting firm based in Tualatin, Oregon, to act as professional consultants to advise on the creation of a Tourism Development Strategy; and

WHEREAS, the tourism consultants with Total Destination Marketing worked with members of the Tourism Development Strategy Task Force to:

- Host two community workshops in October 2013 focused on local tourism strengths, weaknesses, opportunities and threats;
- Conduct an online community survey of tourism opportunities;
- Identify key stakeholders for interviews to gain their perspectives on tourism-development opportunities;
- Hold five meetings of the task force over the seven-month period of October 2013 to April 2014 that included opportunities for public comment;
- Conduct a public-comment period in March 2014 on the Draft Tourism Development Strategy; and

WHEREAS, the Tourism Development Strategy effort involved extensive public engagement that included a large stakeholder advisory task force representing diverse interests as cited above; two community workshops; an online community survey; task force meetings open to the public and offering public comment opportunities; 27 stakeholder interviews; articles reporting on the tourism process appearing in the October 16 and 23, 2013, November 6 and 20, 2013, and April 2, 2014, editions of the *Wilsonville Spokesman* newspaper; a lengthy article in the December 2013 issue of the all-city *Boones Ferry Messenger* newsletter; email notices to over 50 members of the public of meetings, comment opportunities and document releases; mailing of hard-copy prints of the *Fieldwork Research Report, December 2013; Draft Tourism Development Strategy, March 2014;* and *Revised Draft Tourism Development Strategy, April 2014,* documents to City Council, Task Force members and key interested members of the public, such as principals of the chamber of commerce; a public-comment period on the Draft Tourism Development Strategy; and opportunities to appear before the City Council; and

WHEREAS, the Tourism Development Strategy Task Force has reviewed and accepted the *Wilsonville Tourism Development Strategy, May 2014,* and recommends that the City Council adopt the *Wilsonville Tourism Development Strategy, May 2014.*

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. Based on the above recitals, which are incorporated herein, the City Council, thanks and commends the members of the Tourism Development Strategy Task Force for their work on the Wilsonville Tourism Development Strategy; and

2. The *Wilsonville Tourism Development Strategy, May 2014,* shall be an official document of the City of Wilsonville that is a component of the City's larger *Economic Development Strategy* designed to create an economically vibrant and prosperous community, a copy of the Strategy is marked "Exhibit A" attached hereto and incorporated by reference as if fully set forth herein; and

3. The City Manager is directed to return to the City Council at the Manager's earliest reasonable opportunity with a draft work plan implementing *the Wilsonville Tourism Development Strategy, May 2014;* and

4. This Resolution is effective upon adoption.

ADOPTED by the Wilsonville City Council at a regular meeting on May 5, 2014, and filed with the Wilsonville City Recorder this date.

_____
TIM KNAPP, MAYOR

ATTEST:

_____
Sandra C. King, City Recorder, MMC

SUMMARY OF VOTES:
Mayor Knapp –
Council President Starr –
Councilor Goddard –
Councilor Fitzgerald –
Councilor Stevens –

Attachment:
Exhibit A - Wilsonville Tourism Development Strategy, May 2014

City of
WILSONVILLE
OREGON

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Wilsonville, OR 97070
Phone 503-682-0411
Fax 503-682-1015
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Web www.ci.wilsonville.or.us

MEMO

To: Tourism Development Strategy Task Force Members

From: Mark Ottenad, Public/Government Affairs Director; Task Force Staff Coordinator

Date: April 16, 2014

RE: Changes to *Draft Tourism Development Strategy, March 2014,* Incorporated into the *Revised Draft Tourism Development Strategy, April 2014*

This memo summarizes primary changes made to the *Draft Tourism Development Strategy, March 2014,* that have been incorporated into the *Revised Draft Tourism Development Strategy, April 2014.* The modifications are based on suggestions provided by the Task Force members at the March 20 meeting, public comment submitted and City Council members' feedback at the April 7 Council work session.

Throughout the document, minor text and formatting changes were made to improve readability and provide style consistency.

Vision/Mission:

- In the Revised Draft, the Vision and a portion of the Mission are highlighted for review by the Task Force. These two components of the Draft Strategy received a variety of comments in support or not in support. As a statement that is intended to be "visionary," the consultants with Total Destination Marketing believed that phrase "family-friendly city competing successfully as one of Oregon's leading destination cities" reflected the Task Force's desire and provided a high-bar to aim for — and certainly one that is better than being a "mediocre destination city." Task Force members may wish to weigh-in on this matter to set the bar at the desired level that we seek to achieve.

Document Organization:

- Added an *Introduction* section to more clearly set-out the goal and purpose of the Tourism Development Strategy.
- Repositioned the *Leadership and Organization* section from section 5 to section 1 as the lead recommendation that sets the stage for following recommended actions.
- Added an appendix (#6) for "Tourism Strategy Performance Indicators" to show potential performance-measurement metrics.
- Added an appendix (#7) for Public Comments received, along with Consultants Review of the comments.

Recommended Actions:

- Edited recommendations to reflect the priorities expressed by the Task Force members who completed the survey. A number of the recommendations have a commencement time, and then are carried forward into the future. These are shown in the Actions as "◆ Program Commencement" and "√ Continuation."
- Reworded many Actions in *Section 4, Infrastructure,* to "Support" to reflect the fact that Visit Wilsonville DMO will not be an initiator or developer of infrastructure, but will have a role to encourage and support development through other entities where appropriate.
- Modified the text of various Actions to show which Target Markets or Key Experience Themes are being emphasized; this text is currently highlighted in yellow.

Exhibit A - Resolution 2468

Wilsonville Tourism Development Strategy

May 2014

Wilsonville Tourism Development Strategy

May 2014

City Council

Tim Knapp, Mayor

Richard Goddard, Councilor

Julie Fitzgerald, Councilor

Scott Starr, Council President

Susie Stevens, Councilor

Tourism Development Strategy Task Force

Denny Atkin, Resident , Advertising Director, The Oregonian (retired)

Eric Bohard, Chair, City of Wilsonville Parks & Recreation Advisory Board

Jeff Brown, General Manager, Holiday Inn - South Portland/Wilsonville

Emily Corley, General Manager, McMenamins Wilsonville Old Church and Pub

Bryan Cosgrove, City Manager, City of Wilsonville

Danielle Cowan, Executive Director, Clackamas County Tourism & Cultural Affairs (CCTCA)

Julie Fitzgerald, Task Force Chair, City Councilor, City of Wilsonville City Council

John Hanna, Club Manager, Willamette United Soccer Club

Darren Harmon, General Manager, Wilsonville Family Fun Center

Carolyn McCormick, President/CEO, Washington County Visitors Association (WCVA)

Susan Myers, General Manager, Capital Realty Corp

Chris and Liz Perry, Market Managers, Wilsonville Farmers Market

Cheryl Snow, Executive Director, Clackamas County Arts Alliance

David Stead, General Manager, Langdon Farms Golf Club

Mary Stewart, President, MARStewart Creative Group

Tonie Tollen, Owner, Tollen Farm

Daphne Wuest, Board Chair, Clackamas County Tourism Development Council

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Prepared by:

Total Destination Marketing

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Introduction

A New Era for Tourism in Wilsonville

Tourism in Wilsonville is entering a new era that will be characterized by the introduction of new attractors, events, infrastructure and innovative digital marketing. This will require the City of Wilsonville to establish new goals, responsibilities and strategies for the organization that will be responsible for the City's future tourism development and marketing contract.

The Wilsonville Tourism Development Strategy is a masterplan that provides strategic directions for the city to take optimal advantage of the opportunities that are likely to arise over the next decade. It is not a marketing plan or operational plan, but is designed to act as a guidance system in the development of more specific and tactical annual programs and budget allocations. This is a living document that will be updated as new opportunities and challenges arise.

Actions for Success

Tourism is a growing and important sector of the Oregon economy. The Portland metro region's visitor economy is worth over $4.1 billion (2012). A key objective of this strategy is to secure a higher share of this for Wilsonville. It is designed to provide guidance for the future development of tourism in Wilsonville. It provides directions to increase market share, identifies development opportunities for new attractors and events, makes tourism a catalyst for businesses, and improves the experiences of visitors to Wilsonville visitor experiences.

Win-Win for Residents & Business

An important principle underpinning the strategy is that what can be attractive to visitors can also be appealing to residents and investors. As the cultural, natural, sporting and recreational attractors are improved, they will also improve the quality of life and business opportunities for residents.

Executive Summary

A Holistic Approach

This strategy adopts a holistic approach which addresses all of the elements necessary to communicate and deliver outstanding visitor experiences. Tourism is a complex economic activity where success requires cross-agency cooperation involving public, private, and nonprofit organizations. It also involves consideration of the interests of all customer groups including visitors, government, partners, local businesses and residents.

The Vision

In 2023, Wilsonville is a welcoming, family-friendly community that is one of Oregon's premier destination cities, investing in tourism, meetings, leisure and recreation strengths, amenities and services to provide compelling year-round experiences.

Our Mission

To facilitate the thoughtful development of Wilsonville's visitor economy for the benefit of visitors and partners, and to enhance the quality of life for those who live and work in the community.

Opportunities and Challenges

This strategy has been guided by consideration of the opportunities relating to the development of new attractors, growth of key markets, the rising popularity of the Portland metropolitan area, and the interest of local stakeholders. The strategy also recognizes the challenges posed by limited resources, increased competition, and the need for a holistic approach to sustainable tourism development.

Strategic Directions

The strategy has been designed to build Wilsonville's tourism capacity, increase market share, revenue, employment and new business opportunities. The following are key elements for the strategy:

Priority Markets:

- Horse show participants and organizers
- Meetings and conventions participants and organizers
- Northwest getaways
- Sports tournaments participants
- I-5 motorists in transit

Priority Experience Themes

- Horse shows and equestrian events
- Meetings and conventions
- Sports tournaments
- Northwest getaways

The Tourism Action Plan

1. Leadership and Organization

Provide clear direction, partnerships and sustainable funding for Wilsonville tourism through leadership and management that is recognized for its innovation, collaboration and effectiveness.

1.1 Establish an Independent 501 (c) (6) Not-for-Profit DMO to be named Visit Wilsonville.

1.2 Establish Board of Management for Visit Wilsonville.

1.3 Increase the Allocation of the Hotel/Motel Transient Lodging Tax.

1.4 Request a project budget to launch Visit Wilsonville DMO.

1.5 Review Wilsonville Tourism Grants Program.

1.6 Actively seek grants for Visit Wilsonville.

1.7 Initiate ongoing partnership and relationship-building programs.

1.8 Enhance local-area destination knowledge of frontline staff.

2. Branding and Positioning

Adopt distinctive and meaningful positioning for Wilsonville as a destination.

2.1 Develop a destination branding strategy for Wilsonville.

3. Visitor Experiences

Enhance Wilsonville's tourism attractors, events and experiences to meet and exceed the expectations of visitors and event organizers.

3.1 Encourage active participation by local product-suppliers and farm operators to participate in agri-tourism experiences, including the new Wilsonville-West Linn-Milwaukie Farm Loop.

3.2 Establish Wilsonville as a bike-friendly city and one of Oregon's premier leisure cycling cities.

3.3 Initiate and attract cycling events.

3.4 Initiate programs to ensure that Wilsonville consistently presents outstanding experiences for horse show organizers, participants and attendees.

3.5 Investigate the feasibility of establishing a signature event in Wilsonville to celebrate the start of horse show season.

4. Infrastructure and Placemaking

Ensure that tourism opportunities are optimized in government planning, development approvals, policy, infrastructure and placemaking.

4.1 Support a feasibility study for the development of the area surrounding Regal Cinemas or another area as an entertainment, sports, and leisure precinct.

4.2 Support a hotel feasibility study to assess the medium term lodging and meeting space needs of the city.

4.3 Investigate the feasibility of developing additional facilities within the City specifically designed for weddings, reunions and community events.

4.4 Support the expansion and integration of Wilsonville's trails system and brand the main trails with distinctive themes and names.

4.5 Support the construction of the proposed Bike-Ped-Emergency Bridge across the Willamette River.

4.6 Support the completion of the Ice Age Tonquin Trail.

4.7 Support the introduction of creative bike racks in areas popular with cyclists.

4.8 Support a feasibility study to develop an covered venue for equestrian events.

4.9 Support the development of all-weather, multi-purpose playing fields for sports tournaments.

4.10 Support the development of the proposed push trail and new skate park.

4.11 Support the improvement of river foreshore and water access for active and passive recreation, including boat launch.

4.12 Support study of the enhancement of Boones Ferry Landing in Old Town as a recreation and tourism precinct.

4.13 Support enhancements to the character and attractiveness of Wilsonville's key precincts

4.14 Consider establishing a public art program.

4.15 Support improvements to the attractiveness and sense of welcome at city gateways.

4.16 Support the development and implementation of a comprehensive wayfinding signage system.

4.17 Support the development of a comprehensive directional and event signage strategy.

4.18 Support the establishment of a museum/interpretive center and commemorative sculptures for the Oregon Korean War Memorial.

5. Marketing Communications

Enhance awareness of Wilsonville as an appealing visitor destination through the innovative use of traditional, digital and environmental media.

5.1 Establish a stand-alone Wilsonville tourism website.

5.2 Introduce an internet marketing campaign.

5.3 Develop social media programs relevant to key markets.

5.4 Develop database and email marketing programs.

5.5 Optimize the online use of video.

5.6 Optimize linking strategies.

5.7 Produce a Wilsonville Visitors Guide annually.

5.8 Ensure visitors have ready access to Wilsonville visitor information.

5.9 Assess the effectiveness of digital kiosks to provide visitor information.

5.10 Develop a public-relations program.

5.11 Develop and maintain a library of high-quality images and videos.

5.12 Optimize the use of website and social media analytics.

5.13 Develop an active content management and co-op marketing program.

5.14 Increase public awareness of the benefits of tourism.

5.15 Encourage local residents to discover Wilsonville and surrounding area.

5.16 Conduct ongoing visitor-satisfaction research.

5.17 Conduct visitor research for each major event in Wilsonville.

Methodology

The development of this Tourism Strategy by Total Destination Marketing involved a variety of actions which included:

- A diverse 17-member Task Force composed of a wide range of stakeholders, including representatives of local lodging, dining, entertainment establishments; operators of agri-tourism, golf and sporting-tournament venues; Chamber of Commerce principals; officials with regional tourism agencies; and residents.
- A community survey which was accessible online and publicized by the City of Wilsonville and local media (35 responses).
- A total of 27 in-person interviews with local business and community leaders.
- Three community workshops with residents, businesses and community leaders (17 participants).
- Interviews with City of Wilsonville executives.
- Informal discussions with local businesspeople in contact with visitors.
- Interviews with individuals outside of Wilsonville who have partnership relations with the city in regard to tourism or are experts in fields of interest to Wilsonville tourism.
- On-site assessments of Wilsonville and its adjacent areas to experience the city and surrounding area through the objective and unbiased eyes of a first time visitor.
- A review of relevant past reports and plans relating to Wilsonville from a tourism, economic development, recreation and leisure perspective.
- A review of web sites and brochures relating to Wilsonville businesses and key competitors and partners to Wilsonville.
- A formal public-comment period in March 2014 to receive feedback and suggestions on the *Draft Wilsonville Tourism Development Strategy, March 2014.*
- Report before Wilsonville City Council in April 2014

The Business of Tourism | Tourism is Economic Development

Tourism is an *export* industry. That notion may initially seem a little strange. After all, when we think of exports we usually think of container ships or trucks, stacked full of consumer goods, machinery, agricultural produce, or raw materials leaving the area. Economists call tourism an "invisible export" because the customer must come to the source of production to consume the products. Another way to think of tourism is that it imports wealth through the "manufacturing" of visitor experiences that are mainly consumed within the host community.

With effective management the benefits from tourism can include:

- Diversifying, stabilizing, and enlarging the economic base of a community
- Stimulating entrepreneurial activity and small businesses
- Boosting existing businesses by supplementing resident spending
- Generating supplementary tax revenues
- Stimulating the sale and export of local products, e.g. agriculture, artifacts, wine, etc.
- Enhancing the image of the place as an attractive place to shop, visit, study, develop a business, and invest
- Generating jobs that can't be easily outsourced
- Supporting community enhancements and infrastructure that are of mutual benefit to residents and visitors

Who are Tourists?

Tourists often go unnoticed in a community, particularly in large and diverse cities and counties. We sometimes hold preconceived and stereotypical images of a tourist and how they may behave.

Tourism includes travel by people* and their activities at a location that is not their normal place of employment or residence and is more than 50 miles from where they live. These trips can be for one day or over a longer period. Tourists can be considered to be:

- Those who are in **transit** to another location, but may stop before proceeding on their journey.
- People who stay **overnight** in either commercial or private lodging. These are the most lucrative visitors for a community.

Tourists can be further classified as:

- **Day trippers** who may either be staying temporarily or living in a nearby community who visit, but do not stay overnight.
- **Leisure travelers** are people on vacation or a short break for leisure purposes (including non-essential shopping trips). The majority of leisure trips are during June, July and August, i.e. during summer vacation. Most international travelers fall into this category as well and are often traveling the country for authentic American experiences.
- **Business travelers** are frequently the highest spending of all visitor segments. They may travel to attend conferences, incentive award programs, business meetings and sales visits. Many include leisure activities during their trips.
- **Visiting friends and relatives** (VFR) is one of the largest visitor segments for many communities. They are sometimes overlooked because they stay in private homes, but studies show that they performed well on profitability measures including being one of the highest spenders on shopping. They are the largest segment to stop at visitor information centers and are highly influenced by the knowledge of local residents.
- **Special purpose** tourists are a subset of leisure travelers, and include those traveling individually or in groups for sporting, antique hunting, equestrian, cycling, or medical reasons etc.

* "State statutes and local tourism ordinances define tourism activity as "economic activity resulting from tourists." A tourist is defined as "a person who, for business or pleasure, recreation, or participation in events related to the arts, heritage or culture, travels from the community in which they reside to a different community that is separate, distinct from, and unrelated to the person's community of residence.

The legal definitions also prescribe that the person traveled more than 50 miles from their community of residence or stay overnight in the community they are visiting. Where increasing overnight stays is not reasonably attainable, bringing in visitors from outside the area and getting them to linger longer to eat, shop, recreate, learn about local culture, history, or take in agricultural or nature attractions should be considered an equal goal."

Destination Situation | Wilsonville, OR

Wilsonville (21,550 pop.) is a fast-growing city with a diverse economy strengthened by leading firms in the high-tech industry and numerous manufacturing, warehousing and distribution facilities. Wilsonville is located in both Clackamas County (386,080 pop.) and Washington County (550,990 pop.), and is also part of the greater Portland metro area (2.6 mill. pop.). The city is situated just south of Portland and is on the Willamette River. Travel Oregon classifies Wilsonville as part of the Willamette Valley. Wilsonville serves as the dual gateway between the urbanized Portland metro area to the north and the rich agricultural lands of the Willamette Valley to the south. The city attracts visitors because of its shopping, equestrian, farm, outdoor recreation, family entertainment, wine, sports tournaments and as an ideal base for exploring the region.

Attractors and Experiences

Wilsonville's ideal location is enhanced by a blend of urban, natural and rural experiences, and its close proximity to Portland. It presents easy access to a variety of attractors and experiences:

- Aurora, Charbonneau and nearby cities
- Cycling
- Equestrian and horse shows
- Family Fun Center
- Farms, nurseries and Farmers Market
- Festivals and events
- French Prairie
- Golf
- Greater Portland
- Heritage sites
- Natural areas
- Oregon Korean War Memorial
- Parks and water features
- River recreation
- Shopping
- Sports tournaments
- Weddings and reunions
- Wineries

Accessibility

More than 3.5 million people live within a two-hour drive of Wilsonville. The city is bisected by Interstate 5, is close to Interstate 205 with easy access to Portland International Airport and Aurora Airport, and is serviced by WES Commuter Rail. The city and lodging are within 30 minutes of downtown Portland and Salem, the State Capital.

Hotels & Motels

Property	Number of Rooms
Holiday Inn Wilsonville/Portland South	169
La Quinta Inn & Suites	76
Super 8	72
Guest House International Inn & Suites	63
Snooz Inn	58
Best Western Wilsonville Inn & Suites	56
Total:	**494**

RV Parks / Campgrounds

Property	Number of Spaces
Aurora Acres	130
Pheasant Ridge RV Resort, Inc.	130
Champoeg State Heritage Area	81
Riverside RV Park (Canby)	50
Total:	**310**

Meetings and Conference Venues

The following are the locations that are actively marketing their properties as meetings and convention venues through WCVA and Travel Portland. It should be noted that this may not represent the full spectrum of meetings venues in the city.

Maximum Seating - Theater Style	Number of Venues in Wilsonville
Fewer than 100	2
300-800	1

Source: Washington County Meeting Planner and Portland Convention Meeting Planners Guide.

Shopping

Wilsonville is within easy reach of major destination shopping centers including Woodburn Company Stores, Washington Square, Bridgeport Village, as well as local outlets for Fry's, Costco, Target and many auto sales outlets. An added benefit for visitors is that their purchases are sales tax-free. In 2012 visitor shopping in the Washington and Clackamas Counties generated $171 million, contributed 1100 jobs in the retail sector and assisted many small businesses. Visitors are also attracted by antiques and farmers markets which are available around the county.

Restaurants

Wilsonville has more than 50 restaurants comprising fast-food outlets, bars, grilles, ethic dining and coffee shops. However, research indicates that during some equestrian events there is the need for more fine-dining restaurants. It is reported that visitors have expressed disappointment that the city doesn't have more local, independent restaurants rather than franchised, chain outlets.

Group Travel Capabilities

Wilsonville has limited committable rooms, i.e. rooms that can be confirmed 6-48 months in advance for scheduled tours, groups, and events. There are several properties in Wilsonville that currently provide limited allocations for these group tours.

Wilsonville is seen as an attractive group venue because of its:

- Close proximity to Portland
- Midpoint in the Woodburn – Bridgeport Village - Washington Square shopping corridor
- Affordable rates
- I-5 access

National Tourism

During the nation's ongoing economic recovery from "The Great Recession," the travel industry has emerged as a key driver of U.S. economic growth. The data clearly demonstrates that travel and tourism has a major economic impact not only nationally, but also within practically every state in the country. In 2012, spending in various industries directly linked to tourism - including transportation, lodging, food services, amusement parks and recreation, and retail - generated $855.4 billion in direct economic output.

Nationwide, 14.6 million Americans - or one in eight in the private sector - are employed in jobs dependent on travel and tourism. Travel is a top 10 employer in 48 states and the District of Columbia. Unlike jobs in industries such as manufacturing and information technology, travel jobs cannot be shipped overseas.

Among workers who began their careers in the travel industry, one-third earned at least a bachelor's degree, compared to just 28 percent in health care, 19 percent in construction and 18 percent in manufacturing.

- Of the 5.6 million Americans working part time while pursuing higher education, nearly one-third, or 1.8 million workers, work in the travel industry.
- More than half of all travel industry employees - a total of four million workers - earn middle-class wages or higher.
- Two out of five workers who first took a job in the travel industry are earning more than $100,000 per year.[1]

Oregon Tourism

Tourism in Oregon is a $9.2 billion industry. Tourism directly generates some 91,100 jobs in Oregon and indirectly creates another 41,000 jobs. The Oregon travel industry continued to exhibit moderate growth in spending, visitation and employment during 2012. Travel-generated employment increased for the second consecutive year, though it has not recovered to its pre-recession level. In general, Oregon travel industry trends reflect those of the larger U.S. travel industry.

- Statewide travel spending, $9.2 billion, increased by 3.2 percent in current dollars during 2012.
- Overnight visitation increased by 1.5 percent for the year. Visitor air travel to Oregon destinations (2.85 million) was up by 7 percent and is now roughly at the peak attained in 2007. Room demand, as measured by Smith Travel Research, increased by 2.6 percent for the year.
- Preliminary estimates indicate that travel industry employment grew by 1,500 jobs, an increase of 1.7 percent following an increase of 1,600 jobs from 2010 to 2011.
- The re-spending of travel-related revenues by businesses and employees supported 41,000 additional jobs outside of the travel industry with $1.4 billion in earnings in 2012. Most of these jobs were in various professional and business services.

[1] The Power of Travel Promotion, Spurring Growth, Creating Jobs; U.S. TRAVEL ASSOCIATION 2013

- The Gross Domestic Product of the travel industry was $3.4 billion in 2012. Overall, the travel industry is one of the three largest export-oriented industries in rural Oregon counties (the other two being agriculture/food processing and logging/wood products).[2]

Portland Metro-Area Region Tourism

Portland metro region visitation has a direct influence on overnight stays in Wilsonville. Some of the key points in regard to tourism in the Greater Portland area are:

- The greater Portland metro area welcomed 8.1 million visitors, who generated $4.1 billion in direct spending.
- Easing the tax burden for local and state residents, area travelers generated $161.4 million in tax revenues. Of that total, $82 million was local tax revenue.
- The travel industry supports 29,200 jobs in the Portland area, generating $898 million in employment earnings.[3]

Source: *Dean Runyan Associates*. For the purpose of this study, the Portland metropolitan area is defined as Clackamas, Multnomah and Washington counties.

Tourism in Clackamas County

In 2012, Clackamas County attracted $471 million in visitor spending which generated $18 million in local and state taxes, as well as 5,230 jobs. (Oregon Tourism Economic Impact - Dean Runyan 2012 projected results). The county is marketed as "Mt. Hood Territory."

The Clackamas County Tourism & Cultural Affairs (CCTCA) is charged with developing and administering programs directed toward achieving optimal economic benefit from tourism for county businesses, attractions and government. In addition to marketing support and expert advice, CCTCA offers two different grant programs, the Tourism Development Grant and the Community Partnership Program, to foster tourism marketing and development within the county.

Tourism in Washington County

In 2012, Washington County attracted $598 million in visitor spending which generated $27,552 million in local and state taxes, as well as 5,900 jobs (Oregon Tourism Economic Impact - Dean Runyan 2012 projected results).

The Washington County Visitors Association (WCVA) is a non-profit destination marketing organization (DMO) that markets Washington County as a tourism destination. Part of the WCVA's role is to identify and market to business, leisure and group travelers, meetings and conference organizers, sports and event planners, and tour operators, among others. WCVA operates a grant program for approved tourism related initiatives.

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[2] Oregon Travel Impacts 1991-2012; Dean Runyan Associates; April 2013
[3] Portland Economic Impact 2012; Dean Runyan Associates April 2013

Wilsonville Tourism Lodging Tax

Among the best indicators of tourism related income in Wilsonville is the level of lodging tax revenues. Wilsonville's total lodging tax for Clackamas County properties is 12% and for Washington County properties is 10%, both include state tax calculation. The Washington County remittance to all Cities amounts to approximately 28% of the taxes. Of this amount, Wilsonville receives a small share of the 28%. Portland has a base tax of 6% and Multnomah County has a 5.5% tax and the State has a 1% applied to all hotel/motels in the state, which totals 12.5%. In addition, Portland has a separate tourism tax for tourism promotion of 2%, which makes a total lodging tax of 14.5%.

City of Wilsonville Hotel/Motel Tax Collections and Disbursements
FY2005-06 – FY2012-13

	2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Actual
Tax Collections	$ 207,002	$ 267,651	$ 275,369	$ 218,608	$ 193,106	$ 214,109	$ 208,890	$ 242,369
Less:								
Visitor Information Center contract	70,487	81,900	79,928	82,886	85,592	85,695	86,768	89,250
VIC property tax payment	1,122	773	814					
Tourism Grants program	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,022
Law Enforcement General Fund	110,393	159,978	169,627	110,772	82,514	103,414	97,122	128,097
TOTAL	**$ 207,002**	**$ 267,651**	**$ 275,369**	**$ 218,658**	**$ 193,106**	**$ 214,109**	**$ 208,890**	**$ 242,369**

Source: City of Wilsonville Finance Dept.

The Destination SWOT	Visitor Experiences
Strengths	**Weaknesses**
Key Strengths ▪ A hub for experiencing NW Oregon ▪ Affordable lodging ▪ Business tourism, meetings and conferences ▪ Central location on Interstate 5, near Portland, midway to Salem, access to PDX ▪ Family activities: Family Fun Center, water features, parks, sports fields, etc. ▪ Destination shopping ▪ Horse shows and events ▪ Sports fields: Soccer, baseball, lacrosse, softball ▪ Strength of diverse economic and business base **Complementary Strengths** ▪ Agri-tourism – Farmers Market, wine, farm fresh ▪ Aurora airport ▪ Cycling: trails, road ▪ Golf courses ▪ Heritage: Boones Landing, Korean War Memorial, French Prairie, Aurora, Champoeg ▪ Nature: Birdwatching, forests, parks, trails, river, French Prairie, Magness Memorial Tree Farm, Graham Oaks Natural Area ▪ Parks, particularly Memorial Park ▪ Pubic art: Murase water features ▪ Trails: Ice Age Tonquin Trail, Memorial Park, Intertwine connection, community trails	**Critical Weaknesses** ▪ Insufficient signage and wayfinding ▪ Interstate 5 and Willamette River physically divide the city; also split by two counties ▪ Lack of turf, all-weather fields ▪ Limited number of conference/meeting facilities and meetings space ▪ Many lodging properties in need of refurbishment ▪ A need for several hallmark events ▪ Limited public access to Willamette River including viewing corridors and recreation **Additional Weaknesses** ▪ Customer service standards and weak local knowledge by front line hospitality staff ▪ Lack of arts space/gallery/display areas ▪ Lack of Four- or Five-Star or full-service lodging ▪ Lack of sufficient awareness and support of tourism ▪ Limited boutique/ specialized shopping ▪ Limited evening entertainment ▪ Limited number of quality, unique, fine dining establishments ▪ Limited transportation via airport shuttle and limited taxi services ▪ No traditional, pedestrian-friendly downtown
Opportunities	**Threats**
Key Opportunities ▪ Cycling: Completion of Willamette River Bridge and Ice Age Tonquin Trail ▪ Establish distinctive hallmark events ▪ Establish Wilsonville as Oregon's leading equestrian event destination ▪ Expand sports tournaments ▪ Genealogy research ▪ Increase access and recreation on river including Willamette River Trail ▪ Increased cross-selling by local organizations ▪ Increased development of Korean War Memorial ▪ Multipurpose community center (recreation, culture/arts, heritage and conference)	**Critical Threats** ▪ Land-use restrictions impacting equestrian and other agri-tourism ▪ Loss of horse shows to competitor cities ▪ Not completing the Willamette River Bridge and Ice Age Tonquin Trail ▪ Not developing additional turf sports fields ▪ Not developing improved river access **Additional Threats** ▪ Continued dominance of Portland for high-end lodging and dining experiences ▪ Potential increased traffic congestion ▪ Increased lodging in nearby cities ▪ Rapid speed of city growth without adequate

The Destination SWOT	Visitor Experiences
▪ Opening of World of Speed Exposition will draw new markets and publicity ▪ Possible redevelopment sites in the city for major attractors and lodging ▪ Shopping: Retail growth in near-by areas like Woodburn Outlet Mall and Bridgeport/Tualatin ▪ Weddings and reunions **Complementary Opportunities** ▪ Commuter rail connection to Beaverton and Portland	planning and management ▪ Visitor preference to be close to downtown Portland

Note: The Destination SWOT (Strengths-Weaknesses-Opportunities-Threats) does not include an inventory of all Wilsonville attributes. It is focused on those that may contribute to and influence eventual strategies.

Key Considerations:

- Need for development and upgrading of Wilsonville visitor experiences, lodging, meeting facilities and tourism-related infrastructure
- Need for completion of Willamette River Bike-Ped Emergency Bridge and Ice Age Tonquin Trail
- Increased focus on enhancing experience of horse show organizers and participants and the future competitiveness of Wilsonville
- Development of distinctive hallmark events that will draw visitors
- Develop improved access and facilities on Willamette River

The Destination SWOT	Marketing Communications
Strengths	**Weaknesses**
Key Strengths ▪ Established links and relationships with sports and equestrian organizers ▪ Marketing through Clackamas and Washington County tourism organizations ▪ Proximity to key population centers ▪ Willamette United Soccer Club proactive marketing of Wilsonville sports fields	**Critical Weaknesses** ▪ Limited marketing budgets ▪ Low awareness of Wilsonville as a destination ▪ Low internet and social media profile ▪ No clear city identity ▪ No visitor information center (as of Jan. 2014) **Additional Weaknesses** ▪ Fragmented presentation of city assets by various organizations and partners ▪ Insufficient cross-selling between organizations ▪ Lack of market and customer research ▪ Not fully optimizing opportunities through county and state tourism organizations
Opportunities	**Threats**
Key Opportunities ▪ Capitalize on horse show reputation and relationships with event organizers ▪ Enhanced collaboration among government, business and non-profits and external partners ▪ Expanding mobile capability to reach visitors while in area ▪ Increasingly affordable capabilities through internet and social media marketing ▪ Scale and quality of marketing by Travel Oregon, WCVA, CCTCA * ▪ Strengthen Website content, SEO, SEM ▪ Testing of digital information kiosks by partners ▪ World of Speed marketing and publicity **Additional Opportunities** ▪ Enhanced communication/coordination between city government actions/decisions and local special interest groups. ▪ Increased Oregon Horse Country shows is possible with promotion of listed properties ▪ Increased development of Korea-related markets ▪ Growing international and interstate markets for Portland and Oregon ▪ Increase awareness of residents in regard to local events and attractors ▪ Increase capacity of local partners for internet and social media marketing ▪ Partnerships links with nearby complementary communities, e.g. Aurora and Canby	**Critical Threats** ▪ Changes to City policies and politics ▪ Constant innovation and changing marketing technologies ▪ Economic slowdown ▪ Emerging competitors ▪ Media and marketing cost inflation ▪ More competitors ▪ New, quality hotels in nearby cities **Additional Threats** ▪ Limited understanding of tourism among many stakeholders and residents ▪ Low community knowledge of economic impacts of visitor groups, e.g. sports and horse shows * CCTCA = Clackamas County Tourism & Cultural Affairs * WCVA = Washington County Visitors Association

Key Considerations

- Build on existing relationships and partnerships, particularly in regard to horse shows, sports tournaments
- Develop digital platform for marketing and visitor information
- Engage in increased cooperative marketing with key partners
- Increase awareness and identity of Wilsonville as an attractive place to visit
- Limited budget
- Limited number of pro-active tourism marketers in Wilsonville
- Need to address information distribution with closure of VIC

The Destination SWOT	Tourism Management
Strengths	**Weaknesses**
Key Strengths ▪ Engagement of City of Wilsonville, Council and senior executives and officials ▪ Engagement of Clackamas and Washington Counties tourism organizations ▪ Long-established Chamber of Commerce ▪ Special interest marketing by Clackamas and Washington Counties tourism organizations	**Critical Weaknesses** ▪ Limited budget ▪ Low community understanding of benefits from tourism ▪ No designated official DMO or tourism office in Wilsonville (from December) ▪ No Visitor Information Center ▪ Tourism hasn't been a subject of high importance
Opportunities	**Threats**
Key Opportunities ▪ Access to enhanced digital platforms to provide majority of visitor information ▪ Cooperative marketing programs through local partners ▪ Increased support from City of Wilsonville ▪ Leverage market access through Clackamas and Washington Counties tourism organizations	**Critical Threats** ▪ Economic downturn ▪ Inability to foster optimum collaboration between local organizations to present integrated, quality visitor experiences that represent a unified destination ▪ Inability to respond to the evolving role, responsibilities and relevance of DMOs ▪ Reduced lodging taxes

Key Considerations

- Need for increased budget
- Need for tourism perspective in future developments by City and private organizations
- Need for an entity to facilitate business networking, marketing, product development and tourism advocacy
- Optimize marketing and collaboration through CCTCA and WCVA by local partners

Strategic Directions

The following are the strategies and actions that will lead to Wilsonville achieving its tourism vision and goals.

Our Vision for Tourism

The following tourism vision statement has been created following extensive public consultation and input through interviews, workshops and surveys. This vision sets the path to develop a vibrant visitor economy in Wilsonville over the next decade.

In 2023, Wilsonville is a welcoming, family-friendly community that is one of Oregon's premier destination cities, investing in tourism, meetings, leisure and recreation strengths, amenities and services to provide compelling year-round experiences.

Our Mission Statement

The following is the mission statement for Wilsonville in regard to tourism management in a manner that is collaborative, sustainable and customer-focused.

To facilitate the thoughtful development of Wilsonville's visitor economy for the benefit of visitors and partners, and to enhance the quality of life for those who live and work in the community.

Strategic Directions | Target Markets

This strategy is intended to enhance the value and reputation of the city among target audiences. For the purposes of marketing communications the demographic and geographic characteristics of each target audience should be refined each year according the available budgets, opportunities, and events. The target audiences may change as new developments are introduced in the city and the emphasis of partners, competitor activity, and marketing budgets change.

Based on their market attractiveness and Wilsonville's current state of development, each has been prioritized according to two levels of investment – Priority and Supplementary Markets. Priority Markets will comprise those in which proactive marketing and development will be focused, while the Supplementary Markets are those in which Wilsonville will primarily provide detailed website information. This prioritization will change over time as new products are introduced, and investment and market situations change.

Priority Markets:

- **Horse Shows**
  Competitors/participants, spectators, horse owners, and event organizers, class clinicians, recreational and student riders, horse buyers, and supporters. Predominantly women.
- **Meetings & Conventions**
  Delegates are predominantly from within the Portland metro area and Northwest and meetings drawn by convenient, affordable location.
- **Northwest Getaways**
  From all western states or international. Portland metropolitan area is a major draw.
- **Sports Tournaments**
  Organizers and participants in targeted sports tournaments.
- **Transit**
  Predominantly I-5 travelers originating from all western states and international source markets.

Supplementary Markets:

- Business Visitors: Long-term stays who may explore the area, business relocation or future stay.
- Cycling *
- Family Getaways *
- Genealogy Research
- Korean nationals, Korean-Americans, Veterans *
- Outdoor recreation (parks, water features, hiking)
- River recreation *
- Shopping: Group shopping tours.
- Weddings and Reunions

* Requires infrastructure development to be elevated to priority market status.

Experiences are the drivers that will underpin tourism development in Wilsonville. The tastes, behavior and needs of tourists have evolved over recent decades beyond simply taking photos to record the visit to now wanting more hands-on, interactive and immersive experiences.

Key experience themes, or clusters, provide an important conduit for Wilsonville's tourism partners by focusing marketing, investment and development opportunities. The goal is to signal a level of specialization that can lead toward establishing a competitive advantage in a number of themes or clusters.

It is essential for Wilsonville's Destination Marketing Organization to be highly focused in the allocation of both its financial and staff resources. One of the critical success factors for determining key experiences is the use of a range of factors to establish priority markets. These factors may include:

- Alignment with capabilities (and investments) of key partners - brand and experience themes
- Compatibility - aligns with community values
- Distinctiveness - level of significance
- Drawing Power - distance, volume
- Market Access - cost effectively reach
- Quality of Experience - Superior – Average – Fair
- Market Readiness - the experience meets the standards of visitors and tourism markets
- Seasonality - the timing of visitation
- Yield - economic impact

Wilsonville's key experiences are:

1. Sports tournaments
2. Meetings and conferences
3. Horse shows
4. Northwest getaways – wineries, shopping, farm fresh, heritage, recreation, Portland metro area, North Willamette Valley, etc.; *i.e.*, some of the "Best of Oregon."

1. Horse Shows and Equestrian Events

Horse shows, competitive equestrian events and educational clinics have proved capable of attracting not only more affluent, frequent traveling and high spending visitors (owners, breeders, buyers), but with effective marketing can also attract substantial numbers of spectators (horse lovers/riders and interested day visitors). Wilsonville is home to a series of six signature West Coast Horse Show Jumping and Hunting events, now commonly known as 'The Wilsonville Shows'. These are officially recognized events on US and International horse show circuits and help provide a meaningful and distinctive identity for the city. Until recently one of these events known as "The

Country Classic" had attracted fame not only regionally but nationally. However its wider popularity locally and with large numbers of visitors suffered when the diverse fair-like experiences and atmosphere that helped broaden its appeal (on-site food and merchandizing vendors and more) were reduced because of regulations. The event managers and their industry are seeking increased engagement with the community, including more local 'ownership' and wider recognition and support from the City of Wilsonville, the Counties, local businesses and the community at large. They see this as the best means to help reestablish the event appeal and maximize the tourism potential and economic benefits arising from these events.

- Visitor and event spending as a result of Wilsonville's Country Classic Horse Show (one show) is conservatively estimated at $450,000 or more.
- Wilsonville's series of six summer horse shows is estimated to have an economic impact in excess of $10.8 million for competitor visitors only, which does not include thousands of day visitors and spectators.

2. Meetings and Conventions

Meetings and conventions have been identified as a priority market for Wilsonville by the Tourism Task Force. However, capacity is very limited. The main venue for this business is the Wilsonville Holiday Inn. While this has been a lucrative market for the city, there is the need to encourage the development of additional facilities and venues. There are several factors that make Wilsonville an attractive venue for meetings and conventions. These include:

- Close proximity to Portland (business capital) and Salem (State capital)
- Local corporate and association base
- Affordable accommodation
- Responsive hotel and WCVA sales personnel

3. Sports Tournaments

Individuals and groups are already visiting Wilsonville to participate in a variety of sports competitions and tournaments. However, this visitation can be increased with the introduction and expansion of sporting facilities. Wilsonville is acknowledged as having excellent multi-purpose sports fields and is an active participant in the marketing of Washington County sports tourism. When combined with the city's affordable lodging, Wilsonville has the capacity to attract even more sports tournaments if the city had more playing fields, particularly turf fields and additional accommodation. Additionally, the proposed new aquatic center, push track and skate park present excellent opportunities to expand into new sports markets. A particular target should be to increase tournaments in the September to March period.

The sports tournaments in which Wilsonville can most readily excel are:

- Baseball / softball
- Lacrosse
- Soccer
- Softball

Emerging opportunities:

- Aquatics
- Cycling
- Mountain biking (push track)

4. Northwest Getaways

It is difficult to look at Wilsonville from a customer perspective without considering its relationship to the Portland metropolitan area and northern Willamette Valley. Portland is the largest draw card for the region and the most popular destination for domestic and international visitors to Oregon. The highest priority for Wilsonville should be to develop attractors, facilities, and marketing communications to link to this demand, as well as to develop Wilsonville as an attractive destination in its own right. Among the leading attractors within a 30-minute drive of Wilsonville are:

- Agri-tourism - farm fresh
- Downtown Portland
- Family entertainment
- French Prairie
- Galleries and museums
- Golf
- Major events and festivals
- Mt. Hood corridor
- OMSI
- Oregon Zoo
- Parks & gardens
- Performing arts
- Restaurants, brew pubs and nightlife
- Salem, Aurora, Canby
- Shopping
- Sports events
- Tualatin River National Wildlife Refuge
- Wineries and farms
- Woodburn - Washington Square shopping corridor
- World of Speed (planned 2015 opening)

Emerging Experience Themes

Wilsonville has strengths in several experiences, however locations can offer much stronger experiences. If critical infrastructure investments are made, these activities can be elevated to priority status if market demand continues to remain high. Additionally some of the experiences that are currently elements of the Northwest Getaways such as agri-tourism, heritage and art and culture may be separated into their own themes as Wilsonville's competitive capacity increases and their draw reaches a critical mass. The key emerging experience themes are:

- Art and Culture
- Cycling
- Farm fresh – agri-tourism
- Genealogy research
- Korean War Memorial
- River recreation
- Weddings and reunions
- Wineries

Strategic Directions | Alignment with Partner Strategies

Wilsonville is located in both Clackamas (Mt. Hood Territory) and Washington Counties. Each of these counties has different, yet complementary brands.

Central to the Wilsonville tourism positioning are experiences that are closely aligned with the Clackamas County - Mt. Hood Territory brand strengths, including agri-tourism, equestrian (an extension of agri-tourism), farm fresh and outdoor recreation (including cycling).

The Washington County brand is founded on sports, nature, recreation, shopping and wine country experiences. Meetings and conferences are an important component of the county's tourism capabilities.

The following table provides a summary of the alignment of marketing and sales focus of Mt. Hood Territory and Washington County with many of the leading tourism strengths of Wilsonville.

	Clackamas County	Washington County	Travel Oregon
Cycling	√	√	√
Equestrian	√	√	√
Farm Fresh	√	√	√
Meetings & Conferences		√	
Northwest Getaways	√	√	√
River Tourism	√		
Shopping	√	√	√
Sports Tournaments		√	
Weddings and Reunions	√	√	
Wineries	√	√	√

Overall Objectives

1. Adopt a distinctive and meaningful positioning for Wilsonville as a destination.
2. Enhance Wilsonville's tourism attractors, events and experiences to meet and exceed the expectations of visitors and event organizers.
3. Ensure that tourism opportunities are optimized in government planning, development approvals, policy, infrastructure and placemaking.
4. Enhance awareness of Wilsonville as an appealing visitor destination through the innovative use of traditional, digital and environmental media.
5. Provide clear direction, partnerships and sustainable funding for Wilsonville tourism through leadership and management that is recognized for its innovation, collaboration and effectiveness.

Overall Strategy

The strategic focus for Wilsonville tourism will be:

- Facilitating the development of tourism products, events and experiences to encourage increased visitation, longer stays and increased spending.
- Establishing a digital platform to anchor marketing and visitor information programs.
- Leveraging co-operative opportunities through County marketing programs.
- Establishing a Destination Management Organization to facilitate community engagement, tourism development and marketing.

Strategic Directions | Actions for Success

The Wilsonville Tourism Development Strategy provides directions for harnessing the city's capabilities, competitiveness and opportunities in the following success areas that are essential for successful tourism development. It is divided into the following themes:

1. Leadership and Organization	How will Wilsonville organize for tourism in regard to structure, funding, people and partnerships?
2. Branding and Positioning	What does Wilsonville want to be known for? How will it be presented as an attractive place to visit and stand apart from competitors?
3. Attractors and Experiences	What are the experiential enhancements that can attract and engage visitors and encourage them to stay longer?
4. Infrastructure and Placemaking	What are the physical structures and facilities needed for the support of a visitor economy?
5. Marketing Communications	What are the actions and messages needed to communicate the attractiveness, services and amenities of Wilsonville?

Responsible Organizations

The following provides a key to the organizations mentioned in the following pages. The Lead Responsible Organization is designated in bold print.

- Business: Wilsonville business community
- CCTCA: Clackamas County Tourism & Cultural Affairs
- Chamber: Wilsonville Chamber of Commerce
- City: City of Wilsonville
- Community: Relevant Wilsonville residents, groups and organizations
- County: County governments
- Developers: Infrastructure development and investment organizations
- DMO: Wilsonville Destination Management Organization
- Metro: Portland Metro regional government (fka Metropolitan Service District)
- Partners: Wilsonville hospitality and tourism partners, including business and non-profits
- Schools: West Linn-Wilsonville School District
- State: Relevant State agencies; *e.g.*, ODOT, Parks and Recreation
- TO: Travel Oregon
- WCVA: Washington County Visitors Association

Priority Codes Used with Timing of Recommended Actions

◆ Program Commencement √ Continuation

Strategic Directions | 1. Leadership and Organization

Objective:

1. **Provide clear direction, partnerships and sustainable funding for Wilsonville tourism through leadership and management that is recognized for its innovation, collaboration and effectiveness.**

Successful tourism requires a seamless delivery of information and experiences between public, private and nonprofit organizations and visitors. Optimizing its benefits will require the long-term advocacy, support and collaboration of many individuals and organizations within Wilsonville and further afield.

Tourism in Wilsonville is entering a period of transition during which will likely involve the introduction of many new attractors and experiences, entry into new markets and the establishment of a comprehensive digital marketing platform. While Wilsonville is engaged in this transition as a destination, the functions and role of its tourism organization should be initially structured to facilitate product development and creation of its digital platform. The preferred model is outlined in Appendix 2 and recommends establishing an Independent 501 (C) (6) Not-for-Profit Destination Management Organization (DMO). This option route provides the fullest and most practical opportunity to create the products, infrastructure, relationships, and marketing programs.

Due to very close working relationship that the DMO needs to have with the City, especially during the early formative stage, an alternative recommendation could be to commence sooner with Option 3, using City resources and staffing that is transitioned to the independent, nonprofit DMO called for in Option 4.

Priority Codes Used with Timing of Recommended Actions: ◆ Program Commencement √ Continuation
The Lead Responsible Organization is designated in bold print.

Actions:

1.1 Establish an Independent 501 (c) (6) Not-for-Profit DMO to be named Visit Wilsonville.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
A DMO, named Visit Wilsonville, operating as an independent, non-profit. It will work with a permanent Board of Management comprising key tourism stakeholders and community leaders. During the initial 3-5 years the major focus will be on optimizing tourism related development opportunities, basic marketing and enhancing the tourism performance of local partners. The DMO will be a non-member organization and will not operate a Visitor Information Center.	◆			City	**City** CCTCA Partners WCVA Chamber

1.2 Establish Board of Management for Visit Wilsonville DMO.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
This Board, comprising representatives of a variety of local organizations with an interest in tourism, should not be dominated by members of any one category. The objective is to facilitate the effective development of tourism by optimizing access to marketing, funding, and government agencies at county, state, and national levels to aid product and market development.	◆	√	√	City	**City** CCTCA Partners WCVA Chamber

1.3 Increase the Allocation of the Hotel/Motel Transient Lodging Tax (TLT).

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
The amount of the City's Hotel/Motel TLT directly allocated to tourism should be $115,000 - $188,000. This will provide a budget to address the strategies in this Plan.	◆	√	√	City	**City**

1.4 Request a special project budget to launch Visit Wilsonville DMO.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Seek a one-time grant of $60,000 from City of Wilsonville and other sources to facilitate the timely and coordinated launch of Visit Wilsonville and the quality production of its new website, brochures, social media, image and video libraries, and collateral. There is also a need for office equipment etc.	◆			City	**DMO**

1.5 Review Wilsonville Tourism Grants Program.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Tourism grants should be continued, however they should be invested to attract sports tournaments and aid major events	◆	√	√	DMO	**DMO** City

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
that will directly lead to increased tourism arrivals. The grants must demonstrate that investments will generate more TLT funds. A set of criteria for evaluating applications should be established.					

1.6 Actively seek grants for Visit Wilsonville.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Actively research and apply for grants to support Visit Wilsonville marketing, tourism development and organizational projects.	◆	√	√	DMO	**DMO**

1.7 Initiate ongoing partnership and relationship-building programs.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Introduce internal and external relationship building programs for Visit Wilsonville and Wilsonville tourism and its partners. Additionally, in collaboration with CCTCA, WCVA and Travel Oregon introduce programs to provide education, coop marketing and networking opportunities for local partners.	◆	√	√	N/A	**DMO**

1.8 Enhance local-area destination knowledge of frontline staff.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Front line staff in Wilsonville should be knowledgeable about things to see and do locally for lodging guests. This should be addressed in conjunction with partners and through sales visits, information and familiarizations. It may be possible to address through a volunteer trainer program and through Travel Oregon's "Oregon Q Care" quality customer-service training program.		◆	√	DMO Partners Travel Oregon	**DMO**

Strategic Directions | 2. Branding and Positioning

Objective:

2. Adopt distinctive and meaningful positioning for Wilsonville as a destination.

While fundamental positioning and branding issues are mentioned in this strategy, it is not a brand strategy. Increasingly, places of all sizes are turning to the principles of branding to guide them and to help stand apart from competitors. Positioning is at the heart of branding and will define what we want customers to think and feel about Wilsonville. It relates to the position in consumer's minds (and hearts) that we want the city to occupy.

The three most important concepts for places like Wilsonville to master in branding are (i) differentiation and positioning, i.e. leading with what sets it apart, (ii) focusing on those attributes that provide its differentiation, and (iii) being consistent in how these attributes are presented, and ensuring that tourism partners deliver on the city's brand promise.

A simple definition of a brand is that it is a distinctive and valued promise that enables consumers to more easily choose one place over another. You might consider that the standing of a successful brand is determined by the value of the promises that it makes, and the promises that it keeps. To become a successful brand, Wilsonville must consistently organize, invest, communicate and manage itself in ways that enable it to consistently fulfill the promise that it conveys to target audiences.

Priority Codes Used with Timing of Recommended Actions: ◆ Program Commencement √ Continuation
The Lead Responsible Organization is designated in bold print.

Actions:

2.1 Develop a destination branding strategy for Wilsonville.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Develop a well-researched destination branding strategy to determine the ideal positioning, Destination Promise and Brand Platform which can lead to a distinctive visual and verbal identity to be consistently conveyed to target audiences and be aligned with key experiences.	◆			DMO City	**DMO** City Chamber

Strategic Directions | 3. Visitor Experiences

Objective:

3. Enhance Wilsonville's tourism attractors, events and experiences to meet and exceed the expectations of visitors and event organizers.

The development of visitor experiences involves more than the ad hoc encounters with the physical location and associated activities. Experiences should provide a higher level of engagement with the sense of place, culture, natural environment and local people. They require a mix of place, activities, infrastructure, services and interpretation. The more these are combined, the more satisfying and memorable the experience.

Experiences which are differentiated and closely aligned with the Wilsonville brand can build a competitive edge for the city.

Experiences should be designed to:

- Spark the imagination
- Engage the senses
- Stimulate the intellect
- Invoke an emotive response
- Enliven the spirit
- Generate welcome personal connections

Priority Codes Used with Timing of Recommended Actions: ◆ Program Commencement **√** Continuation
The Lead Responsible Organization is designated in bold print.

Actions:

AGRI-TOURISM FARM FRESH

3.1 Encourage active participation by local product-suppliers and farm operators to participate in agri-tourism experiences, including the new Wilsonville-West Linn-Milwaukie Farm Loop.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Encourage local suppliers, farm operators and livestock producers to participate and financially support the development of engaging experiences and marketing of agri-tourism and the Farm Loop, as well as cross-marketing other attractors such as golf, cycling, events etc. Include Loop and Farmers Market in Wilsonville marketing where appropriate. Addresses needs of Northwest Getaways target market.	◆	√	√	Partners	**DMO** Partners

CYCLING

3.2 Establish Wilsonville as a bike-friendly city and one of Oregon's premier leisure cycling cities.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Develop and support community-wide strategies, policies and programs to capitalize on the city's pivotal location for cyclists. This should be supplemented through outreach, awareness and education programs. Encourage government, non-profits and local businesses to become more cycle focused including signage, trails, cycle cleaning stations. Encourage businesses to join the "Bicycle Friendly Business" (BFB) under Travel Oregon's 'Bike Friendly Business' recognition program. This includes encouraging a bike shop to locate in the city. Addresses needs of cycling target market.	◆	√	√	Business Community City Partners	**DMO** Business Community City Partners

3.3 Initiate and attract cycling events.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
As part of the long term strategy to establish Wilsonville as one of Oregon's premier cycling destinations, attract or organize regional cycling events for those categories of cycling most suited to Wilsonville's strengths. This may be achieved by adding cycling events to other events, e.g. Horse Show. Addresses needs of Northwest Getaways target market.		◆	√	CCTCA City Community DMO WCVA	**DMO** CCTCA City Community WCVA

FESTIVALS AND EVENTS

3.4 Initiate programs to ensure that Wilsonville consistently presents outstanding experiences for horse show organizers, participants and attendees.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Facilitate closer collaboration and engagement between the Horse Shows, City, businesses, non-profits, education and residents to ensure that the horse shows are highly successful, attract new events, more repeat visitors, and can be leveraged for their community activities. This includes assistance in regard to conformity with land use regulations on farmland.	◆	√	√	CCTCA City Community DMO WCVA	**DMO** CCTCA City Community WCVA Chamber

3.5 Investigate the feasibility of establishing a signature event in Wilsonville to celebrate the start of horse show season.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Consider a multi-day event bringing together the horse, cycling, regional food and wine themes and other assets of Wilsonville. A name that arose from consultations was *"Eqwine."*		◆	√	Business Community DMO Partners	**DMO** Community Chamber

Strategic Directions | 4. Infrastructure and Placemaking

Objective:
Ensure that tourism opportunities are optimized in government planning, development approvals, policy, infrastructure and placemaking.

This section addresses the projects and approvals to make Wilsonville a more attractive destination. It includes the infrastructure, streetscapes, landscaping, and developments that are needed to provide a quality visitor experience. These are fundamental to the city's tourism development.

Priority Codes Used with Timing of Recommended Actions: ◆ Program Commencement √ Continuation
The Lead Responsible Organization is designated in bold print.

Actions:

NEW INFRASTRUCTURE

4.1 Support a feasibility study for the development of the area surrounding Regal Cinemas or another area as an entertainment, sports, and leisure precinct.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
This large site presents a unique opportunity for the development of an indoor sports arena and entertainment/cultural complex, with outside dining/entertainment, and hotel / meeting facilities. Consider a "main street" with shopfronts and wide sidewalks to form an attractive pedestrian and gathering precinct.	◆			City Developers	**City** DMO

4.2 Support a hotel feasibility study to assess the medium-term lodging and meeting-space needs of the city.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Workshops and interviews suggested occasional shortages of quality lodging and meetings / conference facilities. If a need for added hotels is verified, City/ DMO should actively recruit developers and operators. Expansion/improvements to the current lodging inventory is important for future growth prospects. Task Force did not assign a timing priority.				City Developers	**City** DMO

4.3 Investigate the feasibility of developing additional facilities within the City specifically designed for weddings, reunions and community events.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
These facilities should supplement the current spaces for group gatherings. The new venues should be designed to meet the specific needs for weddings (including ceremonies) and reunions. This should be actively supported by operational, business and marketing plans to maximize their economic contributions to the community.		◆	√	City	**DMO** City

CYCLING AND WALKING

4.4 Support the expansion and integration of Wilsonville's trails system and brand the main trails with distinctive themes and names.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Wilsonville can be an attractive destination for cyclists and walkers with the continued development and inter-connectedness of quality local trails, the Intertwine and links to key parks and recreational areas. This can be aided by signage and/or kiosks at trailheads and branding the main trails.	◆			City Metro State	**City** **DMO** Community

4.5 Support the construction of the proposed Bike-Ped-Emergency Bridge across the Willamette River.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
This single action can have a transformative effect in making Wilsonville one of the state's foremost cycling destination and service centers because of its location between Portland and the Willamette Valley, with access to numerous cycling trails.	◆			City Federal State	**City** **DMO** Community

4.6 Support the completion of the Ice Age Tonquin Trail.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Encourage Metro to complete the trail through areas that are unincorporated. This should include and extend the Ice Age and natural history thematic interpretation in all areas of the trail. Ensure quality linkages between the Trail and key commercial leisure precincts in Wilsonville.		◆		City Metro State	**City** **DMO** Community County

4.7 Support the introduction of creative bike racks in areas popular with cyclists.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Introduce artistically designed, but functional, bike racks to provide cyclists with not only convenient bike racks at critical locations, but also opportunities for creative expression by local and regional artists.		◆	√	Business City	**DMO** City Community

HORSES

4.8 Support a feasibility study to develop a covered venue for equestrian events.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Consult closely with the local equine industry and CCTCA and others to assess the needs and feasibility of developing a facility to host horse show events during periods of inclement weather.	◆	√		County Partners	**DMO** CCTCA Chamber

SPORTS

4.9 Support the development of all-weather, multi-purpose playing fields for sports tournaments.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
The addition of more turf fields will encourage an increased number of tournaments for a variety of sports in Wilsonville.	◆			City County Partners Schools	**City** DMO Schools WCVA

4.10 Support the development of the proposed push trail and new skate park.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
These expanded facilities will benefit both visitors and residents. The push trail will assist in winning mountain bike competition events. However, expanded sports facilities may require additional lodging for optimal results.		◆		City County	**City** DMO Schools WCVA

RIVER RECREATION

4.11 Support the improvement of river foreshore and water access for active and passive recreation, including boat launch.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Resident surveys and interviews show that they enthusiastically support the enhancement of river access for active and passive recreation including non-motorized boating, improved viewing corridors, dining, riverside walks and cycle trails. Access should provide links to the Willamette River Trail.	◆			City State Partners Business	**City** DMO

4.12 Support study of the enhancement of Boones Ferry Landing in Old Town as a recreation and tourism precinct.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
This site's historic significance, riverside location, connection to Old Town and potential completion of a proposed bike-ped-emergency Willamette River Bridge crossing present an excellent opportunity to create a tourism precinct catering to cyclists, kayakers, and other non-motorized river recreation, as well as provide a recreational outfitter, café and historic interpretation. It should also optimize Wilsonville's position on the Willamette River Water Trail.	◆			City Metro State Partners Business	**City** Community DMO

PLACEMAKING

4.13 Support enhancements to the character and attractiveness of Wilsonville's key precincts

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Drawing upon the best placemaking principles used in successful precincts around the metro area, brand each key precinct by naming, color, design, banners and signage. Where appropriate create pedestrian-friendly, relaxing gathering places that feature sidewalk dining and drinking, specialist shopping, live performances and distinctive public art.		◆		Business City	**City** Business Chamber DMO

4.14 Consider establishing public art program.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Investigate the creation of a 'Percentage for Art' requirement for new commercial developments. Currently, public art in Wilsonville informally reflects two themes: horses and water. The city is attracting families to interactive water fountains. The proposed recreation and aquatic center may present further opportunities for water-based public art, as does increased access to the riverfront. Collaborate with Clackamas County Arts Alliance and interested Wilsonville cultural organizations.	◆			City Business Partners County	**City** Business Community County DMO

4.15 Support improvements to the attractiveness and sense of welcome at city gateways.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Interviews, workshops and site visits revealed a desire for improved and more distinctive city gateways. Consider addressing the attractiveness, scaling, signage and distinctive sense of welcome at key gateways.	◆			City	**City** **Chamber** Community DMO

4.16 Support the development and implementation of a comprehensive wayfinding signage system.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
The need for improved signage and wayfinding was identified in interviews and workshops. In addition to providing clear directions, signage is important for wayfinding, identity and the creation of attractions by linking venues to form coherent and attractive trails and touring routes. This should be conducted after the brand strategy is completed.	◆			City	**City** Chamber DMO

4.17 Support the development of a comprehensive directional and event signage strategy.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
A comprehensive signage strategy is required to address directional signage issues in addition to more localized wayfinding, including the provision of quality, effective, temporary signage for events.	◆			City	**City** Chamber DMO

4.18 Support the establishment of a museum/interpretive center and commemorative sculptures for the Oregon Korean War Memorial.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Support the Korean War Memorial Foundation of Oregon's objective to establish a museum/interpretive center and to install commemorative sculptures at or near the Oregon Korean War Memorial in Town Center Park.	◆			Korean War Memorial Foundation of Oregon (KWMFO) fund-raising efforts	**Korean War Memorial Foundation of Oregon (KWMFO)** City DMO

Strategic Directions | 5. Marketing Communications

Objective:
Enhance awareness of Wilsonville as an appealing visitor destination through the innovative use of traditional, digital and environmental media.

Wilsonville's marketing must be carefully integrated by aligning all online and off-line actions, including web marketing, collateral, social media, public relations, and other communications. The following may be expanded according to future budgets and level of partner participation. In the absence of a Visitor Information Center, Wilsonville must initiate expanded programs to reach visitors through digital and traditional media. The following actions assume that the DMO has sufficient budget to implement the programs.

Priority Codes Used with Timing of Recommended Actions: ◆ Program Commencement √ Continuation
The Lead Responsible Organization is designated in bold print.

Actions:

5.1 Establish a stand-alone Wilsonville tourism website.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Wilsonville's stand-alone, mobile-ready (responsive design) tourism web site that is highly interactive and is the portal for city marketing not only for visitor information, but to also feature a blog, capture customer information, community event calendar, and provide opportunities for partners to reach audiences. The site should be integrated with social media programs and Wilsonville's YouTube channel. The mobile capacity of the site is essential to the future growth of tourism in the city.	◆	√	√	Business DMO Partners	**DMO**

5.2 Introduce an ongoing internet marketing campaign.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Ensure that all aspects of the web site are operating at optimal performance levels for search engine optimization. By focusing on specific keywords and phrases relevant to priority audiences,	◆	√	√	Business DMO Partners	**DMO**

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
the city can achieve high ranking in Organic Search results. This should be supported by "Pay per Click" advertising. Re-marketing with Google Analytics will also allow the city, through cookie tracking, to follow-up with those who visit the website and have shown interest but may not have completed their actions, *e.g.*, order a brochure.					

5.3 Develop social media programs relevant to key markets.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Activate a social media strategy to engage and convert target audiences. This should initially involve Facebook, Pinterest, YouTube, and Twitter.	◆	√	√	Business DMO Partners	**DMO**

5.4 Develop database and email marketing programs.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Create database and subscriber list with opt-in forms on the website and through social media. Then create a monthly e-newsletter, with the aim of eventually reaching out to 3,000 subscribers.		◆	√	Business DMO Partners	**DMO**

5.5 Optimize the online use of video.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Ensure that engaging videos are an important element in Wilsonville online marketing through the website and the creation of a Wilsonville YouTube channel. Encourage residents and visitors to upload their relevant Wilsonville videos.	◆	√	√	Business City DMO Partners	**DMO**

5.6 Optimize linking strategies.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Maximize links to the Wilsonville website from key external and internal partner sites. It is particularly important for local partners such as hotels, attractors and events to provide links from their web sites for prospective visitors to the city.	◆	√	√	N/A	**DMO**

5.7 Produce a Wilsonville Visitors Guide annually.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Produce a brochure each year specifically for use by visitors staying in the area. This rack brochure should have its sole focus on what to see and do, highlighting the key experience themes and a good map. Investigate paid advertising by appropriate local partners. A PDF version of the brochure should be online.	◆	√	√	Business DMO Partners	**DMO** Chamber

5.8 Ensure visitors have ready access to Wilsonville visitor information.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Work with County DMOs to optimize distribution of visitor information. Beyond mobile website, social media and kiosks, ensure brochures are readily available for visitors (and residents) at popular locations within the city. Encourage partners to ensure their websites are mobile-ready.	◆	√	√	Business DMO Partners	**DMO** CCTCA WCVA Chamber

5.9 Assess the effectiveness of digital kiosks to provide visitor information.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
In conjunction with CCTCA and WCVA evaluate, according to set criteria the effectiveness of providing information via digital kiosks. If proven cost-effective, support expanded coverage. This includes the approach for the proposed French Prairie rest area.	◆	√	√	CCTCA DMO WCVA	DMO CCTCA WCVA Chamber

5.10 Develop an active public-relations program.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Create an online public relations campaign aligned to a social media editorial calendar. Utilize the power of leading travel bloggers and print journalists. Distribute quarterly PR Web press releases online and activate a comprehensive media center within the website. Also assist Travel Oregon and the Counties to publicize the city's key experience and events.	◆	√	√	DMO	**DMO** CCTCA TO WCVA

5.11 Develop and maintain a library of high-quality images and videos.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Develop and consistently update an image and video library of evocative and high quality images which capture Wilsonville's key experience themes. Use images for print and online marketing collateral and for placement in earned media coverage.	◆	√	√	CCTCA City DMO WCVA	**DMO** CCTCA City WCVA

5.12 Optimize the use of website and social media analytics.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Conduct monthly analysis of the Wilsonville website and social media performance to set goals and objectives for marketing accountability. This should include its relationship to the online metrics of local partners. Consider providing key partners with a monthly report of monthly responses to enable them to optimize their online marketing in association with the Wilsonville DMO.	◆	√	√	DMO	DMO

5.13 Develop an active content management and co-op marketing program.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Optimize targeted coverage of Wilsonville through CCTCA, WCVA and Travel Oregon by actively participating in selected marketing programs and by providing the most enticing content for marketing and media communications.	◆	√	√	DMO	DMO

5.14 Increase public awareness of the benefits of tourism.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Inform residents, businesses, service organizations, media and leaders of tourism's benefits, particularly as it relates to lodging tax, commercial opportunities, and major events.	◆	√	√	DMO	**DMO**

5.15 Encourage local residents to discover Wilsonville and surrounding area.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
In conjunction with local media, introduce residents to their city and to become ambassadors (on-line and off-line) for the area's recreational opportunities, events and attractions.	◆	√	√	CCTCA City DMO Partners	City **DMO**

5.16 Conduct ongoing visitor-satisfaction research.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Provide ongoing opportunities for visitors to offer feedback on experiences through a satisfaction survey or form readily available in hard copy and online. Discuss visitor satisfaction results and feedback at Board meetings.		◆	√	DMO Partners	**DMO** Partners

5.17 Conduct visitor research for each major event in Wilsonville.

Description	Timing			Funding Source	Responsible Organizations
	Top Priority 1-2 years	Medium Priority 3-5 years	Lower Priority 6-10 years		
Initiate a customer-research program to gain insights into the spending, economic impact, demographics, behavior, points of origin, motivations and satisfaction of visitors to major events and sports tournaments.	◆	√	√	DMO Partners	**DMO** Partners

Appendix 1

Tourism Development Strategy Task Force

A Tourism Task Force was appointed by the City of Wilsonville and is comprised of the following members. Task Force meetings were held on October 24 and November 12 2013, January 29, March 20, April 24, 2014.

Name	Title	Affiliation
Denny Atkin	Resident	Advertising Director, The Oregonian (retired)
Eric Bohard	Chair	City of Wilsonville Parks & Recreation Advisory Board
Jeff Brown	General Manager	Holiday Inn - South Portland/Wilsonville
Emily Corley	General Manager	McMenamins Wilsonville Old Church and Pub
Bryan Cosgrove	City Manager	City of Wilsonville
Danielle Cowan	Executive Director	Clackamas County Tourism & Cultural Affairs (CCTCA)
Julie Fitzgerald	Task Force Chair, City Councilor	City of Wilsonville City Council
John Hanna	Club Manager	Willamette United Soccer Club
Darren Harmon	General Manager	Wilsonville Family Fun Center
Carolyn McCormick	President/CEO	Washington County Visitors Association (WCVA)
Susan Myers	General Manager	Capital Realty Corp
Chris and Liz Perry	Market Managers	Wilsonville Farmers Market
Cheryl Snow	Executive Director	Clackamas County Arts Alliance
David Stead	General Manager	Langdon Farms Golf Club
Mary Stewart	President	MARStewart Creative Group
Tonie Tollen	Owner	Tollen Farm
Daphne Wuest	Board Chair	Clackamas County Tourism Development Council

The following staff members assist the taskforce in organizational matters:

Jim Austin	Community Relations Coordinator	Clackamas County Tourism & Cultural Affairs (CCTCA)
Annie Bailey	Communications & Public Relations Coordinator	Clackamas County Tourism & Cultural Affairs (CCTCA)
Barbara Jacobson	Assistant City Attorney	City of Wilsonville
Mike Kohlhoff	City Attorney	City of Wilsonville
Jason McGill	Chief Financial Officer	Washington County Visitors Association (WCVA)
Mark Ottenad	Public/Government Affairs Director	City of Wilsonville
Kristin Retherford	Economic Development Manager	City of Wilsonville

Appendix 2

The Destination Management Options for Wilsonville

Wilsonville requires a small, dedicated group of specialists in the form of a Destination Marketing Organization (DMO) to implement key elements of the Tourism Development Strategy. Typically, a DMO may be a Convention & Visitors Bureau (CVB), Chamber of Commerce, government department or tourism office operated by another community entity.

According to the most recent research from Destination Marketing Association International (DMAI), 65% of DMOs are independent non-profit entities, 5% of DMOs are Chambers of Commerce, and another 19% operate as a division of municipal, county, state or provincial government. [4] The appropriateness of one structure over another is entirely determined by the local situation. It is influenced by the size of the community, its political dynamics, destination strengths, partnerships, audiences, stakeholder focus, market maturity and funding all of which may influence the DMO model selected.

Whichever model Wilsonville selects, the option must provide the skills and expertise to build a strong destination foundation by establishing the attractors, marketing, product development initiatives and outreach programs required for a robust visitor economy. Of paramount importance in the selection of a DMO model is the need to ensure that it reflects the new era for tourism in Wilsonville where the focus will be on product development, commercialization of City assets, integration into the City's economic development programs, and establishing a digital platform. Critical to this success will be fostering a unified and collaborative approach by establishing close working relationships with business, non-profit and government across the city, the two counties and other Oregon DMOs.

The Wilsonville destination audit revealed that several significant new attractors and experiences may be introduced and others expanded in the city and surrounding areas to form a more mature destination. This creates the need for Wilsonville to build an organization with the capacity to lead and manage tourism in the city. A major focus for this organization should be:

- Capacity Building
- Community Relations
- Information Distribution
- Marketing and Sales
- Product Development
- Research

There are four options that Wilsonville can consider as models for the city's DMO.

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[4] *Profile of Destination Marketing Organizations*, DMAI 2011

Option One: Contract with Commercial Marketing Organization

The City of Wilsonville could issue a Request for Proposal (RFP) seeking the services of a commercial marketing organization to manage Wilsonville's tourism marketing and management, such as a marketing, sales or PR agency. This form of engagement is usually limited to the implementation of specific elements of the marketing programs, such as web development, social media and brochure production.

Pro	Con
▪ May have strong marketing skills ▪ Outsourcing select assignments, e.g. web design or social media can be effective ▪ May be outside of political influence	▪ Usually limitations to range of activities to be undertaken ▪ Not as easy to get engagement with City or County Depts. etc. ▪ Wilsonville tourism may compete for attention with firm's other clients ▪ There may be conflicts of interest with other clients ▪ Limitations to the scale and scope of responsibilities that can be undertaken ▪ Not building equity in an organization and staff ▪ Limitations to engagement with stakeholders ▪ Difficult gaining credibility and exerting leadership among stakeholders as an independent contractor ▪ May not have experience or skills for holistic management of tourism because of marketing focus ▪ A profit driven firm could limit or reduce services based on hours spent on client work ▪ May be averse to spontaneous opportunities or needs outside of stated contract and budget

Option Two: Contract with an Independent Not-for-Profit Organization

The City of Wilsonville could issue a Request for Proposal (RFP) seeking an independent non-profit or private organization to manage Wilsonville's tourism marketing and management, such as the Chamber of Commerce, Downtown Association, or similar. Contracts of this nature are usually awarded for a renewable period of three to five years.

Pro	Con
▪ May save on some overheads from parent organization ▪ May already be seen as an established community resource ▪ May have established relationships ▪ May share expertise and human resources with parent organization ▪ May be outside of political influence	▪ Tourism is likely to play a subordinate role to the organization's primary mission or focus ▪ Tourism may be a sub-committee of the Board and not a priority for them ▪ Policies of parent organization may affect priorities and partnerships of DMO ▪ Changes at the end of contract period may cause loss of "corporate" knowledge, networks, relationships and contacts ▪ Sometimes unable to promote organizations that may not be members of the parent organization ▪ May not be able to easily collaborate or engage with City and County departments ▪ Being a sub-committee it may be difficult for tourism to recruit high level community members, exert authority over budget, staff, programs and other priorities ▪ Concerns that lodging tax may be used for non-tourism activities ▪ Can be a problem if the parent organization engages in political advocacy ▪ There may be competing agendas within the parent organization

Option Three: Create a DMO within City of Wilsonville

Tourism in Wilsonville is entering a period of transition during which it is likely to involve the introduction of many new attractors, infrastructure and experiences, entry into new markets and the establishment of a comprehensive digital marketing platform. While Wilsonville is engaged in this transition as a destination, the functions and role of the organization could possibly be structured to leverage product development in the short-term by establishing a destination management organization (DMO) within the City of Wilsonville. This unit could then, within a few years of incubation, spin off as an Independent 501 (C) (6) Not-for-Profit DMO.

Pro	Con
▪ Many tourism assets are owned and operated by the City ▪ Tourism can be more involved where there are important issues involving economic development, product development, events, infrastructure, placemaking, policies and approvals by the City ▪ Direct accountability to City for use of TLT ▪ Everyday interaction with City staff signaling that tourism is an equal partner ▪ Possible to offset some overheads working within City ▪ Easier to coordinate events, street closings, playing fields, recreation, parks, police support and liaise with relevant City staff ▪ Opportunity to integrate tourism development and tourism sales into new City developments, e.g. parks, aquatic center, trails, sports fields ▪ Employment benefits may attract more experienced staff ▪ May share City expertise and human resources ▪ May directly improve commercialization of City assets e.g. sports fields, wedding venues	▪ Potential for lack of independence because of interference by elected officials in programs and staff decisions ▪ Without added effort perceptions may arise that it is "just another government department" ▪ Could be impacted by a change in political priorities ▪ May be a higher cost of staff benefits than other models

Option Four: Create an Independent 501 (C) (6) Not-for-Profit DMO

Wilsonville could establish a stand-alone independent tourism management organization which is contracted to the City for the delivery of specific tourism development services. The organization would have its own board of management and be responsible for hiring staff as well as determining its own policies, procedures and systems. It is envisioned that the organization's focus will transition from product development to an increased marketing focus as additional facilities are developed. This added tourism infrastructure will also create a more attractive environment for a stand-alone organization. Nationally, the tourism industry has demonstrated the highest level of adoption and collaboration with this model

There are two main forms of stand-alone DMO, namely membership based and non-membership. The membership based DMO provides exposure only to businesses that are members, while the non-membership provides exposure for all relevant tourism related businesses, where appropriate. Over the past decade there has been a shift toward non-membership models. A third, and increasingly popular model, is a Tourism Business Improvement District (TBID) which is a public-private partnership formed by local government at the request and/or with the approval of businesses in a district, with the aim of increasing the number of overnight visitors using businesses and services in that area.

Pro	Con
▪ Most common model applied across the country ▪ Capable of recruiting a high level Board from business, non-profits and government ▪ As a separate organization, with its own identity and Board, it will elevate the profile of tourism and the marketing of Wilsonville as a priority within the city ▪ Independent status enables greater autonomy and freedom in establishing own policies, structure, staff and programs ▪ Independent status can aid relationships across private, nonprofits and government ▪ Highly specialized mission for tourism ▪ Able to quickly respond to market and experiential opportunities ▪ Stakeholders know DMO actions are 100% dedicated to tourism ▪ Build knowledge and equity in organization for future growth and sustainability ▪ The most common form of DMO in USA ▪ May be outside of political influence	▪ Membership sales can consume large amounts of staff time – if member model chosen ▪ "Heads in beds" pressure can divert resources from non-sales activities ▪ Membership model can sometimes restrict promotion of key destination strengths in favor of members ▪ Creating a startup with associated costs may be challenging

Recommendation:

Tourism in Wilsonville is entering a new era with a strong focus on product development. It will initially be characterized by the introduction of new attractors, infrastructure and digital marketing. This will require the City of Wilsonville to establish new goals, responsibilities and strategies for the organization that will lead the City's future tourism development and marketing contract.

After careful consideration, Option 4 is recommended as the preferred model to provide the necessary facilitation and collaboration for building the products, infrastructure, foundations, relationships, and dedicated, skilled staff. This approach will also support the commercialization of City assets such as sports fields and wedding venues.

It is recommended that a DMO, named "Visit Wilsonville" and operating as a non-profit 501 c (6), be established and operate with **an independent Board of management** comprising key tourism stakeholders and community leaders. The primary role of the Board is to oversee the fulfillment of the vision. This organization and its board will be 100% dedicated to tourism development in Wilsonville. Integral to this role will be engagement with local stakeholders and collaboration and co-operative marketing with local partners, CCTCA, WCVA and Travel Oregon.

During the first three years it is envisaged that the major focus of the organization will be on product development, networking and basic digital marketing programs. To achieve its objectives in regard to product development, Visit Wilsonville staff must have a close working relationship with all relevant City of Wilsonville departments. The organization will not operate a Visitor Information Center nor will it engage in the management and organization of events. Access to Visitor information for visitors (and residents) will be managed through digital platforms, brochures and in collaboration with CCTCA and WCVA.

Due to very close working relationship that the DMO needs to have with the City, especially during the early formative stage, an alternative recommendation could be to commence sooner with Option 3, using City resources and staffing that is transitioned to the independent, nonprofit DMO called for in Option 4.

Appendix 3
DMO Organizational and Financial Benchmarks

The following information relating to Destination Marketing Organizations provides a series of industry "yardsticks" which have been derived from the 2013 DMO Organizational and Financial Profile Study conducted by DMAI [5]. These will assist in determining structure, funding and size of Visit Wilsonville. The goal of the study is to provide DMOs with a unique and invaluable resource to guide the development and management of their DMO. According to the DMAI study, the following results relate to DMOs with a budget of "Less than $500,000."

1. DMO FUNDING / REVENUE

Source of Funding	Amount	% of Total
Public sources	$ 250,494	87.3%
Private sources	$ 38,466	12.7%
Total Funding	**$ 288,961**	**100.0%**

2. LINE ITEM EXPENSE SCHEDULE

Source of Expenses	Amount	% of Total
Personnel	$116,455	41.2%
Sales & Marketing	$131,712	48.9%
Admin – Operations	$27,883	10.0%
Total Funding	**$ 288,961**	**100.0%**

[5] *DMO Organizational and Financial Profile Study* by Destination Marketing International Association, Pages 21, 24-25, 29-30 (2013)

3. EMPLOYEES

Full-Time	2
Regularly Scheduled Part-time	1
Total Full-Time Equivalent	**2**
Part-time On-call Staff Employees	2
Regularly Scheduled Volunteers	23

3. PARTNERSHIPS / MEMBERSHIPS

The survey revealed the percentages of DMOs that generate income from:

Dues-paying Members	30.8%
A Partnership Program	53.8%
Neither	38.5%

4. PRODUCTIVITY MEASURES (Medians)

Personnel Costs / Full-time equivalent Employee	$ 42,882
Expenditures/Full-time Equivalent Employee	$135,500
Revenue per Full-time Equivalent Employee	$ 135,500
Funding per Full-time Employee	$ 146,842
Funding per Full-time Equivalent Employee	$ 135,500

5. OPERATING COSTS OF A SMALL OREGON DMO

The following operating percentages relate to a small Oregon DMO with a budget between 350,000 and 400,000.

Administration	16% to 19%
Personnel	44% to 45%
Marketing	35% to 37%

Appendix 4
Wilsonville Transient Lodging Tax

The current total lodging tax for Wilsonville properties located in Clackamas County is 12% and for those in Washington County it is 10%, both include state tax calculation. The Washington County remittance to all Cities amounts to approximately 28% of the taxes. Of this amount, Wilsonville receives a small share of the 28%. Portland has a base tax of 6%, Multnomah County has a 5.5% tax and the State has a 1% applied to all hotel/motels in the state, which totals 12.5%. In addition, Portland has a separate tourism tax for tourism promotion of 2%, which makes a total lodging tax of 14.5%.

City of Wilsonville Hotel/Motel Tax Collections and Disbursements
FY2005-06 – FY2012-13

	2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Actual
Tax Collections	$ 207,002	$ 267,651	$ 275,369	$ 218,608	$ 193,106	$ 214,109	$ 208,890	$ 242,369
Less:								
Visitor Information Center contract	70,487	81,900	79,928	82,886	85,592	85,695	86,768	89,250
VIC property tax payment	1,122	773	814					
Community Tourism Grants program	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,022
Law Enforcement General Fund	110,393	159,978	169,627	110,772	82,514	103,414	97,122	128,097
TOTAL	**$ 207,002**	**$ 267,651**	**$ 275,369**	**$ 218,658**	**$ 193,106**	**$ 214,109**	**$ 208,890**	**$ 242,369**

Source: City of Wilsonville Finance Dept.

In addition to city hotel/motel tax collections, Clackamas County Tourism & Cultural Affairs (CCTCA) provides currently $20,000 per year per community through the Community Partnership Grants Program that the City may be able to utilize. CCTCA also administers a county-wide, competitive Tourism Development Grant Program of $200,000 per year that may be of assistance.

The total recommended Visit Wilsonville DMO budget is $288,961 at full operation. It may be that the DMO has a start-up phase as it proceeds to 'build-out' of the recommended tourism development program. Thus the total allocated to Visit Wilsonville DMO by the City using hotel/motel tax collections is recommended at the outset to be in the range of $115,000 to $188,000.

The anticipated growth in visitation to Wilsonville combined with the future development of new hotels may result in an increase of 50%–60% in lodging tax receipts over the next decade. The factors that may support this increase in TLT revenue are:

- Organic growth
- Increased occupancy (Currently Wilsonville 58% vs. Beaverton 74.3% and Hillsboro 79.6%; 2013)
- Increased "RevPar" — Revenue Per Available Room per overnight stay (Currently Wilsonville $53.00 vs. Beaverton $70.56 and Hillsboro $91.95; 2013)
- Increased market share of the Portland metro area and North Willamette Valley regions
- New attractors bringing more visitors to the city
- New and remodeled hotels
- Increased marketing

Appendix 5
Wilsonville Tourism Grants

The availability of tourism development and tourism grant funds in Wilsonville is extremely limited. Therefore, the allocation of tourism grant funds by the City of Wilsonville should be directed toward projects that present the greatest opportunities for increased visitor nights and tourist spending in the city, hence increasing tax revenues. The programs that present the best opportunities for generating increased tourism activity are (i) special events and festivals and (ii) attraction of sports tournaments. The following outlines some guiding principles that should be considered when allocating grants to these programs.

Special Events and Festivals: A set of criteria should be created for the allocation of development funds for events. Priority should be given to events that can develop as signature events with strong tourism potential by drawing attendees from throughout the Northwest. Marketing support should primarily be available to assist with marketing for outside of the Portland metro area and where attendance will result in increased overnight stays.

Sports Tournaments: A priority for the granting of funds directed to sporting events should be for supporting bids, "seeding" sporting events, and promoting attendance. Allocation of grants to sporting should be limited to support where it will generate overnight stays. A set of outcomes-focused criteria should be developed to guide the allocation of development funds for sporting events. These investments should only be made when this financial intervention is the only way that Wilsonville can secure the event. The level of investment must always be calibrated according to the likely spending by the event attendees.

Appendix 6
Tourism Strategy Performance Indicators

When the strategy has been activated, it is vital to closely monitor and manage progress and make adjustments when necessary. There are many aspects of the tourism program that can be monitored; however, the metrics to be examined will be guided by the organization's objectives and the investment in specific programs.

The research data available to Visit Wilsonville is available in two forms. The first form of data, known as secondary research or desk research, generally involves the review and analysis of published information, analysis and reports that are readily available, generally at no or low cost. This kind of information tends to be aggregated and is generally not customized or as specific in location. Sources for the data may include Travel Oregon, WCVA and CCTCA.

The second kind of data is primary research, which is customized information that is researched and assembled for a specific location or issue. Primary research will be directly focused on Wilsonville and may be conducted by Visit Wilsonville, local partners or by engaging a research agency. Primary research can include the commissioning of surveys and other instruments targeted to a specific location, market or issue.

The following provides a variety of those performance measures that can be considered:

Performance Indicator	Method
Strategy Implementation	Monitor the level of success in activating and implementing the recommendations in this strategy. Track factors for success and reasons for gaps in performance.
Destination Travel Impacts	Monitor the Oregon Travel Impacts prepared annually by Dean Runyan & Associates for Travel Oregon. Evaluate the county performance for indicators of local results in regard to visitor spending impacts, visitor volume, overall trends, visitor shares.
Lodging Industry Performance	Monitor on a monthly basis using Smith Travel Research (STR.com) statistics relevant to local hotels and motels: revenues, ADR (average daily rate), occupancy levels, REVpar (revenue per available room), market share vs. competitor destinations in metro area, monthly /annual tends. Track lodging tax receipts. Feedback from local lodging partners.
Marketing Programs	Monitor and evaluate performance of tactical marketing programs such as website and social media results, advertising responses, and public relations using accepted industry metrics. However, these should relate to the specific objectives and investments set for each investment.

Performance Indicator, con't	Method
Internet Marketing and Social Media	All digital marketing should be evaluated regularly using Google Analytics and other tools to monitor web traffic, rankings, competitors, links, followers, friends, visitors, likes, key words and SEO, page views and a variety of relevant metrics.
Media Coverage	Monitor media coverage, particularly externally, for its use of the desired brand messages.
Major Events incl. Grants Events	Initiate a customer research program to gain insights into the spending, economic impact, demographics, behavior, points of origin, motivations and satisfaction of visitors to major events and sports tournaments.
Product / Experience Development	Monitor the number of new tourism-related businesses, events, packages and multi-product offerings to successfully meet customer needs as they relate to the opportunities outlined in this strategy.
Customer Profiles	Assess shifts in customer profiles and source markets. Depending upon available budgets research visitor profiles and behavior in conjunction with county tourism organizations.
Customer Satisfaction	Conduct ongoing customer surveys to monitor satisfaction with the Wilsonville experience and the likelihood of visitors returning. These surveys should be conducted at all major events and evaluate the behavior and spending of visitors.
Community Tourism Support	Conduct a survey of residents, businesses, tourism, government and other interested organizations. This should include assessment of residents' overall image of Wilsonville and that of certain key precincts. Repeat every two years.
Co-operative Support	Track the level of participation in Visit Wilsonville co-operative marketing opportunities.
Stakeholder Feedback	Survey key stakeholders and partners in Wilsonville annually to explore and track tourism related issues, and seek feedback on Visit Wilsonville programs and needs.

Appendix 7

Public Comments on *Draft Wilsonville Tourism Development Strategy, March 2014:* Consultants' Review

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A public-comment period for the *Draft Wilsonville Tourism Development Strategy, March 2014*, was held March 21-31, 2014. As with other public-outreach efforts related to creation of the Tourism Development Strategy, notices were sent to members of the task force, over 50 interested members of the public, subscribers to the City's e-news notification system and to local media, including the *Wilsonville Spokesman*, *The Oregonian* and *Charbonneau Villager*. An online public-comment survey form was utilized, along with email submissions.

A total of 23 separate sets of comments were submitted, including 21 through the online survey and two as email attachments. One set of comments submitted by Theonie Gilmore of the Wilsonville Arts & Culture Alliance included a 25-page proposal that was made to the Wilsonville City Council in October 2010 for an Arts & Wellness Facility; this proposal is not included in this report and has been forwarded to the City's current Recreation and Aquatics Center Study Task Force for consideration. The Draft Strategy does suggest consideration of a recreational/sports-event attractor.

This appendix includes reviews by the consultants of the public comment submitted, verbatim text of the public comments and the survey instrument.

The following are remarks and explanations by consultants with Total Destination Marketing (TDM) in regard to the public comments received in response to the *Draft Wilsonville Tourism Development Strategy, March 2014*.

- Throughout the research, consultation and strategy development phases TDM has stressed the importance of prioritization in the development of the strategy and in the operations of Visit Wilsonville. While Wilsonville, at this time, does not have any major signature attractions and events (except the Horse Shows) that generate considerable overnight stays, it does have a diversity of activities that can attract visitors. Critical to the success of Visit Wilsonville will be prioritizing a limited number of target markets and attractors. Some public comments to the strategy have sought to add more community and nearby assets to the lists of attributes. While they can easily be added, they do not change the recommended experience themes and target markets.
- There are a number of comments that relate to specific community assets and attractions. Many of these will possibly be of greater importance when Visit Wilsonville prepares its annual marketing plan and evaluates content for its website, brochures, PR releases and other promotions.
- World of Speed and Charbonneau will be noted where appropriate.

- Achieving the vision is dependent upon many of the actions outlined in the "Visitor Experiences" (pages 32-34) and "Infrastructure and Placemaking" (pages 35-41). Many of these actions relate to initiatives that are either planned or proposed by a variety of organizations, but in most cases rely on confirmation of funding or appointment of developers. We believe that the fulfillment of several of these may represent "game-changers" for Wilsonville and will place it well on the way toward achieving this vision.
- The comment regarding the inclusion of "non-resident workers" in the Mission Statement (page 20) is valid and we will suggest that they be included.
- A core role of Visit Wilsonville will be to add value to the efforts of individual entities. That is, Visit Wilsonville should not be undertaking the sales and marketing activities that an individual commercial organization should be conducting through its own marketing plan and budget. An exception to this may be where Visit Wilsonville may coordinate a united presence at an exhibition or a feature in a magazine where the costs may be shared.
- The prioritization of each recommendation will depend upon a number of variables. For instance the marketing recommendations will depend upon available human and financial resources. They may also be influenced by the ability of local tourism partners to participate with co-operative marketing contributions to raise their priorities. Their prioritization can be determined each year as the organization prepares its annual marketing plan. The Visitor Experiences and the Infrastructure and Placemaking recommendations in most cases are dependent upon priorities and funding of other organizations. In many cases these are government departments at City, County, State and Federal levels.
- Grants have been recommended for both the development of 'festivals and events' and for 'sports tournaments'. The funds available for grants are very limited. Sports tournaments have been included because these incentives are directly tied to room nights in Wilsonville. Sports marketing is extremely competitive and the provision of these incentives is very common by many of Wilsonville's competitors.
- The strategy does recognize the potential of the Horse Shows and encourages increased support and engagement by the City of Wilsonville and the business community. These events are well respected on the circuit and warrant optimal support from throughout the community.
- TDM endorses the proposal to increase the percentage of lodging tax directly dedicated to tourism development.

City of Wilsonville "Draft Tourism Development Strategy" Public Comment Survey Responses, March 21-31, 2014

Following are verbatim comments submitted; comments are numbered (#) for ease of reference. A total of 21 separate sets of comments were submitted; commenters did not necessarily comment on each question.

#	Q1: Do you have any comments on the "Destination Situation" section, pages 8-12?
1	Agree with restaurants and lack of fine dining. Quit bringing in fast food and get some decent restaurants in town. We leave to eat out to go Downtown or even Lake Oswego.
2	Appears to be a very apt summary of the current Destination Situation in Wilsonville and the area.
3	yes- p.8 Add CULTURE to'Festivals and events' (the Libray and Boones Ferry Historical Association sponsored historical speaker in the monthy historical talk a cMenamins on March 25 to a FULL house!
4	Its weaknesses are the city's weaknesses. We don't have that much to begin with, and we're not doing a good job of leveraging what we have. Hopefully this project can kickstart a correction. It will happen only if the city has the will to morph this report into a manifest vision
5	In the main, the statements made seem accurate. I question validity of portions of the sentence, "The city attracts visitors because of ....". I think the number of visitors who come to Wilsonville for "outdoor recreation" (other than equestrian which is already noted) and as "an ideal base of exploring the region," are few.
6	Thorough assessment.
7	you might add World of Pseed to the list of Attractors onpage 8
8	an excellent & thorough analysis -- creates the fundamental context necessary to assess needs & opportunities.
9	an excellent & thorough analysis -- creates the fundamental context necessary to assess needs & opportunities.
10	We need to encourage the improvement of our lodging options to ensure visitors stay in Wilsonville. Also, the motel tax needs to be changes so that 80-90% of it is spent on promoting tourism.
11	We should not overlook our community of Charbonneau that is also located in Wilsonville and can also contribute local shopping, including remodeling services, two restaurants, a golf course, convenience mart, realtors and Travel & Tours Agency, These are also integral parts of the Wilsonville community and contribute greatly to our local spend as well as to tourism in general. Also, I think that we should include the newest hotel located in Tualatin as a part of our overall area accommodation. It is a an oversight not to include these valuable members of our community and in the study in general. Personally I offer genealogical services, boutique shopping and have just opened a new Irish retail shop that will help facilitate our equestrian/ cross cultural expansion between Ireland and Wisonville/Oregon/PNW as well as our golf tourism in a cross cultural capacity. I would also be happy to offer local Wilsonville tourism to my office. The last thing I want to contribute is that there are very few golf communities in Oregon such as Charbonneau and it should be included in the tourism spin here for cross cultural experiences for those looking to relocate here for retirement.
12	Many of the destinations are not located in Wilsonville, and it's a stretch to include them as major portions of our tourism plan, i.e. shopping at Woodburn factory stores.
13	no
14	I think you should include World of Speed car enthusiasts and people who like shopping for antiques
15	No questions

#	Q2: Do you have any comments on the "Destination SWOT" section, pages 13-18?
1	Agree on traffic congestion becoming an issue. One of the attractions of Wilsonville was the ease of traveling around. With all the new apartments, traffic is becoming increasingly bad, and tax-paying homeowners may move out as it becomes more like Tigard and Sherwood.
2	This was a very interesting section with a considerable number of issues identified.
3	p.13-under COMPLIMENTARY STRENGths 'Public art: Murase water features add SCULPTURE. 2) "opportunities" - add THEATER AUDITORIUM; under "Additional Weaknesses" add THEATER AUDTORIUM; under "Threats"- NOTHAVING THEATER AUDITORIUM AND SWIMMING POOL (SEE ARTS & WELLNESS CENTER PROPOSAL SUBMITTED 3-24-2014)
4	Impressed with the comprehensiveness, insight, and accuracy of this section.
5	"Destination Shopping" leads me to believe that there are significant shopping opportunities in Wilsonville. Because of Wilsonville's proximity to shopping, agritourism, heritage and wineries, there may be opportunity for a tour operator to use Wilsonville as a hub to access all these.
6	Comment of the horse shows. A few years ago, the Country Classic was much more of a Portland area highly prestigeous social event that people besides those actually involved in the shows attended. Major businesses like Intel and Oracle bought patron tables located in fancy white tents with really nice food and wine was served whiole people watched the show events, espefcially the Grand Prix. They also had lots of vendors on site including food and wine for those who did not have tent access. Others sold horse related products, misc art and they also had fancy cars on display. At that time, I repersented the owners of the property where the event was held and it was an impressive event followed by after parties. Now the County has limited the use so vendotrs can't come and the show sponsors seem to have lost their marketing and/or their patrons. Proceeds used to benefit organizations like the Opera so thre was lots of press interest. I think there is an opportunity to revive that event into something much more, buit only with County cooperation. I still have contacts with owners where the event used to take place and Shelly Campf and others who used to orgnaize it. It could be a signifcant summer event again rather than just a horse show for horse people and it could expose a lot of people to other attractions in Wilsonville. We also need a ncier full service hotel but not much we can do about that one.
7	thorough & complete --
8	thorough & complete --
9	From the marketing communications weaknesses analysis it is listed that "no clear city identity" and "low awareness of Wilsonville as a destination". In my mind this is a strength. We don't want "Wilsonville" to be the focus, we want the actvities people come to the city for to be the focus. My view would be to focus on equestrian, sporting programs and river recreaction which draw visitors for multiple nights.
10	Our Washington County and Clackamas County officials do work together well, but community outreach and involvement is hard to come by and is not expanded enough on in meetings for people to understand the full impact of new roads, tourism and how all of it works together mainly because we don't think of tourism as an income generator. More education is certainly needed, not only in our small community but over all in the metro area. Pulling together in all these endeavors is essential as well as education.
11	Page 14: Don't view commuter rail as a complementary opportunity because it runs on very limited hours/days.
12	no
13	We have good shopping opportunities in Wilsonville? Frys I guess. Lower cost lodging and meeting space is a strength

#	Q2: Do you have any comments on the "Destination SWOT" section, pages 13-18?
14	What does intertwine connection mean? I agree, there is very limited boutiques and shopping. We should have had Cabello's here. Lost opportunity for sure! I also agree about the transportation. There should be a set schedule for the trolley service and WES should run during the day to connect to Portland. We do need a pedestrian friendly downtown. Canby has really made some improvements.

#	**Q3: Do you have any comments on the Vision and Mission Statements in the "Strategic Directions" section, page 19:** **Our Vision for Tourism: The following tourism vision statement has been created following extensive public consultation and input through interviews, workshops and surveys. This vision sets the path to develop a vibrant visitor economy in Wilsonville over the next decade.** **"In 2023, Wilsonville is a welcoming, family-friendly city competing successfully as one of Oregon's leading destination cities, investing in its tourism, meetings, leisure and recreation strengths, amenities and services to provide compelling year-round experiences."**
1	I don't think that Wilsonville will ever be "one of Oregon's leading destination cities". It's just close to Portland and Wine country and an alternative to staying in the city. There's nothing here to naturally draw people to the town. Horse events are great but the city is so limiting in how those can be run - plus they are only a few weekends a year.
2	This is a visionary 'vision' -- one that inspires and provides a grander target. Will the community act on the need to make the investments?
3	P. 19- Vision - before the phrase investing in tourism (add) AMENITIES AND SERVICES TO PROVIDE YEAR ROUND EXPERIENCES i.e.CULTURE (then the rest of the words)
4	I hope 10 to 15 years down the road, this will be an accurate brag. In the meantime, it is fairly empty until backed up with tangible development.
5	This vision seems overly-broad and I don't know that it takes into account the actual character of Wilsonville. Is there resident appetite for the leisure and meeting business?
6	Sounds great.
7	Concise, clear and inspiring.
8	Concise, clear and inspiring.
9	I would focus the statement more to what we want to attract. "one of Oregon's leading destination cities"... Ha! I'm not sure that is what we want, and we certainly don't have the variety of attractions to meet this. Focus 1 or 2 types of attractions which bring visitors for multiple nights.
10	Not sure that we can claim we are "competing successfully." Could probably buy into "one of whose goals is to compete successfully..."
11	no
12	Seems like this could be a bit more vision and a bit less tactical.
13	Compelling? Not something I see or believe about Wilsonville. It tries to say too much, no focus.

#	**Q4: Do you have any comments on the Mission Statements in the "Strategic Directions" section, page 19:** **Our Mission Statement: The following is the mission statement for Wilsonville in regard to tourism management in a manner that is collaborative, sustainable and customer-focused.** **"We facilitate the thoughtful development of Wilsonville's visitor economy for the benefit of our visitors and partners, and to enhance the quality of life for all residents."**
1	Bringing in tourists to Wilsonville will not enhance the quality of life for residents - just more traffic and more competition for the limited restaurants we have.
2	This is a excellent mission statement -- one that highlights that public investments can benefit both the community economy for small businesses as well as for residents.
3	Capitalize on history and proximity of Boone's Ferry by re-establishing the ferry service for other than motor vehicles. Night rides and café facilities aboard would greatly enhance the ride. Bicycle and walking pathways to Charbonneau.
4	Pleased to see the Mission put equal stress on enhancing the quality of life for residents. However--and this is important--there is another group in addition to residents and tourists that we need to e aware of, namely the huge number of non-resident workers who spend perhaps more time in our city than many residents do and who also need to find satisfaction and pride as stakeholders in our city. All of the developments that will make Wilsonville attractive to tourism will as an intended consequence make it attractive and satisfying for all those who live, work, and/or study here.
5	No comments on this statement.
6	Nice.
7	I would add citizens into that statement
8	I suggest substituting the introductory descriptor phrase in place of the word "thoughtful", i.e. "We facilitate collaborative, sustainable, customer-focused development of Wilsonville's visitor economy....."
9	I suggest substituting the introductory descriptor phrase in place of the word "thoughtful", i.e. "We facilitate collaborative, sustainable, customer-focused development of Wilsonville's visitor economy....."
10	By enhancing the quality of life for all residents of our community, Wilsonville facilitates the thoughtful development of our visitor economy for the benefit of our visitors and partners, thus creating a sense of place that is vital to a thriving community where everyone wants to be.
11	Should change "and to enhance the quality of life for all residents" to "while enhancing the quality..."
12	Wilsonville's Fun in the Park festival meets objective 2 Visitor Experiences (p. 29) but started with a focus "to enhance the quality of life for all residents." By doing so, satisfied participants invite friends/relatives to share the experience, bolstering the "visitor economy." I like the "and to..." as an important consideration.
13	OK.
14	I am glad this is a focus! Thank you.

#	**Q5: Do you have any comments on the Priority Target Markets in the "Strategic Directions" section, pages 20-23?** **• Horse Shows: Competitors/participants, spectators, horse owners, and event organizers, class clinicians, recreational and student riders, horse buyers, and supporters. Predominantly women.** **• Meetings & Conventions: Delegates are predominantly from within Metro and Northwest and meetings drawn by convenient, affordable location.** **• Northwest Getaways: From all western states or international. Portland metropolitan area is a major draw.** **• Sports Tournaments: Organizers and participants in targeted sports tournaments.** **• Transit: Predominantly I-5 travelers originating from all western states and international source markets.**
1	I would suggest putting together a projection of revenues by month from the priority target markets. This will help to evaluate whether the priority target markets reflect "year round" revenues for the city. One way to think about revenues is to think about "fixed" and "variable" revenue. That is, revenue you can expect to come in versus revenue that may or may not happen. Again, this will help in assessing whether there is a good base for "fixed/stable" revenue City can depend on coming in versus "variable/potential" revenue.
2	I don't think people staying in Wilsonville as an alternative to PDX is realistic. We don't even have SMART service into downtown on the weekends.
3	I understand that Business Visitors are a current market segment, and that the opportunity is to upsell them into becoming Leisure Travelers. Also, I understand that a considerable number of Canadians currently travel to the Woodburn Co Stores to do tax-free shopping; Woodburn has a very limited supply of lodging opportunities, and so Wilsonville appears like a logical location for this travel segment to do overnight and other end-of-the-day activities. Hence, I would suggest elevating Shopping: Group shopping tours to the Priority level.
4	P.20 - "Supplementary Markets"- Add ARTS AND CULTURE EVENTS.
5	No editorial comments
6	see my comment on the horse shows-"Country Classic" in particualr above. That could be revived into an exceptional annual summer event.
7	no comments - agree with this list
8	I would pick Horse Shows and Sports Tournaments... full stop.
9	Cross cultural spin such as twinning with other international cities and tourism initiatives such as awards for tidiest neighborhood etc. Again sense of place.
10	Most difficult to achieve is Northwest Getaways due to cost of advertising. Easiest to achieve is Horse Shows, since Chamber has already developed a huge base or this. Surprised document did not include Oregon Horse Country.
11	no
12	Seems like we are a great place to have trade association meetings and conventions. We are not all the way down in Salem and we are not in expensive Portland. This is a great place for tournaments.
13	Why Korean focus? Just because of the memorial? Don't agree, my husband is Korean. Why not more of a focus for shopping ? Make it easier for businesses. Villebois Plaza is still empty after years. That area could be a huge draw for specialty shops. Sports Tournaments? So you don't really want to draw tourists because there is not a focus for them once they get here. Sports tournaments seems short sighted. No shopping, not many restaurants..at least local ones. People want something they can't get other places. Trails are developing but are not connected yet. Could be a draw! Hiking?

#	**Q6: Do you have any comments on the Supplementary Target Markets in the "Strategic Directions" section, pages 20-23?** **• Business Visitors: Long-term stays who may explore the area, business relocation or future stay.** **• Cycling *** **• Family Getaways *** **• Genealogy Research** **• Korean nationals, Korean-Americans, Veterans *** **• Outdoor recreation (parks, water features, hiking)** **• River recreation *** **• Shopping: Group shopping tours.** **• Weddings and Reunions** *** Requires infrastructure development to be elevated to priority market status.**
1	Some focus on creating/ allowing more businesses to set up offices in the City would help create business visitors.
2	The markets requiring infrastructure development will have a harder time getting the infrastructure if kept in the supplementary category. This is a "Catch 22" situation. Some of these can be facilitated by local businesses and hotels/motels being proactive with their advertising and with offering of enabling services. For example, lodging offering shuttle services across the Boone Bridge for bike riding customers could capture some of the cycling market. They shouldn't just do nothing waiting for infrastructure.
3	Cycling show incredible opportunity, provided key public infrastructure investments are made, especially in the proposed bike-ped-emergency bridge over the Willamette River. Weddings and Reunions appear to be an excellent target market for development.
4	See my comments in #4. The sternwheeler ferry service I have proposed should extend from Oregon City to Champoeg. Historical references to local Native American tribes, French Canadian trappers and early Missionaries, political maneuvering, and early settlers should be emphasized.
5	THEATRICAL AUDITORIUM AQUATIC CENTER
6	With the pike-ped bridge and riverfront facilities in place, cycling and river recreation would instantly become primary target markets.
7	I think specifying "Outdoor recreation" when equestrian and (aspirationally) river recreation does not play to Wilsonville's strengths.
8	no comments - agree with this list
9	River recreation
10	Believe the easiest of these to achieve is Weddings and Reunions. See what Randy Durig has done with Hubbard Chapel. Also, World of Speed to have 1,000 person meeting facility.
11	no
12	Genealogy research? Don't people just do that online. River recreation is not an option unless you have and bring your own boat.
13	See above. It seems that infrastructure is a necessity. Build on our strengths.

#	**Q7: Do you have any comments on the Key Experience Themes in the "Strategic Directions" section, pages 21-23?** **1. Sports tournaments** **2. Meetings and conferences** **3. Horse shows** **4. Northwest getaways – wineries, shopping, farm fresh, heritage, recreation, Portland Metro, North Willamette Valley etc. i.e. some of the "Best of Oregon".**
1	This section seems weak. Better identification of experience themes would be better.
2	Addition: The mission of Playwright Plethora (Sivyer ©2014) is to create an International tourism niche for Wilsonville, Oregon. Playwright Plethora consists of two stages: Stage One: Playwrights submit material for rating and constructive feedback. Currently working with the Wilsonville Library to develop and execute this stage. Stage Two: Highest-ranking playwrights will be invited to perform readings of their plays in various venues (e.g., hotels/motels/restaurants/Fun Center) over a 2-3 day event several times a year.
3	Very good identification of the Key Experience Themes.
4	All of these.
5	It appears that the work done has been thorough and thoughtful,and should prove useful in future decision making. I still think that Tourism misses the boat when it comes to Arts and Culture. It is not possible to develop a really vibrant community without specific attention to Arts & Culture programs. It doesn`t work to treat Arts & Culture as a mere sideline. I think a "Separate Report outlining the strengths and weakness of Wilsonville`s culltural programs. Tourism focuses on economic development which is good and well.but what really makes a city is the Arts & Culture programs which it provides its citizens. Going to a Burger King is not quite the experience which is going to uplift people`s spirits ,and give life some meaning.
6	Number 4 might be "Northwest Gateway to Getaways." I think the visitor will find very little of this in the city of Wilsonville.
7	see above
8	no comments
9	Sports Tournaments & Horse Shows are clear to me. I don't see what the attraction of Wilsonville might be for "meetings and conferences" we have very view places to hold such events. Further "getaways" sound interesting but it isn't clear what would attract people to Wilsonville. Many of the shopping, wineries and other recreation activities are at a distance from Wilsonville.
10	Since the Chamber has successfully developed Oregon Horse Country, I believe the city should fund the Chamber's expansion of this program, which has proven to be a real money generator for the city.
11	Number 1 and 2 are good ideas but we really need to have more fields and meeting space to attract tournaments and conferences.
12	II like #1 since we already have a foundation. We already host tournaments at the public school level so this one is confusing for me. I just read ahead. Yes, aquatics would draw folks and an expansion of sorts facilities is great!

#	**Q8: Do you have any comments on the Emerging Experience Themes in the "Strategic Directions" section, page 23?** **• Cycling** **• Farm fresh** **• Genealogy research** **• Korean War Memorial** **• River recreation** **• Weddings and reunions** **• Wineries**
1	Again, these seem weak. Not sure I would go to Wilsonvile for these events. That is, they don't seem very exciting.
2	Addition: The mission of Playwright Plethora (Sivyer ©2014) is to create an International tourism niche for Wilsonville, Oregon. Playwright Plethora consists of two stages: Stage One: Playwrights submit material for rating and constructive feedback. Currently working with the Wilsonville Library to develop and execute this stage. Stage Two: Highest-ranking playwrights will be invited to perform readings of their plays in various venues (e.g., hotels/motels/restaurants/Fun Center) over a 2-3 day event several times a year.
3	This is an excellent collection of Emerging Experience Themes. Agree with all except Genealogy research, for which I am not aware of local resources (the LSD facility in Lake Oswego?)
4	Cycling around French Prairie and Milan Roads should allow connection by ferry to Old Town. Fir Point is a well established spot on Canby Rd. John Smith and Steven Turner are great focal points (for area history and genealogy) at the Wilsonville Public Library. Kayaking and canoeing on the river should be encouraged, but restrict noisy, high speed watercraft. Terra Vina Vineyard on Ladd Hill Road may eventually be an interesting and beautiful tourist stop. For equestrians, Wilsonville Road is already the focal point for gatherings.
5	thank you for including "heritage and culture my be separated into their own themes...
6	Repeat response to Question 6. Also add here the World of Speed and (although not so much emerging as secondary) the Family Fun Center.
7	No edits.
8	no comments
9	These don't appear to generate overnight stays.
10	At this time, the city needs to focus on what is achievable with the dollars available. A cycling bridge over the Willamette is a good example of what is not achievable financially.
11	A world class skate boar park that is capable on hosting national competitions. Locate it on the city owned property just north of city hall.
12	Antiques. World of Speed.
13	Yes cycling and hiking! But develop shopping and restaurants.

#	**Q9: Do you have any comments on Alignment with Partner Strategies or Overall Objectives and Strategies in the "Strategic Directions" section, pages 24-25?**
1	Wilsonville appears to have good alignment with both counties and state.
2	p. 25- CULTURE SHOULD BE ADDED SEPARETLY. IT IS NOT PARTOF RECREATION.
3	Seems to me that we are overlooking or ignoring our proximity to northern Marion County and possibly also eastern Yamhill County. Wilsonville is in some important ways closely related to both and should exploit their resources in our tourism strategy. Of course we already do so some extent but are not recognizing that fact in this report.
4	These pages seem relevant and accurate.
5	thoughtful, sound and well-researched
6	No comments.

#	**Q10: Do you have any comments on Actions for Success, Branding and Positioning, Visitor Experiences, Infrastructure and Placemaking, Marketing Communications, or Leadership and Organization in the "Wilsonville Strategic Directions" section, pages 26-49?**
1	The amount of funds allocated to lodging and tourism to implement what is in the plan is very low. The budget doesn't seem realistic. I'd like to see in the appendix how the money would be spent. This would give us a better idea for whether the funds are sufficient or not.
2	I think it is a waste of taxpayer money to engage in branding Wilsonville as a destination.
3	Logical set of actions to pursue. All of the recommendations make sense; it appears that perhaps more thought should be given to the relative priorities of Timing -- that is, many recommendations have all three priorities checked. The recommendation for an independent DMO also makes considerable sense -- as a city in two counties and near two other counties, neither county tourism agency will provide sufficient attention to Wilsonville, especially when so many attractions are outside of Wilsonville in other counties or cities. Starting such a DMO from scratch appears to be major undertaking -- one that will sink if just let go to the wind or volunteers. It seems that it could make sense for the City to start this organization, doing the organizing work, and then transition to the nonprofit model. However, it is not clear how a DMO could run on its own, and so it would seem to need to have a close tie to the City in terms of funding and cooperation on initiatives like wayfinding, bike/ped infrastructure, etc.
4	.P.29 ARTS EXPERIENCES: SPARK, ENGAGE, STIMULATLE, INVOKE, ENLIVEN, GENERATE. P.31 - THE WILSONVILLE FESTIVAL OF ARTS COULD BE BILLED AS THE START OF THE SUMMER SEASON (1ST WEEKEND IN jUNE) P. 32- 3,1 ARTS & WELLNESS CENTER P. 37 - consider DEVELOPING a public art program. One was initiated by the Arts Action Alliance of Wilsonville. p.44-4.12 Key partners to receive monthly reports could be Non- profit organzaiions: Wilsonville Theater Company; Wilsonville Arts & Culture Councill; arts Action Alliance of Wilsonville; Music & Arts Partners
5	I wish we could do it all, and soon, But some priorities obviously are necessary. Highest priority should be given to developments that do not depend on new, expensive infrastructure and that can be undertaken in the short term and ongoing. But we might as well give up if we are unwilling to spend on infrastructure that will be expensive and speculative---in other words, carry some risk. That said, we can be both visionary and responsible with deliberate study and planning. And that said, the bridge, for which seed money already exists and the need is so well attested, should be on the front burner for planning. Close behind should be sports fields, aquatic center, and performing arts venue. An expansive sports entertainment precinct near the Cinemas is an intriguing idea that needs to percolate. Development of needed riverfront facilities will come naturally together with the French Prairie Bridge.
6	I would expand 3.8 to include "...to assess the needs and feasibility of converting the Clackamas County Events Center OR TO BUILD A SHOWCASE FACILITY to ATTRACT horse shows events during periods of..." 3.12 and 3.13 are particularly interesting/exciting Priority should be put on the "Placemaking" portion of the report, as Wilsonville must decide to have a compelling "There 'there'" for visitors to choose it as a destination.
7	I agree that arts & culture are key elements of placemaking, and that is clearly recognized on pps 36 & 39 by addressing Public Art and commemorative sculptures and, later in document, an arts center. On the other hand, there are significant but more subtle advantages not captured here by omitting t arts/culture and creative thinking as instrumental for developing bold & iconic symbols for signage, branding elements, wayfinding. As well, heritage tourism is not called out as an objective, although two specific tactics are mentioned: Genealogy and Ice Age Trail are.
8	I don't think Wilsonville needs a brand. Our geographic location speaks for it self and the right recreational opportunities will attract visitors.
9	Charbonneau Golf Club is now offering it's services for wedding venue.

#	**Q10: Do you have any comments on Actions for Success, Branding and Positioning, Visitor Experiences, Infrastructure and Placemaking, Marketing Communications, or Leadership and Organization in the "Wilsonville Strategic Directions" section, pages 26-49?**
10	Include Chamber as one of responsible organizations for Festivals and Events-sections 2.4 and 3.8 (Horses). It is a glaring error not to include Chamber everywhere horses in mentioned in this document.
11	No.
12	I like the planning questions so there is focus...action for success

#	**Q11: Do you have any comments on the Appendices, including Tourism Development Strategy Task Force, The Destination Management Options for Wilsonville, DMO Organizational and Financial Benchmarks, Wilsonville Transient Lodging Tax, or Wilsonville Tourism Grants, pages 50-61?**
1	An independent DMO is essential since there is so much work to be done to make this successful. There needs to be creative leadership not bound by other priorities to make this happen. The Chamber of Commerce is too political and too self-focused to be put in charge though they could provide advisory input.
2	Addition: The mission of Playwright Plethora (Sivyer ©2014) is to create an International tourism niche for Wilsonville, Oregon. Playwright Plethora consists of two stages: Stage One: Playwrights submit material for rating and constructive feedback. Currently working with the Wilsonville Library to develop and execute this stage. Stage Two: Highest-ranking playwrights will be invited to perform readings of their plays in various venues (e.g., hotels/motels/restaurants/Fun Center) over a 2-3 day event several times a year.
3	You are going to spend more money per year than the tourist revenue generated in any year in the past 8 years. This is a huge waste of taxpayer money and completely reckless spending! Getting more businesses here will increase hotel stays and tax revenue - not trying to become a tourist destination! Government spending at it's finest!
4	Support the recommendation for Option 4, independent DMO, and the alternate as noted with City possibly starting the DMO.
5	Nice work on Appendix 2
6	Yes to Option 4 Independent DMO and to increasing the dedicated tourism use of the TLT. It now seems particularly short-sighted of us to have given up our Visitor Information Center when the city terminated its contract with the Chamber. That was throwing out the baby with the bath water. If the decision to repurpose that location and building for the Parks and Recreation Dept can be reversed or made only temporary, that facility would be the natural location for the new DMO. Find another place for P&R.
7	The biggest indicator of intent toward significant tourism development would be for Wilsonville to adopt a TRT apportionment plan which is more inline with state allocation.
8	I strongly endorse the recommended Option 4 for DMO management. Financial Benchmarks are specific and realistic
9	The DMO sounds like a good way to target the lodging tax dollars, provided it is done with strong influence from the local business community and is not part of the City Governement. Through partnering with the local business community, the overhead costs can be minimal and allow lodging tax dollars to be spent on attracting people for overnight stays.
10	I feel it is short sighted to only suggest consideration for sport tourism for grants awarded BY Wilsonville.
11	Favor Option 2 on p. 54. The Chamber successfully ran tourism for years and this report seems to throw away a lot of knowledge and experience already developed.
12	No.

#	Q12: Do you have any other comments that you would like to offer for consideration?
1	Excellent plan overall; city should plan to update again in 3-4 years.
2	NOte: CULTURE AND RECREATION SHOULD NOT BE IN THE SAME CATEGORY. SEE CLACKAMAS COUNTY ARTS ALLIANCE DOCUMENTS
3	This seems to be a good start on a much needed development. It will be a test of our good citizens who will need to front some costs whether the city will make important things happen?
4	The relationship with the Old Church and Pub should be fully explored (would McMenamins consider opening an overnight facility nearby, with a focus on local history, etc.).
5	Please feel welcome to contact me directly for more information about either below: GRANTS: be aware that another local grant option exists -- Clackamas County Cultural Coalition provides annual project grants, with Tourism as a funding priority (see Clackamas Arts Alliance website for detail) PERCENT FOR ART: This public art funding instrument is best deployed when attached to public construction. It is generally a disincentive when attached to private development. Far more effective strategies exist regarding public art & private developers -- TRANSIENT LODGING TAX: explore whether a portion of these funds could be used to drive the placemaking objectives
6	I would like to be included on the task force moving forward for our community.
7	Yes. I believe the Chamber is the correct DMO for this. 80%-90% of the TLT would allow the Chamber to focus on grant projects that actually put heads in beds and generate local economic activity. The economic impact of Oregon Horse Country and the feasibility of an equestrian park is the best way to put Wilsonville on a tourist's map.
8	Leverage surrounding areas and events. St Paul Rodeo, Sports Tournaments, Tulip Festival, and Antique shops in Aurora, Wineries in Yamhill County. Create a website that packages weekends and events not just in Wilsonville but surrounding area and target classes of travelers with packaged options. Couples, families, visiting friends and family.

#	**Q13: If you would like to receive additional information about the Tourism Development Strategy effort, please provide your name, phone number and email address.**
1	Richard M. Bernard, MD 31530 SW Village Green Court Wilsonville, OR 97070 2bernards@comcast.net
2	Theonie Gilmore, 503-638-6933; Theonie@WilsonvilleArts.org
3	Cheryl Snow, E.D. Clackamas Arts Alliance 503-720-0662 cheryl@clackamasartsalliance.org
4	Ginger Aarons, CTC, Director Time Travel (Tours) LLC 31840 SW Charbonneau Dr. Ste. A 1-2 Wilsonville, OR 97070
5	Doris Wehler 6855 SW Boeckman Rd Wilsonville, Or 97070
6	Jon Gail 503-570-1502 gail@ci.wilsonville.or.us

Date Received by
City of Wilsonville:
03/31/2014

WILSONVILLE
AREA CHAMBER OF COMMERCE
A South Metro Business Advocate

Wilsonville Area Chamber Comments on the Draft Wilsonville Tourism Development Strategy

Councilor Julie Fitzgerald
Chair of the Tourism Task Force
29799 SW Town Center Loop East
Wilsonville, Oregon 97070

Dear Councilor Fitzgerald:

As the President of the Wilsonville Area Chamber of Commerce, representing 572 businesses that employ 12,000 in the South Metro Oregon, the Chamber's members have a vested interest in the success of the tourism development strategy. We appreciate that you have given local business people and residents the opportunity to comment on this important plan.

It became very clear to the Chamber that the current funding level, 40% of the Tourism Lodging Tax collected, for tourism programing is not sufficient to meet the long-term needs of its success. Tourism experts from the Washington County Visitors Association, Clackamas County Tourism, and the city's consultant all identified the lack of funding as a major hurdle to success, we agree with their assessment. The Chamber believes that the funding for this program should be doubled from 40% to 80% of taxes collected, which will give the tourism program enough resources to be successful.

The consultants indicated that the keyword is "development" in the title of their draft document. One alternative that has not been discussed in the draft strategy is a large grant program that would provide funding to tourism development projects that would generate local economic activity and overnight stays. The Chamber has discussed this concept in previous correspondence to the Wilsonville City Council. This program would need to be administered by an independent board that would include key tourism partners such as sports tournament coordinators, event coordinators, attractions, hotels and restaurants. This approach would put every dollar possible into developing our local tourism attractions versus spending money on payroll and overhead associated with a separate organization.

If a separate organization is determined to be the preferred option by the task force and city council we would strongly suggest that it meets certain conditions. The organization should be truly independent from the City of Wilsonville and should not be connected to any political process, including the city's budget process or a contract renewal. The City should create the organization and funding for it by referring to the voters a charter amendment that would truly create a separate, standalone and independent organization. The city should have representation on the board of the organization, and measures can be written into the charter amendment that could provide the necessary transparency that taxpayers would expect with this type of arrangement.

There is some concern that the current draft document has not clearly prioritized or has a clear timeline of full implementation of the plan. Before the plan goes to the city council the task

force should better prioritize and develop a suggested implementation plan for the strategy so there are clear expectations for stakeholders.

Thank you for your time and consideration.

Sincerely,

Darren Harmon
President
Wilsonville Area Chamber of Commerce

Cc: The Wilsonville City Council

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

City of
WILSONVILLE
OREGON

"Draft Tourism Development Strategy" Public Comment Survey

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1. Do you have any comments on the "Destination Situation" section, pages 8-12?

2. Do you have any comments on the "Destination SWOT" section, pages 13-18?

3. Do you have any comments on the Vision and Mission Statements in the "Strategic Directions" section, page 19:

Our Vision for Tourism: The following tourism vision statement has been created following extensive public consultation and input through interviews, workshops and surveys. This vision sets the path to develop a vibrant visitor economy in Wilsonville over the next decade.

"In 2023, Wilsonville is a welcoming, family-friendly city competing successfully as one of Oregon's leading destination cities, investing in its tourism, meetings, leisure and recreation strengths, amenities and services to provide compelling year-round experiences."

4. Do you have any comments on the Mission Statements in the "Strategic Directions" section, page 19:

Our Mission Statement: The following is the mission statement for Wilsonville in

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

regard to tourism management in a manner that is collaborative, sustainable and customer-focused.

"We facilitate the thoughtful development of Wilsonville's visitor economy for the benefit of our visitors and partners, and to enhance the quality of life for all residents."

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"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

City of
WILSONVILLE
OREGON

"Draft Tourism Development Strategy" Public Comment Survey

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5. Do you have any comments on the Priority Target Markets in the "Strategic Directions" section, pages 20-23?

• Horse Shows: Competitors/participants, spectators, horse owners, and event organizers, class clinicians, recreational and student riders, horse buyers, and supporters. Predominantly women.

• Meetings & Conventions: Delegates are predominantly from within Metro and Northwest and meetings drawn by convenient, affordable location.

• Northwest Getaways: From all western states or international. Portland metropolitan area is a major draw.

• Sports Tournaments: Organizers and participants in targeted sports tournaments.

• Transit: Predominantly I-5 travelers originating from all western states and international source markets.

6. Do you have any comments on the Supplementary Target Markets in the "Strategic Directions" section, pages 20-23?

• Business Visitors: Long-term stays who may explore the area, business relocation or future stay.
• Cycling *
• Family Getaways *

— Page 3 —

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

- **Genealogy Research**
- **Korean nationals, Korean-Americans, Veterans ***
- **Outdoor recreation (parks, water features, hiking)**
- **River recreation ***
- **Shopping: Group shopping tours.**
- **Weddings and Reunions**

*** Requires infrastructure development to be elevated to priority market status.**

Prev Next

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

City of
WILSONVILLE
OREGON

"Draft Tourism Development Strategy" Public Comment Survey

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7. Do you have any comments on the Key Experience Themes in the "Strategic Directions" section, pages 21-23?

1. Sports tournaments

2. Meetings and conferences

3. Horse shows

4. Northwest getaways – wineries, shopping, farm fresh, heritage, recreation, Portland Metro, North Willamette Valley etc. i.e. some of the "Best of Oregon".

8. Do you have any comments on the Emerging Experience Themes in the "Strategic Directions" section, page 23?

- **Cycling**
- **Farm fresh**
- **Genealogy research**
- **Korean War Memorial**
- **River recreation**
- **Weddings and reunions**
- **Wineries**

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

City of
WILSONVILLE
OREGON

"Draft Tourism Development Strategy" Public Comment Survey

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9. Do you have any comments on Alignment with Partner Strategies or Overall Objectives and Strategies in the "Strategic Directions" section, pages 24-25?

10. Do you have any comments on Actions for Success, Branding and Positioning, Visitor Experiences, Infrastructure and Placemaking, Marketing Communications, or Leadership and Organization in the "Wilsonville Strategic Directions" section, pages 26-49?

11. Do you have any comments on the Appendices, including Tourism Development Strategy Task Force, The Destination Management Options for Wilsonville, DMO Organizational and Financial Benchmarks, Wilsonville Transient Lodging Tax, or Wilsonville Tourism Grants, pages 50-61?

12. Do you have any other comments that you would like to offer for consideration?

"Draft Tourism Development Strategy" Public Comment Survey, March 21-31, 2014

13. If you would like to receive additional information about the Tourism Development Strategy effort, please provide your name, phone number and email address.

Prev Submit Comments

City of
WILSONVILLE
OREGON

29799 SW Town Center Loop East
Wilsonville, OR 97070
Phone 503-682-0411
Fax 503-682-1015
TDD 503-682-0843
Web www.ci.wilsonville.or.us

MEMO

To: Tourism Development Strategy Task Force Members; City Council members

From: Mark Ottenad, Public/Government Affairs Director; Task Force Staff Coordinator

Date: April 25, 2014

RE: Changes to *Revised Draft Tourism Development Strategy, April 2014,* Incorporated into the final version of the *Wilsonville Tourism Development Strategy, May 2014*

This memo summarizes primary changes made to the *Revised Draft Tourism Development Strategy, April 2014,* that have been incorporated into the final version of the *Wilsonville Tourism Development Strategy, May 2014.* The modifications are based on suggestions provided by the Task Force members at the April 24 meeting, where public comments and City Council members' feedback of the April 7 Council work session were considered.

Throughout the document, minor text and formatting changes were made to improve readability and provide content and style consistency.

Vision/Mission:

- The Task Force modified both the Vision and Mission Statements.

Recommended Actions:

- A number of recommended actions were slightly modified by changing the priority level and/or amending the language.
- Timing Priorities were modified to show "Top," "Medium" and "Lower" Priorities, along with suggested timeframes.
- Action 4.11, "Support the feasibility study of an indoor aquatic and recreation center," was removed since the feasibility study is now underway.

PUBLIC NOTICE
CITY OF WILSONVILLE

DEVELOPMENT REVIEW BOARD PANEL A and CITY COUNCIL

NOTICE IS HEREBY GIVEN that a PUBLIC HEARING will be held by the **Development Review Board (DRB)** of the City of Wilsonville on **Monday, April 14, 2014 at 6:30 P.M**. at City Hall, at 29799 SW Town Center Loop E, Wilsonville, Oregon, or to such other place to which the Development Review Board may adjourn.

CASE FILES TO BE CONSIDERED:

DB14-0002 SAP South Amendment for Plan Area 2
DB14-0003 SAP-South PDP 7 South, Preliminary Development Plan
DB14-0004 Zone Map Amendment
DB14-0005 Tentative Subdivision Plat
DB14-0006 Type C Tree Plan
DB14-0007 Final Development Plan for Parks and Open Space
SI14-0002 SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

NOTICE IS HEREBY GIVEN that a PUBLIC HEARING will be held by the **City Council** of the City of Wilsonville on **Monday, May 5, 2014 at 7:00 P.M**. at City Hall, at 29799 SW Town Center Loop E, Wilsonville, Oregon, or to such other place to which the City Council may adjourn.

CASE FILES TO BE CONSIDERED: DB14-0004 Zone Map Amendment

OWNER: Bo Oswald, Northwest Wilsonville Properties LLC

APPLICANT: Fred Gast, Polygon NW Company

APPLICANT'S REPRESENTATIVE: Stacy Connery, AICP, Pacific Community Design, Inc.

LOCATION: 29500 SW Grahams Ferry Road. East side of road approximately ¾ miles south of SW Tooze Road. Southwest of current Villebois development, northwest of Graham Oaks Nature Park. Described as Tax Lots 2800 and 2890, Section 15, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon, as depicted on the map below.

CONTACT: Daniel Pauly, AICP, Associate Planner, at (503) 682-4960.

REQUEST: Polygon Homes- Grande Pointe at Villebois

APPLICABLE CRITERIA Planning and Land Development Ordinance: Section 4.008, Section 4.009, Section 4.010, Section 4.011, Section 4.014, Section 4.031, Subsection 4.035 (.04), Subsection 4.035 (.05), Section 4.110, Section 4.113, Section 4.125, Sections 4.139.00 through 4.139.11 as applicable, Section 4.154, Section 4.155, Sections 4.156.01 through 4.156.11 as applicable, Section 4.167, Section 4.169, Section 4.171, Section 4.175, Section 4.176, Section 4.177, Section 4.197, Sections 4.200 through 4.220, Sections 4.236 through 4.270, Sections 4.300 through 4.320, Sections 4.400 through 4.440 as applicable, Sections 4.600 through 4.640.20 as applicable

Other Planning Documents: Comprehensive Plan, Villebois Village Master Plan, previous SAP South Approval Documents.

Copies of the approval criteria are available from the Wilsonville Planning Division, located at 29799 SW Town Center Loop East. All testimony and evidence shall be directed to the applicable criteria or the person providing testimony shall state which other criteria they believe applies to this application. A complete copy of the relevant file information, including the staff report and recommendations, will be available for inspection seven days prior to the hearing. Copies may be provided at the cost of twenty-five cents per page. Copies will also be available for review at the Wilsonville Public Library.

Any interested party may testify at the public hearing or submit written testimony at or prior to the hearing. **Written comments must be received at City Hall by April 4, 2014 to be included in the staff report.** Mail written statements to City Planning Division, 29799 SW Town Center Loop East, Wilsonville OR 97070. The procedures that govern the hearing will be stated at the meeting and are found in Chapter 2.560 of the Wilsonville Code and ORS 197.763.

Please be advised that any issue that is intended to provide a basis for appeal must be raised before the close of the Development Review Board hearing, in person or by letter, with sufficient specificity to afford the Development Review Board and the parties an opportunity to respond to the issue. Failure to raise an issue with sufficient specificity will preclude any appeal on that issue. Parties with standing may appeal the decision of the Development Review Board to the City Council.

Assistive Listening Devices (ALD) are available for persons with impaired hearing and can be scheduled for this meeting. The City will also endeavor to provide qualified sign language interpreters and/or qualified bilingual interpreters, without cost, if requested at least 48 hours prior to the meeting. To obtain such services, please call Shelley White, Planning Administrative Assistant at (503) 682-4960.

Inquiries pertaining to these hearings may be made to Daniel Pauly, AICP, Associate Planner at (503) 682-4960.

Vicinity Map: The project site is shown below

EXPLANATION OF PUBLIC HEARING NOTICE
BEFORE THE DEVELOPMENT REVIEW BOARD AND CITY COUNCIL
AND OPPORTUNITY TO COMMENT ON PROPOSED DEVELOPMENT
Grande Pointe at Villebois: 100-Lot Single-Family Subdivision

This notice informs you of your opportunity to comment on the proposed development of a 100-lot single-family subdivision along with associated streets, parks, and open space located southwest of Arbor Villebois on the property formerly occupied by the Callahan Center and Living Enrichment Center.

Comments are encouraged to address specific criteria established in City Code and Planning Documents. A list of criteria applicable to review of the development can be found in the attached Notice of Public Hearing.

You can provide comments by submitting them in writing, or by testifying in person at the Public Hearings

Frequently Asked Question about Providing Written Comments:

To whom should I address my written comments?
Please address comments to "Development Review Board Members/City Council"

How do I submit written comments?
Email is best. Comments can be emailed to the Planning Staff Member reviewing the application. Daniel Pauly, at pauly@ci.wilsonville.or.us . They can also be mailed to :Planning Division, Attn: Daniel Pauly, 29799 SW Town Center Loop East, Wilsonville, OR 97070 or delivered in person 8:00 to 5:00 on days City Hall is opened (typically Mon-Fri) at the address above.

When should written comments be submitted?

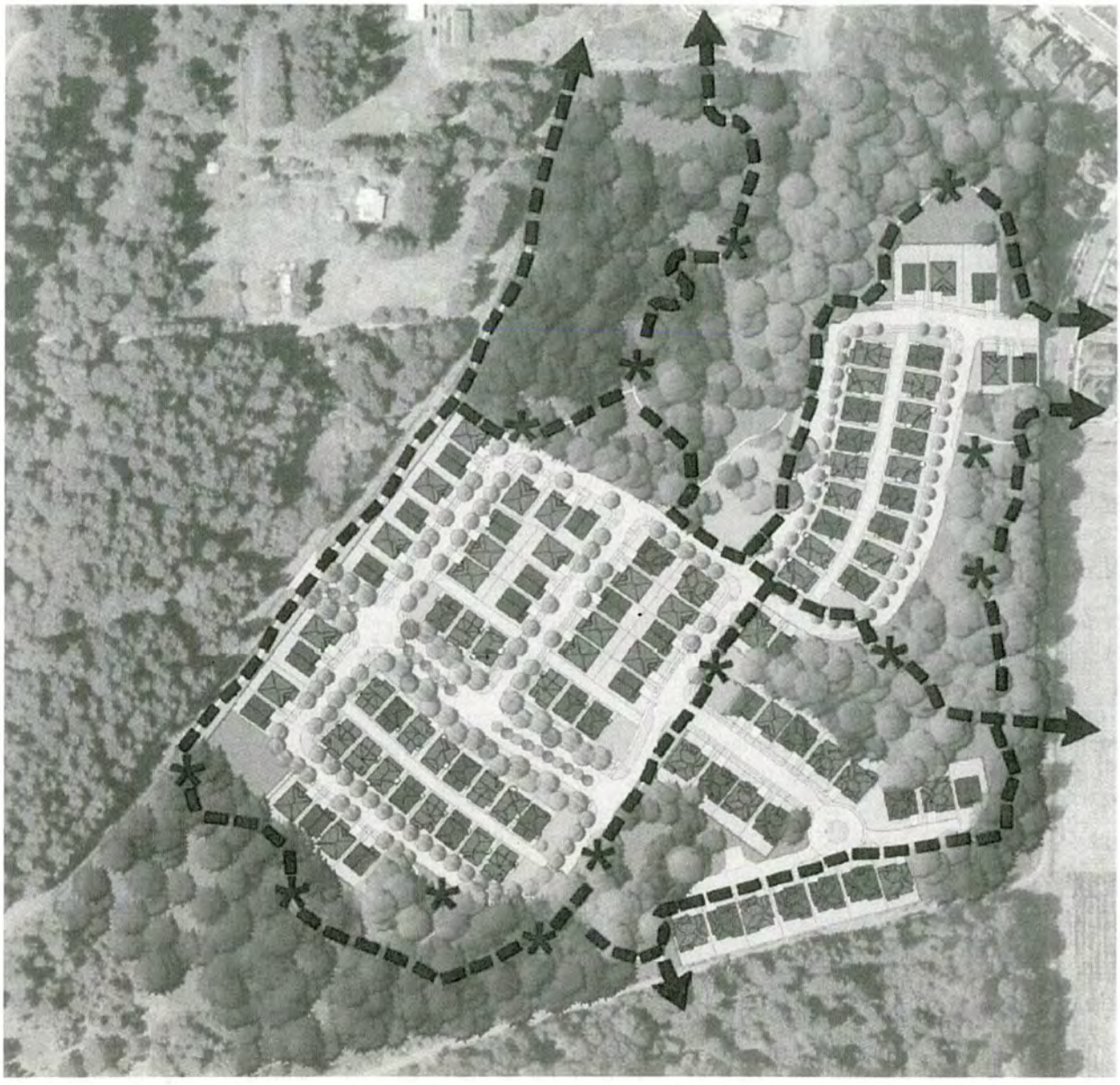
- For comments to be considered in preparing the staff report and to be sent to the DRB (and subsequently to City Council) for their review prior to the Public Hearings they must be received by City Staff no later than 4 p.m. on April 4, 2014.
- For staff to prepare copies of the comments for the DRB hearing they must be received no later than 2 p.m. on April 14, 2014.
- For staff to prepare copies of the comments for the DRB or City Council hearing they must be received no later than 2 p.m. on the day of the hearing.
- You can bring your own copies to the Public Hearings to present when you testify if you do not meet the deadlines above.

Where and When to come to attend or testify at the Public Hearing

WHERE (*Public Hearing*): City Hall Council Chambers, 29799 SW Town Center Loop East, Wilsonville, OR 97070

WHEN: Development Review Board April 14, 2014 at 6:30 p.m.
City Council May 5, 2014 at 7:00 p.m.

City Case File for Application: DB14-0002 through DB14-0007, SI14-0002



City of Wilsonville
City Council Meeting
May 5, 2014 Sign In Sheet

Name	Mailing Address
Nokmson Eder	1100 SW 6th Ave STE 1425 PDX
Kevin Hanway	150 E Main St. Hillsboro OR 97123
Alaina Robertson	300 NW 11th Ave Unit 104, Portland, OR 97209

City of
WILSONVILLE
in OREGON

PLANNING DIVISION MEMORANDUM

April 14, 2014
To: Development Review Board Panel A
From: Daniel Pauly AICP, Associate Planner
Re: Recommended Changes to Staff Report Published April 7th for DB14-0002 et. seq. (SAP South Plan Area 2/PDP 7 South)

After further review of the staff report staff recommends the followings corrections and changes:

1. Correct the footer on each page of the staff report to read "Phase 7 South" rather than "Phase 2 North"

2. Page 7 just above "Request A" insert the language "The Developer is working with the City to reach agreement on the apportionment of fair and equitable exactions for the subject applications through a Development Agreement. Such agreement is subject to approval by the City Council by resolution."

3. Page 7 within the title for Request A change "Amendments" to "Amendment" to be consistent with other references within the staff report.

4. Page 7 add reference "See Finding A39." at the end of Condition of Approval PDA 1.

5. Page 7, Condition of Approval PDB 3 add the omitted word "space" between the words "open" and "improvement"

6. Page 9, Condition of Approval PDD 7 change reference to "Finding E3" to "Finding D4"

7. Page 9, Condition of Approval PDD 8 change "Lift Station" to "Pump Station"

8. Page 10, Condition of Approval PDE 4 add the sentence "Construction on Lot 91 shall be substantially follow the site plan in Exhibit B11." in order to help limit impact on a preserved "Important" Oregon White Oak.

9. Page 10, Condition of Approval PDE 8 after words "legible sign" insert the words "in English and Spanish" to make the sign bilingual as well as after "$(assessed value)"" insert the words "and its Spanish equivalent"

City of Wilsonville
Exhibit A3 DB14-0002 et seq

LEGEND:

- PROPOSED SANITARY SEWER
- EX SANITARY SEWER
- PROPOSED STORM DRAIN
- EX STORM DRAIN
- PROPOSED WATER LINE
- EX WATER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED FIRE HYDRANT
- RAINWATER SWALE
- RAINWATER BIO-RETENTION CELL

SW ALTA CT

6.00' P.U.E.

PROVIDE UTILITY CROSSING WEST OF TRACT TO AVOID CONFLICTS WITH TREE NO. 860

PROPOSED UTILITY LATERALS FOR LOT 91, TO BE LOCATED OUTSIDE OF DRIP ZONE

90

91

92

PROPOSED FRANCHISE UTILITY ROUTE. CONTRACTOR TO HAND DIG OR AIR SPADE FOR TRENCH WITHIN DRIP ZONE

BUILDING TO BE PLACED OUTSIDE OF EX. WATER EASMENT ±11.3'

EXISTING OAK TREE NUMBER 856 TO REMAIN

EXISTING OAK TREE NUMBER 860 TO REMAIN

PROPOSED SEWAGE PUMP HOUSE

SCALE
10 0 5 10
1 INCH = 10 FEET

City of Wilsonville
Exhibit B11 DB14-0002 et seq

N:\proj\395-02\1\09 Drawings\03 Planning\Exhibits - DRB\395021 Lot 91 Utility Exhibit.dwg - SHEET: 22x34 (3) Apr. 7, 14 - 5:00 PM pre

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEO DESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

Lot 91
Preliminary
Utility Layout

DATE 4/7/2014

1

Sign off accepting Conditions of Approval

Project Name: **Grande Pointe at Villebois**

Case Files	Request A:	DB14-0002	SAP-South Amendment for Plan Area 2
	Request B:	DB14-0003	SAP-South PDP 7 South Preliminary Development Plan
	Request C:	DB14-0004	Zone Map Amendment
	Request D:	DB14-0005	Tentative Subdivision Plat
	Request E:	DB14-0006	Type C Tree Plan
	Request F:	DB14-0007	Final Development Plan for Parks and Open Space
	Request G:	SI14-0002	SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

The Conditions of Approval rendered in the above case files have been received and accepted by:

_____
Signature

_____
Title Date

_____
Signature

_____
Title Date

This decision is not effective unless this form is signed and returned to the planning office as required by WC Section 4.140(.09)(L).

Adherence to Approved Plan and Modification Thereof: The applicant shall agree in writing to be bound, for her/himself and her/his successors in interest, by the conditions prescribed for approval of a development.

Please sign and return to:
Shelley White
Planning Administrative Assistant
City of Wilsonville
29799 SW Town Center Loop E
Wilsonville OR 97070

Amber Shasky-Bell

From: Pauly, Daniel <pauly@ci.wilsonville.or.us>
Sent: Friday, April 04, 2014 8:28 AM
To: Stacy Connery; Amber Shasky-Bell
Subject: Additional Materials for Grande Pointe

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Please submit 10 copies of the additional materials for Grande Pointe grouped as following according to the Exhibit numbers I assigned. Also please created 10 cd's with all these materials.

Exhibit B6. House elevations approved by Steve Coyle (already submitted)
Exhibit B7. Arborist Report on Important White Oaks from 4/2 including site plan drawings and modified profile for hardscape
Exhibit B8. Conservation Easement Exhibit showing conservation easement and trees
Exhibit B9. Revised Plan Sheets including:
- Sheet 8 from SAP Plans Park/Open Space/Pathways Plan
- Sheet 4.1 Tentative Plat
- Sheet L2 from FDP
- Sheet L3 from FDP
- Sheet L4 from FDP

Exhibit B10. Alta Ct. Autoturn Exhibit

Are you able to get these to me today or 1st thing Monday?

Thanks and sorry I didn't get this to you sooner.

Daniel Pauly, AICP | Associate Planner | City of Wilsonville | Planning Division
29799 SW Town Center Loop East | Wilsonville OR 97070 | ☎: 503.682.4960 | ✉: pauly@ci.wilsonville.or.us

Disclosure: Messages to and from this E-mail address may be subject to Oregon Public Records Law.

Type	Plan	Style	Date
Revival	**Alley A**	**English**	**3/1/14**

RECEIVED
MAR 31 2014
BY:.....

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

City of Wilsonville
EXHIBIT B6 DB14-0002 et seq

Type	Plan	Style	Date
Revival	**Front-Loaded A**	**English**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Revival	**Front-Loaded A-1**	**English**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Revival	**Front-Loaded A**	**French**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Revival	**Front-Loaded D**	**French**	**3/1/14**
This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Revival	**Alley-Loaded A**	**French**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Modern	**Front-Loaded B**	**American**	**3/5/14**
This Design is:	**Satisfactory**	Recommendation/Question	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/5/14

Type	Plan	Style	Date
Modern	**Front-Loaded B**	**American**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation/Question	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Modern	**Alley-Loaded**	**American**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation/Question	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

Type	Plan	Style	Date
Classic	**Alley-Loaded B**	**American**	**3/1/14**

This Design is:	**Satisfactory**	Recommendation	Not Satisfactory

Steve Coyle, AIA, LEED AP – 3/1/14

1 Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1708 Website: http://www.milbrandtarch.com

Villebois II Single Family
Willsonville, OR
Polygon Vancouver

5017 - B American Modern
Front Elevation

Scale:	Drawn By:	Date:	Job Path:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: **Bank 5**
Job No.: 1348

Morgan Holen
—& ASSOCIATES, LLC
Consulting Arborists and Urban Forest Management

971.409.9354
3 Monroe Parkway, Suite P 220
Lake Oswego, Oregon 97035
morgan.holen@comcast.net

DATE: April 2, 2014

TO: Chris Walther, Polygon Northwest Company

FROM: Morgan E. Holen, Consulting Arborist

RE: Villebois SAP S, Plan Area 2 – Important Trees

MHA1314

This memorandum supplements the January 17, 2014 arborist report for the Villebois Specific Area Plan (SAP) South, Plan Area 2 project located in Wilsonville, Oregon. Following submission of the arborist report, Morgan Holen & Associates coordinated with Pacific Community Design to review detailed site plans and provide specific recommendations for tree protection at five Oregon white oak (*Quercus garryana*) classified as important. This memorandum summarizes the recommendations made, which have been incorporated onto site plan drawings (enclosed).

At the request of Pacific Community Design, Morgan visited the project site on March 5, 2014 in order to re-evaluate trees number 618, 625, 856, 860, and 1023 in terms of potential impacts from proposed construction. Morgan measured the crown spread in four quadrants to obtain more accurate data regarding the dripline and critical root protection zone for each tree. The actual dripline is depicted on the enclosed site plans.

Tree protection fencing should be installed at the dripline of protected trees where feasible, otherwise install protection fencing at the limits of disturbance and coordinate with the project arborist whenever work is necessary beneath tree driplines. During construction, the arborist should evaluate potential impacts beneath tree driplines on-the-ground, provide additional tree protection measures when needed, and document impacts and protection measures.

The existing grade should be maintained beneath tree driplines. The uppermost organic matter may be scraped away under arborist supervision. Where new hardscapes are proposed, a modified profile is recommended which includes a layer of permeable geotextile fabric on the ground surface and building up from native grade using clean crushed rock to the desired depth and surfacing such as concrete or asphalt. This profile is included as a detail with each of the enclosed site plans.

Approximately 3-inches of bark mulch is recommended beneath tree driplines. Where grass if proposed, grass should not be installed any closer than half the dripline radius with a grass free mulched ring surrounding tree trunks. No irrigation should be installed beneath tree driplines, but drip irrigation may be installed for shrubs and ground covers that may be planted within mulched rings. Where irrigation is necessary for grass, spray heads should be installed outside of mulched rings and directed away from tree trunks. Monitor irrigation and avoid tree root zone saturation.

Minor pruning will be needed to remove dead branches for safety. Some pruning for crown clearance may also be needed, particularly at trees 625, 856, and 1023. Coordinate with the project arborist to provide on the ground recommendations for pruning once the site is staked and prepared for construction. Pruning should be performed by a Qualified Tree Service.

City of Wilsonville
EXHIBIT B7 DB14-0002 et seq

Invasive English ivy (*Hedera helix*) should be removed from the main stem of tree 618 during landscaping.

At tree 625, protection fencing should remain at the dripline until sidewalk and manhole construction are imminent. Prior to adjusting the protection fencing to allow the proposed construction, coordinate with the project arborist. The arborist should monitor excavation and provide on-the-ground recommendations to avoid tree root impacts and provide additional recommendations as needed.

Building lots are proposed adjacent to trees 856 and 1023. Prior to home construction, the arborist should evaluate the actual building footprints proposed and provide additional recommendations for tree root protection and pruning to provide overhead clearance and avoid crown damage.

Also at tree 1023, the protection fencing should remain at the dripline until property line fence construction is imminent. Coordinate with the project arborist prior to adjusting the protection fencing. Fence post holes should be dug by hand using a post hole digger or shovel and post holes should be adjusted as feasible to avoid tree root impacts. Boards should be stockpiled and concrete should be mixed outside of protected tree driplines.

These recommendations have been incorporated as specifications on the enclosed site plans. Please contact us if you have questions or need any additional information.

This report is based on conditions existing at the time of inspection and close coordination with Pacific Community Design. The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates have assumed any responsibility for liability associated with the trees on or adjacent to the site.

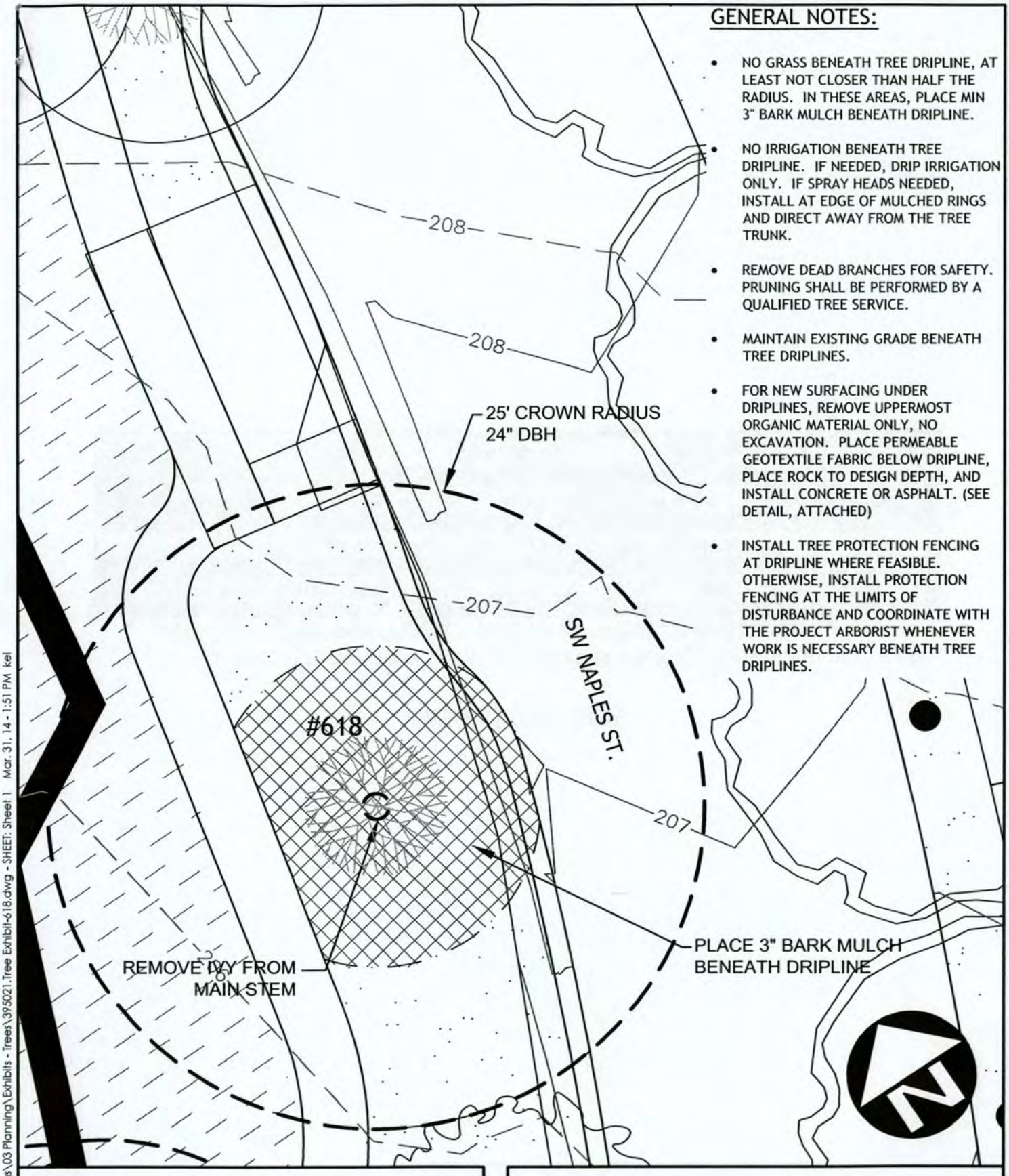
Thank you for choosing Morgan Holen & Associates to provide consulting arborist services for the Villebois SAP South, Plan Area 2 project.

Thank you,
Morgan Holen & Associates, LLC

Morgan E. Holen

Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: Site Plans for Five Important Oaks



GENERAL NOTES:

- NO GRASS BENEATH TREE DRIPLINE, AT LEAST NOT CLOSER THAN HALF THE RADIUS. IN THESE AREAS, PLACE MIN 3" BARK MULCH BENEATH DRIPLINE.
- NO IRRIGATION BENEATH TREE DRIPLINE. IF NEEDED, DRIP IRRIGATION ONLY. IF SPRAY HEADS NEEDED, INSTALL AT EDGE OF MULCHED RINGS AND DIRECT AWAY FROM THE TREE TRUNK.
- REMOVE DEAD BRANCHES FOR SAFETY. PRUNING SHALL BE PERFORMED BY A QUALIFIED TREE SERVICE.
- MAINTAIN EXISTING GRADE BENEATH TREE DRIPLINES.
- FOR NEW SURFACING UNDER DRIPLINES, REMOVE UPPERMOST ORGANIC MATERIAL ONLY, NO EXCAVATION. PLACE PERMEABLE GEOTEXTILE FABRIC BELOW DRIPLINE, PLACE ROCK TO DESIGN DEPTH, AND INSTALL CONCRETE OR ASPHALT. (SEE DETAIL, ATTACHED)
- INSTALL TREE PROTECTION FENCING AT DRIPLINE WHERE FEASIBLE. OTHERWISE, INSTALL PROTECTION FENCING AT THE LIMITS OF DISTURBANCE AND COORDINATE WITH THE PROJECT ARBORIST WHENEVER WORK IS NECESSARY BENEATH TREE DRIPLINES.

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DRAWN BY: JMH DATE: 03/27/2014

REVIEWED BY: JMH DATE: 03/27/2014

PROJECT NO.: 395-021

SCALE: 1" = 10'

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485

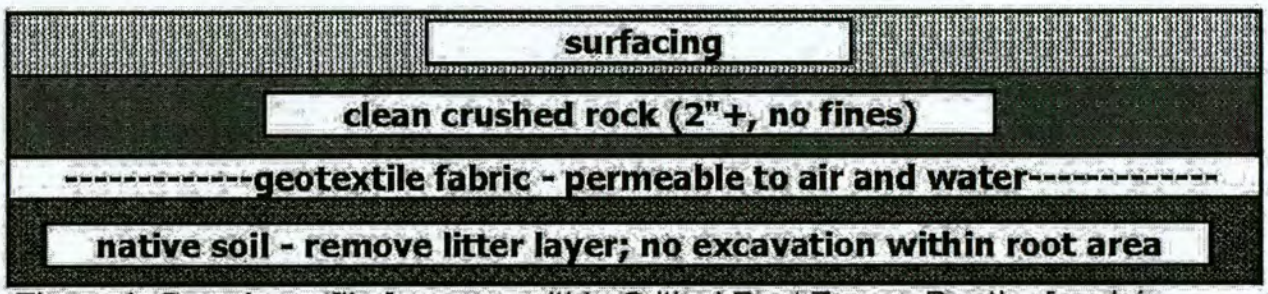

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

MODIFIED PROFILE

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DRAWN BY: JMH DATE: 03/27/2014
REVIEWED BY: JMH DATE: 03/27/2014
PROJECT NO.: 395-021
SCALE: NTS

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
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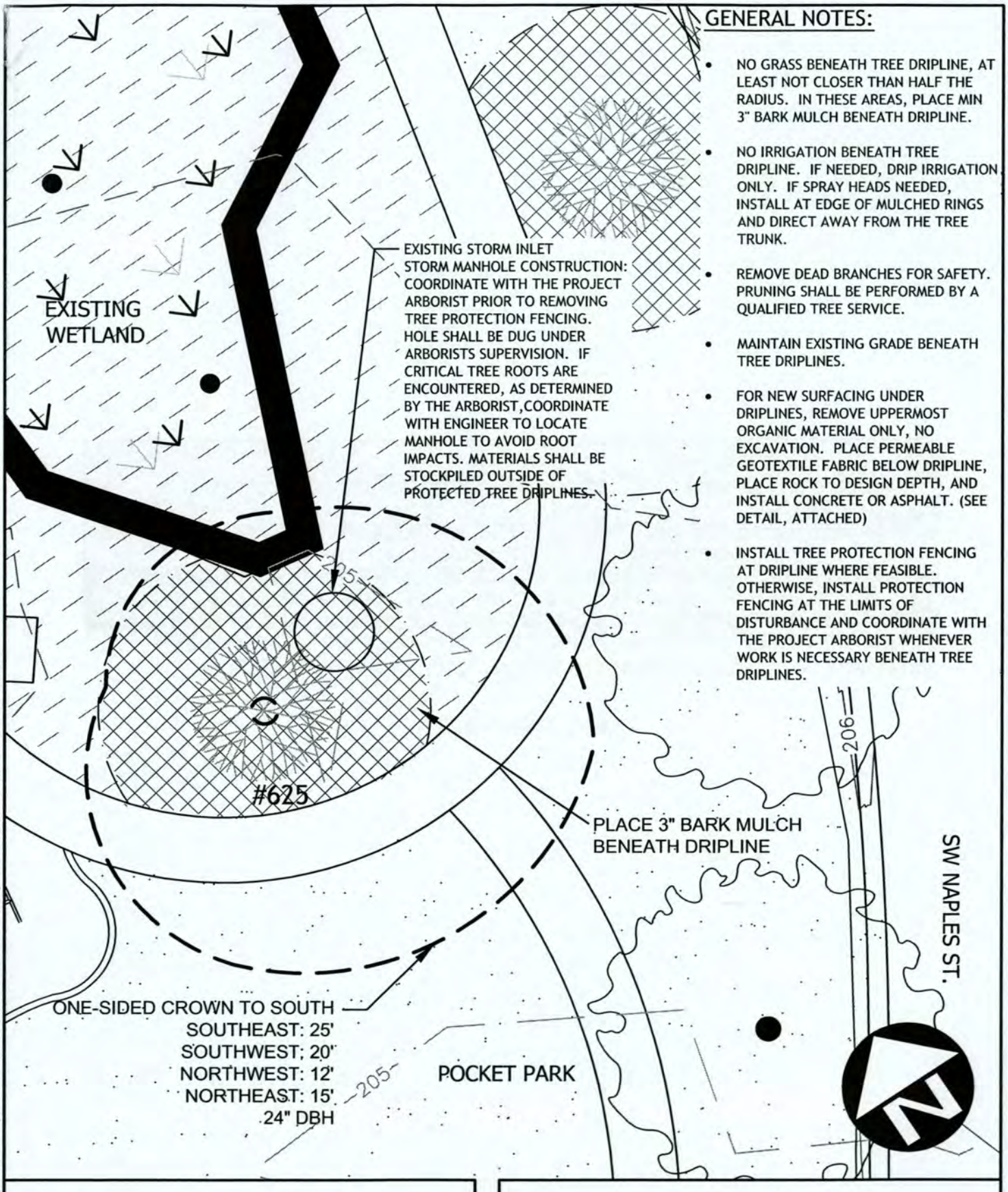
[F] 503-941-9485



GENERAL NOTES:

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DRAWN BY: JMH DATE: 03/27/2014

REVIEWED BY: JMH DATE: 03/27/2014

PROJECT NO.: 395-021

SCALE: 1" = 10'

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
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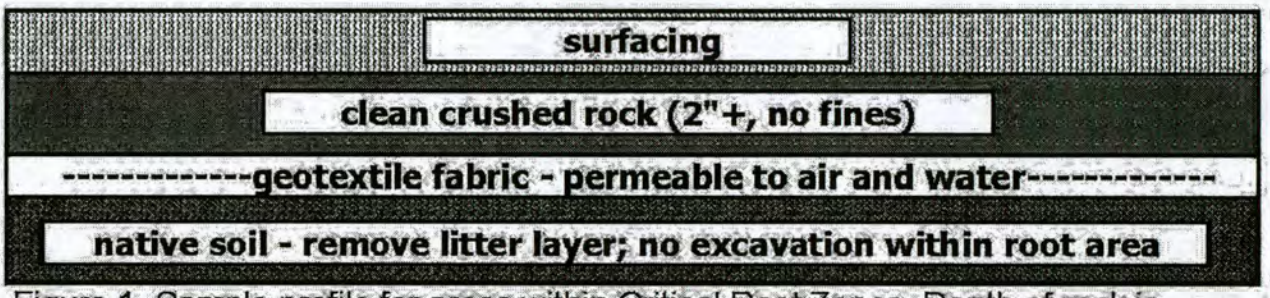

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

MODIFIED PROFILE

DRAWN BY:	JMH	DATE:	03/27/2014
REVIEWED BY:	JMH	DATE:	03/27/2014
PROJECT NO.:	395-021		
SCALE:	NTS		

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
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GENERAL NOTES:

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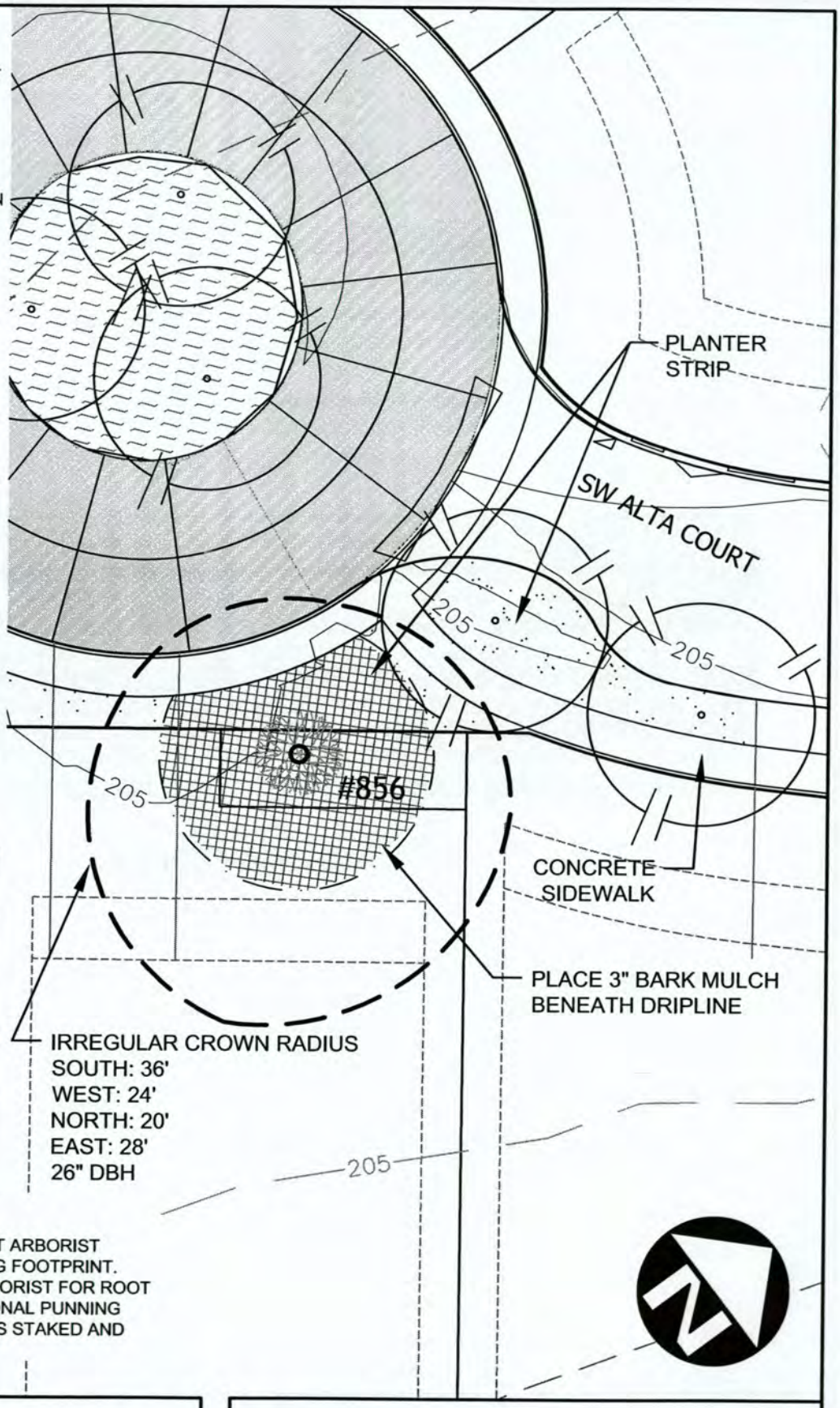

FUTURE HOME CONSTRUCTION:
FINAL RECOMMENDATION BY PROJECT ARBORIST SHALL BE BASED ON ACTUAL BUILDING FOOTPRINT. COORDINATE WITH THE PROJECT ARBORIST FOR ROOT PROTECTION MEASURES AND ADDITIONAL PUNNING RECOMMENDATIONS ONCE THE SITE IS STAKED AND PREPARED FOR BUILDING.

DRAWN BY: JMH DATE: 03/27/2014
REVIEWED BY: JMH DATE: 03/27/2014
PROJECT NO.: 395-021
SCALE: 1" = 20'

Pacific Community Design
12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485

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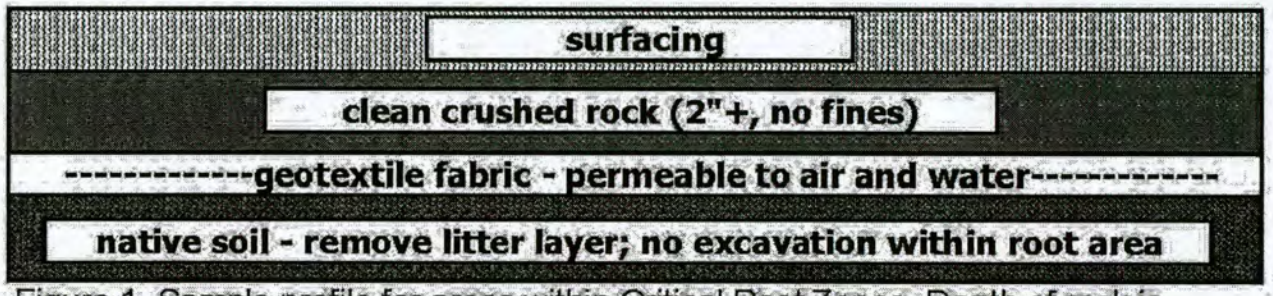

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

MODIFIED PROFILE

DRAWN BY: JMH DATE: 03/27/2014
REVIEWED BY: JMH DATE: 03/27/2014
PROJECT NO.: 395-021
SCALE: NTS

Pacific Community Design

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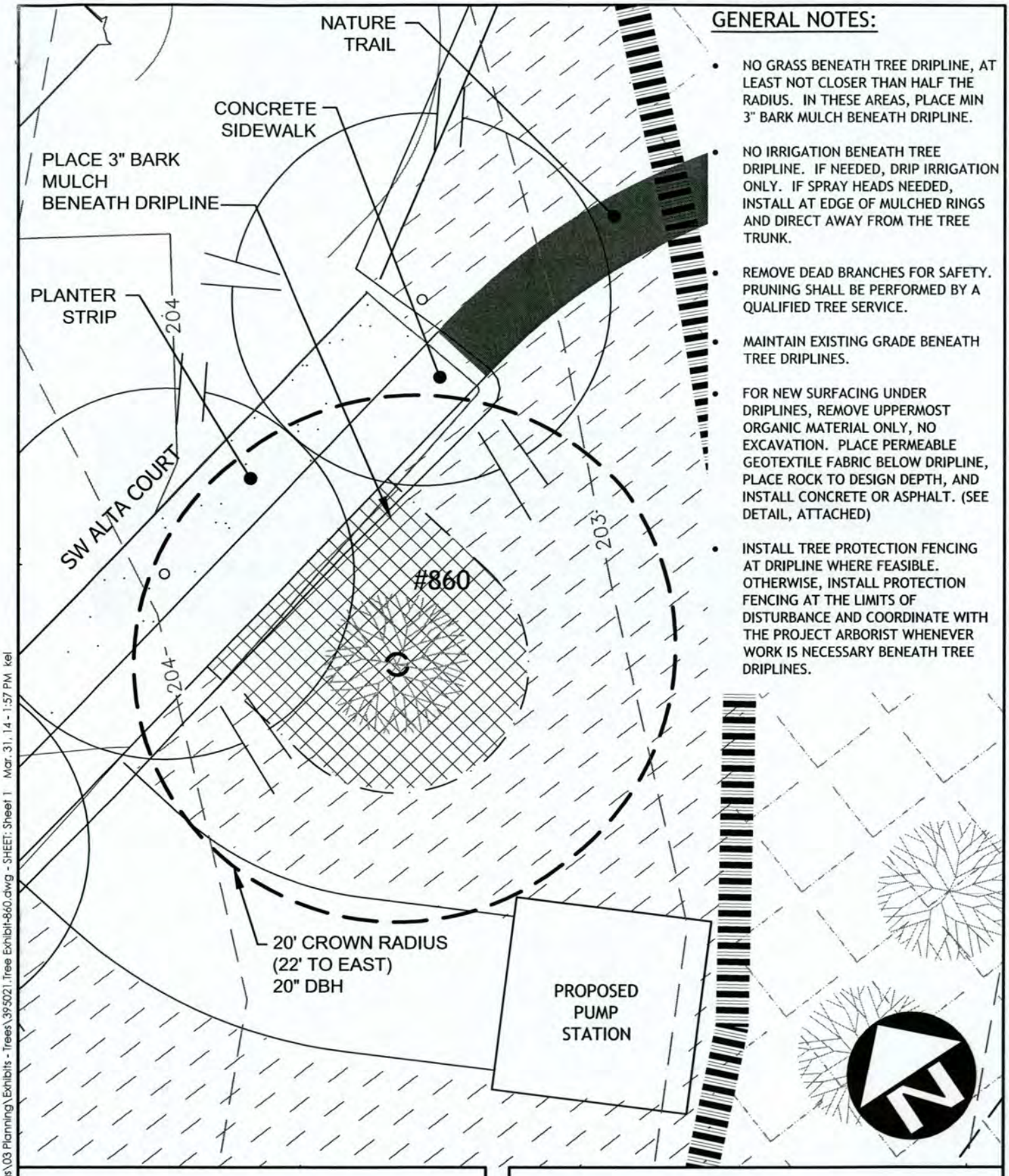

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DRAWN BY: JMH DATE: 03/27/2014

REVIEWED BY: JMH DATE: 03/27/2014

PROJECT NO.: 395-021

SCALE: 1" = 10'

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485

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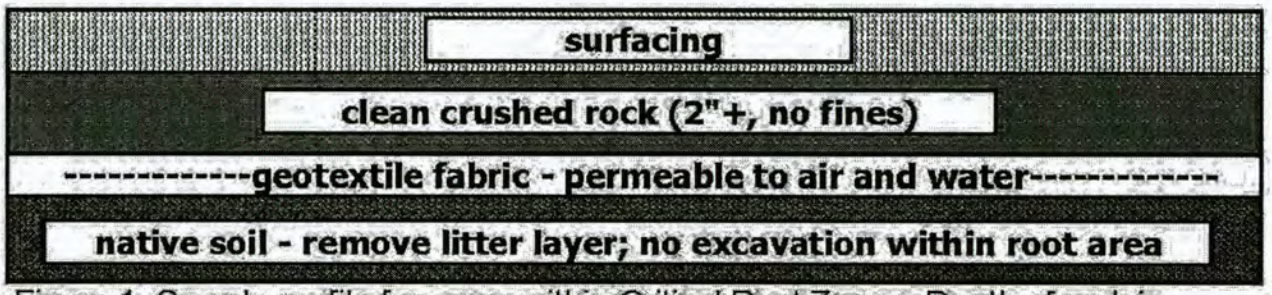

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

MODIFIED PROFILE

N:\proj\395-021\09 Drawings\03 Planning\Exhibits - Trees\395021.Tree Exhibit-860.dwg - SHEET: Sheet 2 Mar. 31, 14 - 4:11 PM kel

DRAWN BY: JMH DATE: 03/27/2014
REVIEWED BY: JMH DATE: 03/27/2014
PROJECT NO.: 395-021
SCALE: NTS

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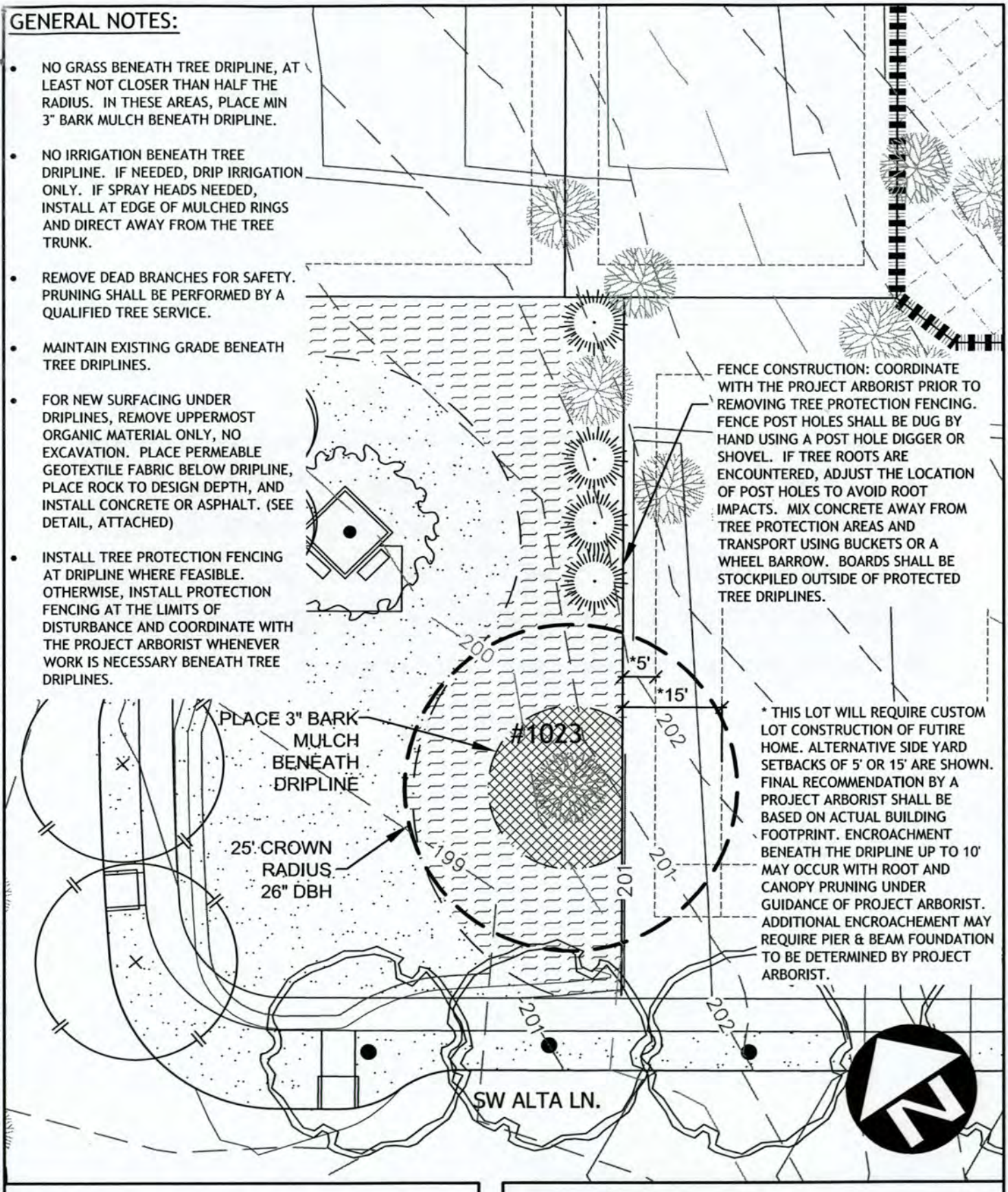
- REMOVE DEAD BRANCHES FOR SAFETY. PRUNING SHALL BE PERFORMED BY A QUALIFIED TREE SERVICE.
- MAINTAIN EXISTING GRADE BENEATH TREE DRIPLINES.
- FOR NEW SURFACING UNDER DRIPLINES, REMOVE UPPERMOST ORGANIC MATERIAL ONLY, NO EXCAVATION. PLACE PERMEABLE GEOTEXTILE FABRIC BELOW DRIPLINE, PLACE ROCK TO DESIGN DEPTH, AND INSTALL CONCRETE OR ASPHALT. (SEE DETAIL, ATTACHED)
- INSTALL TREE PROTECTION FENCING AT DRIPLINE WHERE FEASIBLE. OTHERWISE, INSTALL PROTECTION FENCING AT THE LIMITS OF DISTURBANCE AND COORDINATE WITH THE PROJECT ARBORIST WHENEVER WORK IS NECESSARY BENEATH TREE DRIPLINES.



DRAWN BY: JMH DATE: 03/27/2014

REVIEWED BY: JMH DATE: 03/27/2014

PROJECT NO.: 395-021

SCALE: 1" = 20'

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
[F] 503-941-9485

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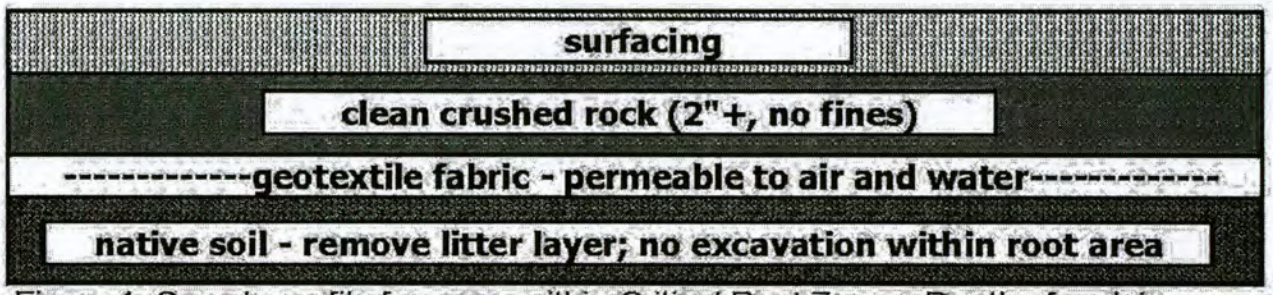

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

MODIFIED PROFILE

DRAWN BY: JMH DATE: 03/27/2014
REVIEWED BY: JMH DATE: 03/27/2014
PROJECT NO.: 395-021
SCALE: NTS

Pacific Community Design

12564 SW Main St
Tigard, OR 97223
[T] 503-941-9484
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Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC

GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

City of Wilsonville
EXHIBIT B8 DB14-0002 et seq

Conservation
Easement Exhibit

DATE 03/24/2014

1.1

LEGEND:

I	IMPORTANT
G	GOOD
M	MODERATE
P	POOR
NE	NOT EXAMINED
- - - - -	CONSERVATION EASEMENT
	EXISTING TREES TO REMAIN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

LT LT LT L/G OS PP

MATCH LINE: - SEE SHEET 1.1

SCALE
60 0 30 60
1 INCH = 60 FEET

N:\proj\395-021\09 Drawings\03 Planning\Exhibits - Trees\395021 Conservation Easement Trees.dwg - SHEET: 22x34 (2) Mar. 25, 14 - 1:49 PM jmh

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Conservation Easement Exhibit

DATE 03/24/2014

1.2

Open Space 3 (OS-3): Forested Wetland Preserve (21.48 Acres)
Preserves existing functional wetlands and wildlife habitat within SROZ areas. Includes smaller soft surface nature trails, with benches and nature trail activity areas that meander through the forest and link with neighborhoods to the north and east and to trails in the Graham Oaks Nature Area to the east and south. Nature trails, benches and nature trail activity areas will comply with SROZ regulations and any impacts will be mitigated through SROZ enhancement and/or creation.

Pocket Park 16 (PP-16) (0.89 Acres)
Provides a neighborhood focal point and gathering spot, connections to nature trail system, and opportunities for creative play through interaction with a non-locally significant wetland and an active lawn area located to complement child play structures. Includes child play structures for younger and older-aged children, a sheltered seating area and hardscape plaza, hardscape paths, and benches.

Linear Greens (LG) (1.14 Acres)
Provides visual and physical linkages to the neighborhood gathering spot and the nature trail system within Open Space areas. Includes small patches of lawn areas, seating areas and small creative play features. Provides aesthetic appeal of open space, a sense of place, and safer pedestrian environment along major road from Grahams Ferry Road site entrance.

LEGEND

- BENCH
- SCORED CONCRETE SIDEWALK CAST IN PLACE
- 20 X 20 SHELTER
- PICNIC TABLE
- TRASH RECETACLE
- 4 TOP TABLE AND CHAIR
- STEPPING STONES CAST IN PLACE
- BIRD STAND / HOUSE
- BIKE RACK
- SOFT SURFACE NATURE TRAIL
- PLAY EQUIPMENT
- NATIVE PLANTING
- LOW ORNAMENTAL PLANTING
- LAWN
- EXITING PLANTING TO REMAIN INVASIVES TO BE REMOVED
- 3' DEPTH BARK MULCH

NOTE:
THE SYMBOLS SHOWN ON THE PLAN REPRESENTING SITE FURNISHINGS HAVE BEEN PROVIDED TO GUIDE FOR FUTURE DESIGN AND PLANTING EFFORTS. GENERAL LOCATIONS AND NUMBERS OF FURNISHINGS ARE TO BE CONSISTENT WITH OR EXCEED THE INTENT OF THIS PLAN. SEE THE COMMUNITY ELEMENTS BOOK FOR SITE FURNISHINGS PRODUCT INFORMATION.

1 **GRANDE POINTE SITE PLAN**

SCALE 100 0 50 100
1 INCH = 100 FEET

2 **GRANDE POINTE POCKET PARK 16**

SCALE 50 0 25 50
1 INCH = 50 FEET

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Villebois

Pacific Community Design

PHASE 7
SOUTH
VILLEBOIS

SAP SOUTH
PLAN AREA 2

City of Wilsonville
EXHIBIT B9 DB14-0002 et seq

PARK/OPEN SPACE
PATHWAYS

DATE 2/05/14

8

LEGEND:	
STD	STANDARD LOTS
M	MEDIUM LOTS
LG	LARGE LOTS
OS	OPEN SPACE
PP	POCKET PARK
L/G	LINEAR GREEN
LT	LANDSCAPE TRACT
WQ	WATER QUALITY/DETENTION

GROSS AREA = 42.8 AC

KEY MAP
NTS

N
SCALE
60 0 30 60
1 INCH = 60 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tentative Plat

DATE 01/17/2014

4.1

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1 **GRANDE POINTE PLANTING PLAN- NORTH**

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Villebois

POLYGON NW COMPANY

Pacific Community Design

PDP 7S
VILLEBOIS

Final Development Plan

PLANTING PLAN NORTH

DATE 2/05/14

L2

LEGEND:

NOTE:
1. SEE PLANT LEGEND SHEET L8 FOR ADDTIONAL INFORMATION
2. SEE STREET TREE PLAN L1 FOR ADDTIONAL INFORMATION

STREET TREES
- KATSURA TREE 2" cal.
- WINTER KING HAWTHORNE 2" cal.
- EUROPEAN BEECH 2 1/2" cal.
- AUTUMN APPLAUSE ASH 2" cal.
- CREIMEAN LINDEN 2" cal.
- GREEN VASE ZELKOVA 2" cal.
- SHADE REES 2' CAL.
- SMALL ORNAMENTAL TREES 2" CAL.
- COLUMNAR EVERGREEN TREES 8' HGT.

- PEDESTRAIN ZONE LOW ORNAMENTAL PLANTINGS ORNAMENTAL GRASSES AND GROUNDCOVERS
- MEDIUM TO LARGE ORNAMENTAL SHRUBS
- SMALL ORNAMENTAL SHRUBS
- NATIVE UNDERSTORY PLANT MIX INVASIVE SPECIES TO BE REMOVED
- WATER QUALITY FACILITY
- LAWN
- EXISTING PLANTINGS TO REMAIN INVASIVE SPECIES TO BE REMOVED
- EXISTING WETLAND TO REMAIN
- EXISTING TREES TO REMAIN
- 3" DEPTH BARK MULCH

SCALE
50 0 25 50
1 INCH = 50 FEET

1 **GRANDE POINTE PLANTING PLAN- SOUTH**

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Villebois

POLYGON NW COMPANY

Pacific Community Design

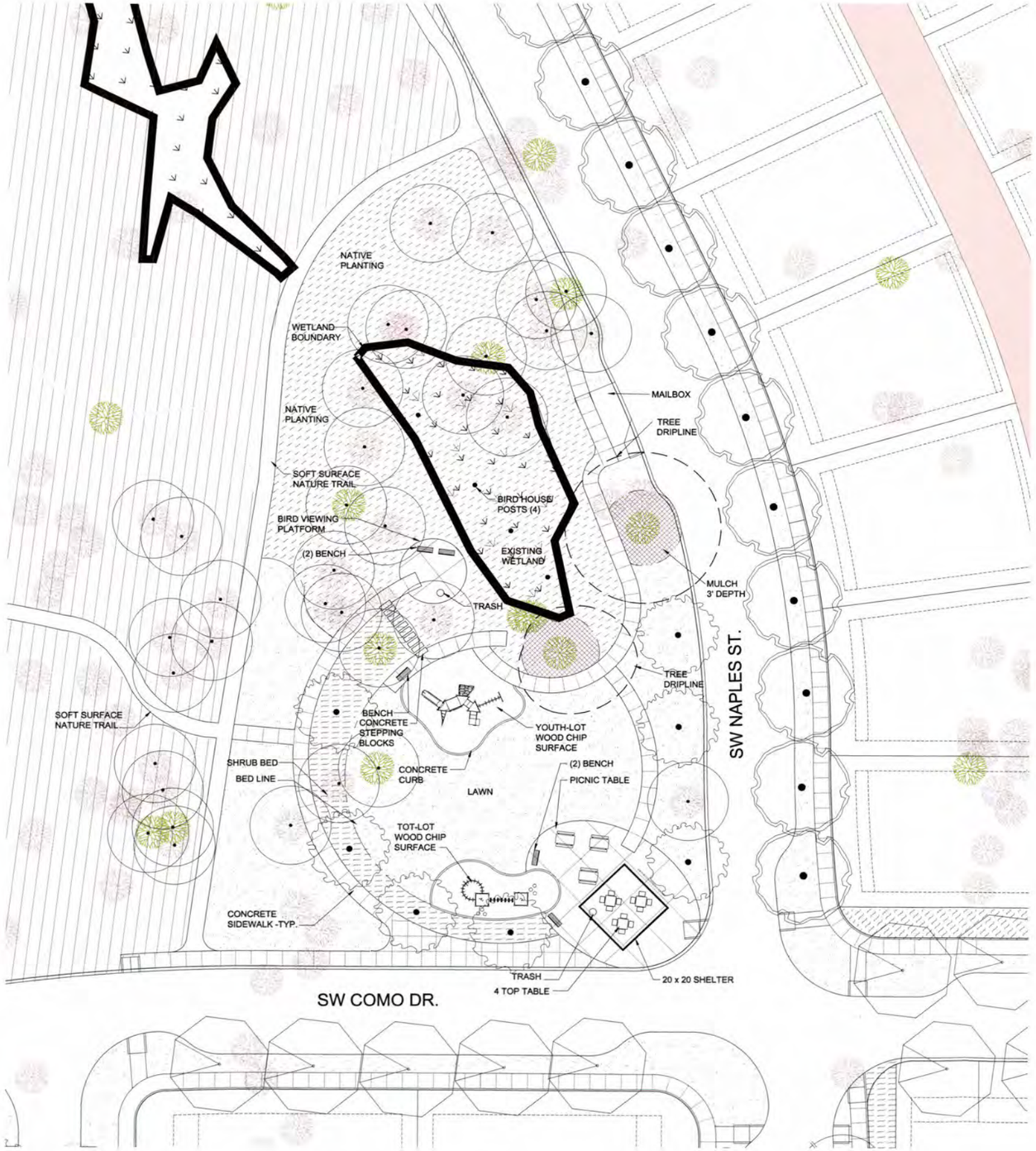
PDP 7S
VILLEBOIS

Final Development Plan

PLANTING PLAN SOUTH

DATE 2/05/14

L3



1 **GRANDE POINTE PARK PLAN**

Open Space 3 (OS-3): Forested Wetland Preserve (21.48 Acres)
Preserves existing functional wetlands and wildlife habitat within SROZ areas. Includes smaller soft surface nature trails, with benches and nature trail activity areas that meander through the forest and link with neighborhoods to the north and east and to trails in the Graham Oaks Nature Area to the east and south. Nature trails, benches and nature trail activity areas will comply with SROZ regulations and any impacts will be mitigated through SROZ enhancement and/or creation.

Pocket Park 16 (PP-16) (0.89 Acres)
Provides a neighborhood focal point and gathering spot, connections to nature trail system, and opportunities for creative play through interaction with a non-locally significant wetland and an active lawn area located to complement child play structures. Includes child play structures for younger and older-aged children, a sheltered seating area and hardscape plaza, hardscape paths, and benches.

Linear Greens (LG) (1.14 Acres)
Provides visual and physical linkages to the neighborhood gathering spot and the nature trail system within Open Space areas. Includes small patches of lawn areas, seating areas and small creative play features. Provides aesthetic appeal of open space, a sense of place, and safer pedestrian environment along major road from Grahams Ferry Road site entrance.

LEGEND

- PAVERS ALTERNATING COLORS
- 8" WIDE FREE STANDING WALL
- PLAY AREA EQUIPMENT CLIMBING FROG AND LILLY PADS
- SCORED CONCRETE SIDEWALK CAST IN PLACE
- OVERLOOK
- 20 X 20 SHELTER
- PICNIC TABLE
- TRASH RECETACLE
- 4 TOP TABLE AND CHAIR
- STEPPING STONES CAST IN PLACE
- BIRD STAND / HOUSE
- BIKE RACK
- SOFT SURFACE NATURE TRAIL
- ENTRY MONUMENT
- PLAY EQUIPMENT
- 3" DEPTH BARK MULCH
- ORNAMENTAL GRASSES
- NATIVE PLANTING
- LOW PEDESTRIAN ZONE PLANTING
- LOW ORNAMENTAL PLANTING
- MEDIUM ORNAMENTAL PLANTING
- LAWN
- EXITING PLANTING TO REMAIN INVASIVES TO BE REMOVED

NOTES:
1.) SEE PLANT LEGEND SHEET L8 FOR ADDITIONAL INFORMATION
2.) LOTS ABUTTING SROZ OPEN SPACE ARE TO HAVE 6' FULL VIEW FENCING ALONG SIDE AND REAR LOT LINES

GENERAL NOTE:
THE SYMBOLS SHOWN ON THE PLAN REPRESENTING SITE FURNISHINGS HAVE BEEN PROVIDED TO GUIDE FOR FUTURE DESIGN AND PLANTING EFFORTS. GENERAL LOCATIONS AND NUMBERS OF FURNISHINGS ARE TO BE CONSISTENT WITH OR EXCEED THE INTENT OF THIS PLAN. SEE THE COMMUNITY ELEMENTS BOOK FOR SITE FURNISHINGS PRODUCT INFORMATION.

SCALE
20 0 10 20
1 INCH = 20 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

PDP 7S
VILLEBOIS

Final Development Plan

POCKET PARK 16
PARK PLAN

DATE 2/05/14

L4

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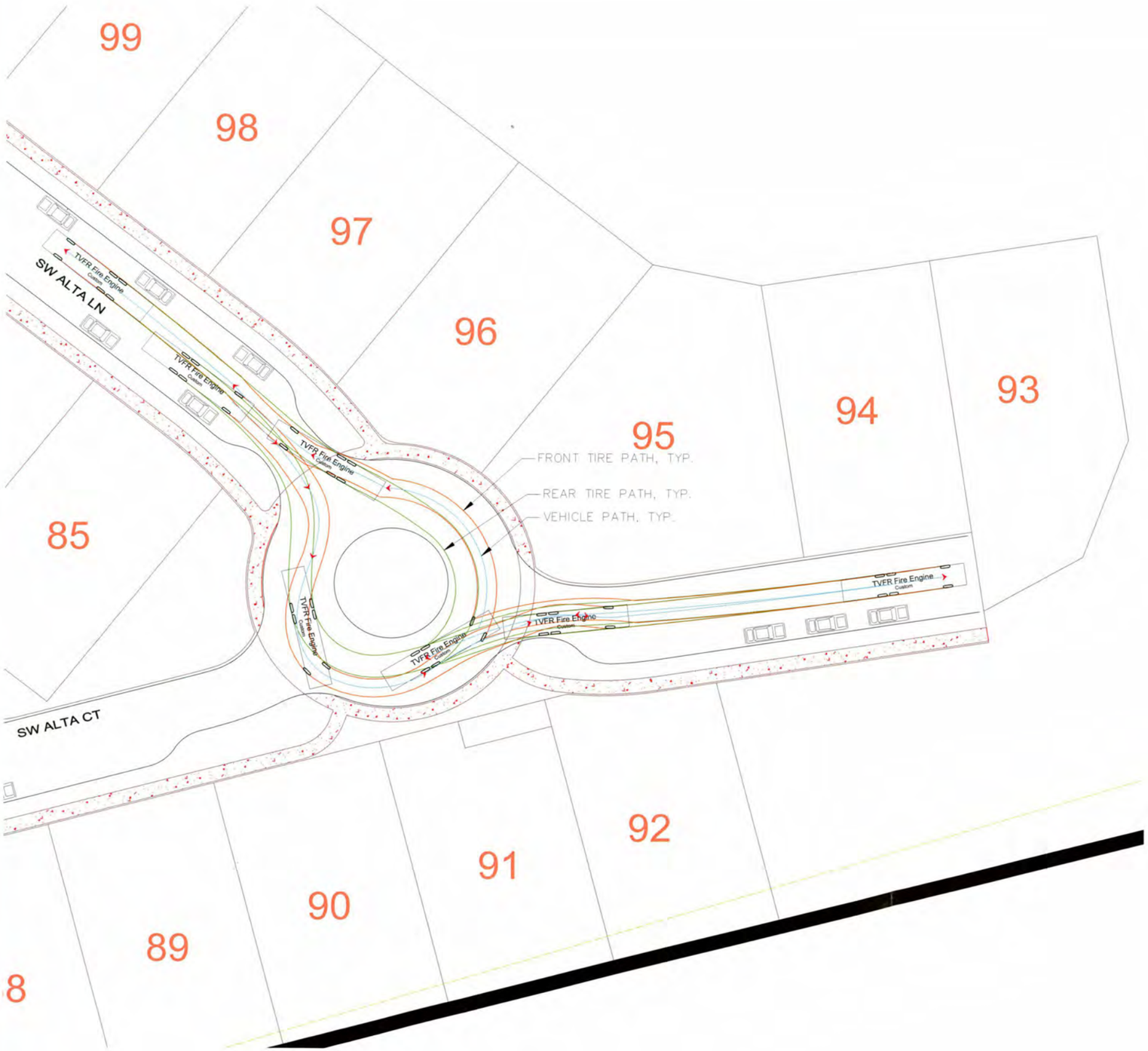
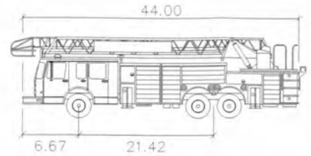




TVFR Fire Engine

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

SCALE
20 0 10 20
1 INCH = 20 FEET

N:\proj\395-021\09 Drawings\03 Planning\Exhibits\395021 Fire Truck AutoTURN Exhibit.dwg - SHEET: 22x34 (1) Apr. 3, 14 - 2:15 PM pre

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

City of Wilsonville
EXHIBIT B10 DB14-0002 et seq

Fire Truck
Access Exhibit

DATE 4/2/2014

A

Exhibit A1

STAFF REPORT
WILSONVILLE PLANNING DIVISION

Polygon Homes- Grande Pointe at Villebois

DEVELOPMENT REVIEW BOARD PANEL 'A'
QUASI-JUDICIAL PUBLIC HEARING
STAFF REPORT

HEARING DATE	April 14, 2014
DATE OF REPORT:	April 7, 2014

APPLICATION NOS.: DB14-0002 SAP-South Amendment for Plan Area 2
DB14-0003 SAP-South PDP 7, Preliminary Development Plan
DB14-0004 Zone Map Amendment
DB14-0005 Tentative Subdivision Plat
DB14-0006 Type C Tree Plan
DB14-0007 Final Development Plan for Parks and Open Space
SI14-0002 SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

REQUEST/SUMMARY: The Development Review Board is being asked to review a Villebois Specific Area Plan Amendment to add a Plan Area 2 to Specific Area Plan South, Preliminary Development Plan, Zone Map Amendment, Tentative Subdivision Plat, Type C Tree Plan, Final Development Plan, and Significant Resource Overlay Zone (SROZ) Map Refinement, SRIR Review, and SROZ Boundary Verification for a 100-lot residential subdivision, and associated parks and open space and other associated improvements.

LOCATION: 29500 SW Grahams Ferry Road. East side of road ¾ miles south of SW Tooze Road. Southwest of current Villebois development, northwest of Graham Oaks Nature Park.. The property is specifically known as Tax Lots 2800 and 2890, Section 15, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon.

OWNER: Bo Oswald, Northwest Wilsonville Properties LLC

APPLICANT: Fred Gast, Polygon NW Company

APPLICANT'S REP.: Stacy Connery AICP, Pacific Community Design, Inc.

COMPREHENSIVE PLAN MAP DESIGNATION: Residential-Village

ZONE MAP CLASSIFICATIONS: PF (Public Facility)

STAFF REVIEWERS: Daniel Pauly AICP, Associate Planner
Steve Adams PE, Development Engineering Manager
Kerry Rappold, Natural Resource Program Manager
Don Walters, Building Plans Examiner

STAFF RECOMMENDATIONS: **Approve with conditions** the requested SAP Amendment, Preliminary Development Plan, Tentative Subdivision Plat, Tree Removal Plan, Final Development Plan for Parks and Open Space, SROZ Map Refinement, SRIR Review, and SROZ Boundary Verification. **Recommend approval** of the requested Zone Map Amendment to City Council.

APPLICABLE REVIEW CRITERIA

DEVELOPMENT CODE	
Section 4.008	**Application Procedures-In General**
Section 4.009	**Who May Initiate Application**
Section 4.010	**How to Apply**
Section 4.011	**How Applications are Processed**
Section 4.014	**Burden of Proof**
Section 4.031	**Authority of the Development Review Board**
Section 4.033	**Authority of City Council**
Subsection 4.035 (.04)	**Site Development Permit Application**
Subsection 4.035 (.05)	**Complete Submittal Requirement**
Section 4.110	**Zones**
Section 4.113	**Residential Development in Any Zone**
Section 4.125	**V-Village Zone**
Sections 4.139.00 through 4.139.11 as applicable	**Significant Resource Overlay Zone (SROZ)**
Section 4.154	**Bicycle, Pedestrian, and Transit Facilities**
Section 4.155	**Parking, Loading, and Bicycle Parking**
Section 4.167	**Access, Ingress, and Egress**
Section 4.169	**General Regulations-Double Frontage Lots**
Section 4.171	**Protection of Natural Features and Other Resources**
Section 4.175	**Public Safety and Crime Prevention**
Section 4.176	**Landscaping, Screening, and Buffering**
Section 4.177	**Street Improvement Standards**
Section 4.197	**Zone Changes and Amendments to Development Code-Procedures**
Sections 4.200 through 4.220	**Land Divisions**
Sections 4.236 through 4.270	**Land Division Standards**
Sections 4.300 through 4.320	**Underground Utilities**
Sections 4.400 through 4.440 as applicable	**Site Design Review**
Sections 4.600 through 4.640.20 as applicable	**Tree Preservation and Protection**
OTHER PLANNING DOCUMENTS	
Comprehensive Plan	
Villebois Village Master Plan	
SAP South Approval Documents	

Vicinity Map

BACKGROUND/SUMMARY:

SAP South Amendment for Plan Area 2 (DB14-0002)

The proposed Specific Area Plan (SAP) amendment for Specific Area Plan (SAP) South seeks to add Plan Area 2, which is the subject property, into SAP South. The amendment will allow application of the existing planning tools used to guide development of SAP South to development of Plan Area 2. These planning tools include an Architectural Pattern Book, Community Elements Book, Master Signage and Wayfinding Plan, and Rainwater Management Book.

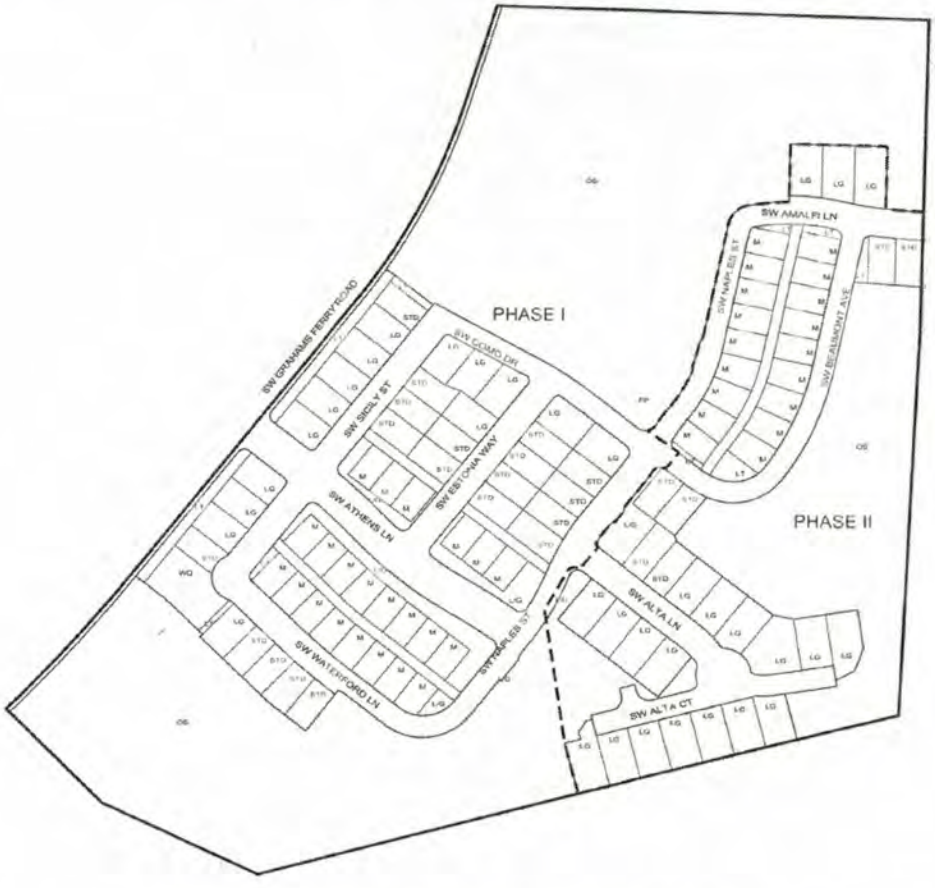
Plan Area 2 is also known as the 'Future Study Area' in the Villebois Village Master Plan. The Master Plan was amended in October 2013 to update the 'Future Study Area' with a residential land use plan and associated details and information to guide the subsequent review stages for proposed development of this property. In Figure 3, Conceptual Specific Area Plan Boundaries, of the amended Villebois Village Master Plan the subject property is shown as part of Specific Area Plan South.

A number of minor refinements to the Master Plan are proposed as design of the proposed development has progressed. All refinements meet the test of not being significant as defined in Subsection 4.125 (.18) F. and therefore can be approved as part of the SAP Amendment request. The refinements include adding subtle curves to certain streets, minor changes to size and

amenities within parks and open space, and clarification of the residential unit count (100 units proposed).

PDP 7S Preliminary Development Plan (DB14-0003)

The proposed Preliminary Development Plan 7 of Specific Area Plan South (also known as Grande Pointe at Villebois) comprises 42.76 acres. The applicant proposes a variety of larger single-family housing types totaling 100 units, 24.06 acres of parks and open space, 6.83 acres of public streets, and associated infrastructure improvements. The front of all the houses will face tree lined streets, parks and green spaces. The applicant plans on building the project in two phases, Phase 1 being 56 homes in the western portion of the project, Pocket Park 16 and the northern and southern open space, and Phase II being 44 homes on the eastern portion of the project and the remaining open space and linear greens.



Proposed Housing Type	Number of Units
Large Size Single Family	35
Standard Size Single Family	25
Medium Size Single Family	40
Total	100

Zone Map Amendment (DB14-0004)

The zoning proposal is to change the current PF zone, a remnant of the former uses, to the Village (V) zone. The proposed residential and park uses are permitted in the Village zone. The Village zone has been applied to all of Villebois as it has developed.

Tentative Subdivision Plat (DB14-0005)

The applicant is proposing the subdivision of the properties into 100 residential lots, along with alleys, parks areas, and street rights-of-way. The name of the proposed subdivision approved by Clackamas County is "Grande Pointe at Villebois."

Type C Tree Plan (DB14-0006)

The preservation of on-site trees was an important factor in the design of PDP 7 South. To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within areas previously impacted by development. A majority of the site trees are preserved within the proposed conservation easement area. Trees were only inventoried within and around the proposed development footprint.

The proposed tree preservation plan seeks to preserve the maximum quantity of trees rated "Important" and "Good," per Villebois Village Master Plan Chapter 3, Implementation Measure 9. In addition, the City's tree ordinance emphasizes preservation of Oregon White Oak and Native Yew trees. The Tree Report demonstrates most of the inventoried trees are in "Poor" condition (50%) or "Moderate" condition (28%). Of trees inventoried, 19% are rated in "Good" condition and 3% are rated in "Important" condition. Four (4) of the twenty-four (24) "Important" trees inventoried are proposed for removal for construction. All inventoried "Important" trees are Oregon White Oak. Of the one hundred fifty-four (154) inventoried "Good" trees one hundred and one (101) are proposed for removal. Only five (5) of the "Good" trees proposed for removal are Oregon White Oak. Twelve (12) "Good" Oregon White Oak trees are proposed for preservation. Douglas-fir is the predominant species of "Good" trees being removed. In addition four (4) "Good" trees are listed as "likely to remove". Two (2) of these trees are Oregon White Oak. The determination to remove trees was based upon an assessment of which trees were necessary to remove due to the poor or hazardous health of the tree, whether or not they interfered with the health of other trees, and whether removal is necessary for utility work or the construction of houses.

	General Condition Rating				Total
Treatment Recommendation	P	M	G	I	
Retain	109	101	49	20	**279** (34.4%)
Remove	286	121	101	4	**512** (63.1%)
Likely to be Removed	7	9	4	0	**20** (2.50%)
Total	**402** (50%)	**231** (28%)	**154** (19%)	**24** (3%)	**811** (100%)

Final Development Plan for Parks and Open Space (DB14-0007)

Details have been provided for all the parks and open space matching the requirements of the Community Elements Book. Street trees, curb extensions, street lights, and mail kiosks are also shown conforming to the Community Elements Book.

DISCUSSION TOPICS:

Courtyard Fencing

In order to increase consistency with the Architectural Pattern Book and other development elsewhere in Villebois a condition of approval requires courtyard fencing consistent with the pattern book and the architectural style of the home on thirty-percent of the lots. The courtyard fences are especially encouraged for lots facing linear greens and alley loaded lots.

Traffic on Villebois Drive

Understandably, neighbors in the adjoining development are concerned about increased traffic on neighboring streets including Villebois Drive, including the comments in Exhibit D1 and D2. Staff has not identified capacity issues with Villebois Drive or any improvements on adjoining residential streets that would be triggered by this development.

Ensuring Preservation of "Good" and "Important" Oregon White Oak Trees

An implementation measure from the Villebois Village Master Plan states in part, "The design of Villebois shall retain the maximum number of existing trees practicable that are six inches or more DBH in the "Important" and "Good" tree rating categories, which are defined in the Community Elements Books." Native species of trees and trees with historical importance shall be given special consideration for retention." Oregon White Oak is among the species of native trees prioritized for retention. The subject site includes a number of Oregon White Oak trees rated as "Good" or "Important". While many of these trees are preserved within the proposed conservation easement covering the area of the site within the Significant Resource Overlay Zone (SROZ), a number are not. They are included in park areas, open spaces, and yards.

The City has extensive experience preserving trees in Villebois and in the City in general. Through the experience the City has learned a number of lessons. The City has learned trees are too often damaged during construction by improper utility and other work within the root zone. The City has learned too over watering, either by improper irrigation or by temporary or permanent grading get be detrimental to the health of preserved trees. The City has learned that preserved trees are a community and neighborhood resource and amenity and their upkeep and maintenance can be a burden on individual homeowners over time.

Based on the special value of the preserved "Good" and "Important" Oregon White Oak trees and past experience with tree preservation a number of Conditions of Approval are being imposed to ensure the proper preservation and long-term maintenance of these trees. These conditions require tree preservation easements where the trees are entirely or partially within private yards and assigns maintenance to the homeowners association rather than the private

homeowners. Also, the easements restrict inappropriate landscaping and irrigation around the preserved trees. A condition requires specific setbacks on certain lots to minimize impact within the root zones of the preserved trees. A condition address using caution when placing fence posts around preserved trees. Another condition requires boring for installation of utilities to avoid the roots of "Important" and "Good' Trees. Finally, a condition requires bilingual signs on the tree preservation fencing for "Important" and "Good" Oregon White Oaks stating the penalty for damaging the tree may be up to the assessed value of the tree as determined by a tree valuation report required to be submitted as part of the tree removal permit.

CONCLUSION AND CONDITIONS OF APPROVAL:

Staff has reviewed the applicant's analysis of compliance with the applicable criteria. This Staff report adopts the applicant's responses as Findings of Fact except as noted in the Findings. Based on the Findings of Fact and information included in this Staff Report, and information received from a duly advertised public hearing, staff recommends that the Development Review Board approve the proposed applications (DB14-0002, DB14-0003, DB14-0005, DB14-0006, DB14-00017, and SI14-0002) and recommend approval of the zone map amendment to City Council (DB14-0004) with the following conditions:

REQUEST A: DB14-0002 SAP South Plan Area 2 Amendments

Planning Division Conditions:	
PDA 1.	Prior to development of the open space in Phase 2 the applicant shall work with Metro to develop appropriate interface enhancements for trail connections with Graham Oaks Nature Park and shall provide the City with a copy of correspondence from Metro either approving or denying a connecting trail on Metro property.

REQUEST B: DB14-0003 SAP-South PDP 7, Preliminary Development Plan

Planning Division Conditions:	
PDB 1.	Approval of DB14-0003 SAP-South PDP 7, Preliminary Development Plan is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004)
PDB 2.	Street lighting types and spacing shall be as shown in the Community Elements Book. See Finding B28.
PDB 3.	All park and open improvements approved by the Development Review Board within Phase I (Phasing Shown on Sheet 11 of Exhibit B4) shall be completed prior the issuance of the twenty-eight (28th) house permit for the phase. All park and open space improvements approved by the Development Review Board within Phase II (Phasing Shown on Sheet 11 of Exhibit B4) shall be completed prior the issuance of the twenty-second (22nd) house permit for the phase. If weather or other special circumstances prohibit completion, bonding for the improvements will be permitted. See Finding B57.
PDB 4.	The applicant/owner shall enter into an Operations and Maintenance Agreement for the subdivision that clearly identifies ownership and maintenance for parks and open space, paths, and natural area tracts. Such agreement shall ensure maintenance in perpetuity and shall be recorded with the subdivision for 'Grande Pointe at Villebois.' Such agreement shall be reviewed and approved by the City Attorney prior to recordation. See also Finding F4.

PDB 5.	The applicant/owner shall install courtyard fencing in the front yard of no less than thirty percent (30%) of the houses, which is thirty (30) of the one hundred (100) houses. The applicant/owner is especially encouraged to place the courtyards in the front yard of homes facing linear greens and pocket parks that do not have a porch as well as alley loaded homes. The design and placement of the required courtyard fencing shall be consistent with the Architectural Pattern Book and the architectural style of the house. The courtyard area enclosed by the fence shall not exceed a five (5) percent slope from front building line of the house to the point of the courtyard closest to the front lot line or between the points of the courtyard closest to opposite side lot lines. Where necessary, the applicant shall install dry stack rock or brick wall along the front or side of the lot to ensure a five (5) percent or less slope is maintained. See Finding B25.
PDB 6.	Where a building foundation is exposed in the public view shed more than would be typical on a level lot, the foundation shall have a brick or stone façade matching the design of the house.

REQUEST C: DB14-0004 Zone Map Amendment

Planning Division Conditions:
This action recommends adoption of the Zone Map Amendment to the City Council for the subject properties. Case files DB14-0003, DB14-0005, DB14-0006, and DB14-0007 are contingent upon City Council's action on the Zone Map Amendment request.

REQUEST D DB14-0005 Tentative Subdivision Plat

Planning Division Conditions:	
PDD 1.	Approval of DB14-0005 Tentative Subdivision Plat is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDD 2.	Any necessary easements or dedications shall be identified on the Final Subdivision Plat.
PDD 3.	If one or more of the park/open space tracts are to be dedicated to the City or other public entity, this dedication(s) shall also be executed and recorded with the Final Plat.
PDD 4.	Alleyways shall remain in private ownership and be maintained by the Homeowner's Association established by the subdivision's CC&Rs. The CC&R's shall be reviewed and approved by the City Attorney prior to recordation.
PDD 5.	The Final Subdivision Plat shall indicate dimensions of all lots, lot area, minimum lot size, easements, proposed lot and block numbers, parks/open space by name and/or type, and any other information that may be required as a result of the hearing process for PDP-7S or the Tentative Plat.
PDD 6.	A non-access reservation strip shall be applied on the final plat to those lots with access to a public street and an alley. All lots with access to a public street and an alley must take vehicular access from the alley to a garage or parking area. A plat note effectuating that same result can be used in the alternative. The applicant shall work with the County Surveyor and City Staff regarding appropriate language. See Finding D3.
PDD 7.	All reserve strips and street plugs shall be detailed on the Final Subdivision Plat. See

	Finding E3.
PDD 8.	All tracts shall, except those indicated for future home development, shall include a public access easement across their entirety except for the area occupied by the Sanitary Sewer Lift Station.
PDD 9.	The applicant/owner shall submit subdivision bylaws, covenants, and agreements to the City Attorney prior to recordation. See Finding D6.

REQUEST E: DB14-0006 Type C Tree Plan

Planning Division Conditions:	
PDE 1.	Approval of DB14-0006 Type C Tree Plan is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDE 2.	The property owner/applicant or their successors in interest shall grant access to the property for authorized City representatives as needed to verify the tree related information provided, to observe tree related site conditions, and to verify, once a removal permit is granted, that the terms and conditions of the permit are followed.
PDE 3.	In order to ensure proper preservation the applicant/owner shall grant easements to the City over the area within the drip lines of preserved "Important" and "Good" Oregon White Oak Trees outside the SROZ/proposed Conservation Easement on individual lots. Such easements shall be shown on the Final Plat. The applicant/owner shall enter into an easement agreement regarding these tree preservation easements which, among other provisions typical of such agreements, shall include the following provisions: • City and HOA access to inspect health of trees and condition of area within easement and perform any necessary activity to preserve trees and maintain appropriate landscaping within the easement area. • Establish HOA responsibility for landscaping and tree maintenance within the easement areas. • Limit landscaping within the tree protection easements to native plantings compatible with Oregon White Oaks. • Require temporary and permanent drainage and irrigation be designed around easement areas to optimize the amount of water in the root zone of the trees to support their health. • Require all hardscape improvements and home construction to follow the arborist recommendations in Exhibit B7. • Establish that if one of the preserved trees dies or structurally fails beyond preservation, that an additional Oregon White Oak is planted in its place. Trees requiring tree protective easements include the following trees identified in the submitted Arborist Report as seen in Exhibits B3 and B4, and B7: • Tree 509 (Lot 65) • Tree 510 (Lot 65) • Tree 1023 (Lot 100) • Tree 1257 (Lot 93) • Tree 775 (Lot 95) • Tree 799 if retained (Lot 95) • Tree 865 (Lot 92)

	• Tree 787 (Lot 94) • Tree 788 (Lot 94) • Tree 856 (Lot 91)
PDE 4.	Houses on lots with trees or drip lines listed in Condition of Approval PDE 3 shall be constructed to minimize impact on the trees and, to the extent feasible, not place foundations, or other hardscape improvements within the root zone of the trees. Pursuant to note 6 of Table V-1 in Section 4.125 WC Lots 91 and 93 can be exempt from the maximum front setback to enable tree preservation. If it is necessary to place foundations or other hardscape improvements within the root zone of the trees listed in Condition of Approval PDE 3, construction shall be coordinated with and follow recommendations of the project arborist to minimize impacts.
PDE 5.	Prior to granting a Tree Removal Permit in accordance with the proposed Tree Removal Plan the permit grantee shall file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount determined by the City to ensure compliance with the Tree Removal Permit conditions and the requirements of the Tree Preservation and Protection Ordinance. See Finding E5.
PDE 6.	Trees planted as replacement of removed trees shall be, state Department of Agriculture Nursery Grade No. 1. or better, shall meet the requirements of the American Association of Nursery Men (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade, shall be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced. See Findings E21 and E22.
PDE 7.	Solvents, building material, construction equipment, soil, or irrigated landscaping, shall not be placed within the drip line of any preserved tree, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist. See Finding E24.
PDE 8.	Before and during development, land clearing, filling or any land alteration the applicant shall erect and maintain suitable tree protective barriers which shall include the following: • 6' high fence set at tree drip lines. • Fence materials shall consist of 2 inch mesh chain links secured to a minimum of 1 ½ inch diameter steel or aluminum line posts. • Posts shall be set to a depth of no less than 2 feet in native soil. • Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. • For preserved "Important" and "Good" Oregon White Oak trees and their drip lines outside the SROZ/proposed Conservation Easement, a legible sign shall be securely fastened to the fencing in a visible location stating "Penalty for damaging this tree may be up to $(assessed value)" or substantially similar language. Such assessed value shall be based on the tree valuation report provided pursuant to Condition of Approval PDE 8. See Findings E3 and E24.
PDE 9.	The applicant/owner shall cause a tree valuation report to be prepared by the appropriate arboricultural professional establishing an assessed value for each of the preserved "Important" and "Good" Oregon White Oak outside or with drip lines

	outside the SROZ/proposed Conservation Easement as listed in Condition of Approval PDE 3. The report shall be submitted to the Planning Division together with the tree removal permit. See Finding E3.
PDE 10.	Fence posts placement within drip lines and root zones of preserved trees shall be hand dug and supervised by the project arborist. If roots are encountered alternative fence post placement is required as determined by the project arborist.
PDE 11.	Utilities, including franchise utilities, public utilities, and private utilities and service lines shall be directionally bored as necessary to avoid the root zone of preserved trees. All work within the root zone of preserved trees shall be supervised by and follow the recommendation of the project arborist.
PDE 12.	While an extensive arborist report has been completed and trees and conditions have been inventoried to determine which trees will be preserved it is understood that unforeseen tree health issues or construction situations may arise involving preserved trees, particularly preserved "Good" and "Important" trees. If such issues or situations arise the project arborist shall provide City staff with a written explanation of the measures considered to preserve the trees along with the line of reasoning that makes the preservation of the tree not feasible. Prior to further construction within the tree protection zone, the City will verify the validity of the report through review by an independent arborist to ensure that the tree cannot be preserved. If it is ultimately decided that the tree cannot be preserved by both arborists, then the developer may remove the tree, and will be required to plant one tree of the same variety at another location within the project area. If a tree listed in Condition of Approval PDE 3 is removed under the provisions of this Condition prior to recording of the Final Plat, the protective easement for the tree will not be required as well as any related setback requirements in Condition of Approval PDE 4.

REQUEST F: DB14-0007 Final Development Plan for Parks and Open Space

Planning Division Conditions:	
PDF 1.	Approval of DB14-0007 Final Development Plan for Parks and Open Space is contingent upon City Council approval of the Zone Map Amendment from Public Facility (PF) to Village (V) (Case File DB14-0004).
PDF 2.	All plant materials shall be installed consistent with current industry standards.
PDF 3.	All construction, site development, and landscaping of the parks shall be carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. Minor alterations may be approved by the Planning Division through the Class I Administrative Review process. See Finding F32.
PDF 4.	All retaining walls within the public view shed shall be a decorative stone or brick construction or veneer. Final color and material for the retaining walls shall be approved by the Planning Division through the Class I Administrative Review Process. The temporary retaining wall along the north property line shall be Lock-n-Load or Keystone-type modular block retaining wall. See Finding F37.
PDF 5.	All hand rails within the parks and open space shall be of a design similar to the approved courtyard fencing shown in the Architectural Pattern Book. Final design of any hand rails in parks and open space shall be approved by the Planning Division through the Class I Administrative Review Process. See Finding F37.
PDF 6.	All landscaping shall be continually maintained, including necessary watering,

	weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Development Review Board. See Finding F41 through F43.
PDF 7.	The applicant shall submit final parks, landscaping and irrigation plans to the City prior to construction of parks. The irrigation plan must be consistent with the requirements of Section 4.176(.07) C.
PDF 8.	Prior to occupancy of each house the Applicant/Owner shall install landscaping along the public view-sheds of each house, unless otherwise approved by the Community Development Director. Homeowners association shall contract with a professional landscape service to maintain the landscaping.
PDF 9.	The street trees on SW Alta Court shall be a variety listed in the Community Elements Book for secondary residential streets. No street trees shall be planted where there growth would interfere with Tree 856 or 860, preserved "Important" Oregon White Oak trees. See Finding F23.
PDF 10.	Street trees, as shown on the approved landscape plans, shall be planted as each house or park is built, except as noted in Condition of Approval PDF 9 above.
PDF 11.	Final construction plans for playground equipment, shelter, and other elements shall demonstrate compliance with the requirements of the Community Elements Book which have not been verified for compliance at the current level of design. See Findings F9 and F17.

REQUEST G: SROZ Map Refinement, SRIR Review, SROZ Boundary Verification

Planning Division Conditions:	
NONE	
Natural Resources Division Conditions:	
Significant Resource Overlay Zone	
NRG 1.	The applicant shall submit the SROZ refinement mapping, including the removed impact areas, as ARCGIS shape files or a compatible format.
NRG 2.	All landscaping, including herbicides used to eradicate invasive plant species and existing vegetation, in the SROZ shall be reviewed and approved by the Natural Resources Program Manager. Native plants are required for landscaping in the SROZ.
NRG 3.	Prior to any site grading or ground disturbance, the applicant is required to delineate the boundary of the SROZ. Six-foot (6') tall cyclone fences with metal posts pounded into the ground at 6'-8' centers shall be used to protect the significant natural resource area where development encroaches into the 25-foot Impact Area.
NRG 4.	Pursuant to Section 4.139.03 (.05) of the Wilsonville Code, the applicant is required to use habitat-friendly development practices (Table NR-2) to the extent practicable for any encroachment into the Significant Resource Overlay Zone and the 25-foot Impact Area. The applicant shall reduce the light spill-off into the SROZ from the proposed street lighting.
NRG 5.	Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.
NRG 6.	The applicant shall submit a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum,

	photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes ownership, the new owners will have the continued responsibilities established by this section.
NRG 7.	The Significant Resource Overlay Zone (SROZ) and mitigation area depicted on the SRIR mapping for the site shall be identified in a conservation easement. The applicant shall record the conservation easement with Clackamas County. The conservation easement shall include language prohibiting any disturbance of natural vegetation without first obtaining approval from the City Planning Division and the Natural Resources Program Manager. The conservation easement shall be reviewed by the City Attorney prior to recording.

The following Conditions of Approval are provided by the Engineering, Natural Resources, or Building Divisions of the City's Community Development Department or Tualatin Valley Fire and Rescue, all of which have authority over development approval. A number of these Conditions of Approval are not related to land use regulations under the authority of the Development Review Board or Planning Director. Only those Conditions of Approval related to criteria in Chapter 4 of Wilsonville Code and the Comprehensive Plan, including but not limited to those related to traffic level of service, site vision clearance, recording of plats, and concurrency, are subject to the Land Use review and appeal process defined in Wilsonville Code and Oregon Revised Statutes and Administrative Rules. Other Conditions of Approval are based on City Code chapters other than Chapter 4, state law, federal law, or other agency rules and regulations. Questions or requests about the applicability, appeal, exemption or non-compliance related to these other Conditions of Approval should be directed to the City Department, Division, or non-City agency with authority over the relevant portion of the development approval.

Request B: Preliminary Development Plan and Request F: Final Development Plan

Engineering Division Conditions:		
Standard Comments:		
PF 1.	All construction or improvements to public works facilities shall be in conformance to the City of Wilsonville Public Works Standards.	
PF 2.	Applicant shall submit insurance requirements to the City of Wilsonville in the following amounts:	
	Coverage (Aggregate, accept where noted)	*Limit*
	Commercial General Liability	
	General Aggregate (per project)	$ 2,000,000
	Fire Damage (any one fire)	$ 50,000
	Medical Expense (any one person)	$ 10,000
	Business Automobile Liability Insurance	
	Each Occurrence	$ 1,000,000
	Aggregate	$ 2,000,000
	Workers Compensation Insurance	$ 500,000

PF 3.	No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, right-of-way and easements have been obtained and Staff is notified a minimum of 24 hours in advance.
PF 4.	All public utility/improvement plans submitted for review shall be based upon a 22"x 34" format and shall be prepared in accordance with the City of Wilsonville Public Work's Standards.
PF 5.	Plans submitted for review shall meet the following general criteria: a. Utility improvements that shall be maintained by the public and are not contained within a public right-of-way shall be provided a maintenance access acceptable to the City. The public utility improvements shall be centered in a minimum 15-ft. wide public easement for single utilities and a minimum 20-ft wide public easement for two parallel utilities and shall be conveyed to the City on its dedication forms. b. Design of any public utility improvements shall be approved at the time of the issuance of a Public Works Permit. Private utility improvements are subject to review and approval by the City Building Department. c. In the plan set for the Public Works Permit, existing utilities and features, and proposed new private utilities shall be shown in a lighter, grey print. Proposed public improvements shall be shown in bolder, black print. d. All elevations on design plans and record drawings shall be based on NAVD 88 Datum. e. All proposed on and off-site public/private utility improvements shall comply with the State of Oregon and the City of Wilsonville requirements and any other applicable codes. f. Design plans shall identify locations for street lighting, gas service, power lines, telephone poles, cable television, mailboxes and any other public or private utility within the general construction area. g. As per City of Wilsonville Ordinance No. 615, all new gas, telephone, cable, fiber-optic and electric improvements etc. shall be installed underground. Existing overhead utilities shall be undergrounded wherever reasonably possible. h. Any final site landscaping and signing shall not impede any proposed or existing driveway or interior maneuvering sight distance. i. Erosion Control Plan that conforms to City of Wilsonville Ordinance No. 482. j. Existing/proposed right-of-way, easements and adjacent driveways shall be identified. k. All engineering plans shall be stamped by a Professional Engineer registered in the State of Oregon.
PF 6.	Submit plans in the following general format and order for all public works construction to be maintained by the City: a. Cover sheet b. City of Wilsonville construction note sheet c. General construction note sheet d. Existing conditions plan.

	e. Erosion control and tree protection plan. f. Site plan. Include property line boundaries, water quality pond boundaries, sidewalk improvements, right-of-way (existing/proposed), easements (existing/proposed), and sidewalk and road connections to adjoining properties. g. Grading plan, with 1-foot contours. h. Composite utility plan; identify storm, sanitary, and water lines; identify storm and sanitary manholes. i. Detailed plans; show plan view and either profile view or provide i.e.'s at all utility crossings; include laterals in profile view or provide table with i.e.'s at crossings; vertical scale 1"= 5', horizontal scale 1"= 20' or 1"= 30'. j. Street plans. k. Storm sewer/drainage plans; number all lines, manholes, catch basins, and cleanouts for easier reference l. Water and sanitary sewer plans; plan; number all lines, manholes, and cleanouts for easier reference. m. Detailed plan for storm water detention facility (both plan and profile views), including water quality orifice diameter and manhole rim elevations. Provide detail of inlet structure and energy dissipation device. Provide details of drain inlets, structures, and piping for outfall structure. Note that although storm water detention facilities are typically privately maintained they will be inspected by engineering, and the plans must be part of the Public Works Permit set. n. Detailed plan for water quality facility (both plan and profile views). Note that although storm water quality facilities are typically privately maintained they will be inspected by Natural Resources, and the plans must be part of the Public Works Permit set. o. Composite franchise utility plan. p. City of Wilsonville detail drawings. q. Illumination plan. r. Striping and signage plan. s. Landscape plan.
PF 7.	Prior to manhole and sewer line testing, design engineer shall coordinate with the City and update the sanitary and stormwater sewer systems to reflect the City's numbering system. Video testing and sanitary manhole testing will refer to the updated numbering system. Design engineer shall also show the updated numbering system on As-Built drawings submitted to the City.
PF 8.	The applicant shall install, operate and maintain adequate erosion control measures in conformance with the standards adopted by the City of Wilsonville Ordinance No. 482 during the construction of any public/private utility and building improvements until such time as approved permanent vegetative materials have been installed.
PF 9.	Applicant shall work with City's Natural Resources office before disturbing any soil on the respective site. If 5 or more acres of the site will be disturbed applicant shall obtain a 1200-C permit from the Oregon Department of Environmental Quality. If 1 to less than 5 acres of the site will be disturbed a 1200-CN permit from the City of Wilsonville is required.
PF 10.	To lessen the impact of the proposed project on the downstream storm drain system, and adjacent properties, project run-off from the site shall be detained and limited to

	the difference between a developed 25-year storm and an undeveloped 25-year storm. The detention and outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PF 11.	A storm water analysis prepared by a Professional Engineer registered in the State of Oregon shall be submitted for review and approval by the City to address appropriate pipe and detention facility sizing.
PF 12.	The applicant shall be in conformance with all water quality requirements for the proposed development per the Public Works Standards. If a mechanical water quality system is used, prior to City acceptance of the project the applicant shall provide a letter from the system manufacturer stating that the system was installed per specifications and is functioning as designed.
PF 13.	Storm water quality facilities shall have approved landscape planted and/or some other erosion control method installed and approved by the City of Wilsonville prior to streets and/or alleys being paved.
PF 14.	The applicant shall provide the City with a Stormwater Maintenance and Access Easement (on City approved forms) for City inspection of those portions of the storm system to be privately maintained. Applicant shall maintain all LID storm water components and private conventional storm water facilities located within medians and from the back of curb onto and including the project site.
PF 15.	Fire hydrants shall be located in compliance with TVF&R fire prevention ordinance and approval of TVF&R.
PF 16.	The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly abandoned in conformance with State standards.
PF 17.	All survey monuments on the subject site, or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
PF 18.	Sidewalks, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.
PF 19.	No surcharging of sanitary or storm water manholes is allowed.
PF 20.	The project shall connect to an existing manhole or install a manhole at each connection point to the public storm system and sanitary sewer system.
PF 21.	A City approved energy dissipation device shall be installed at all proposed storm system outfalls. Storm outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PF 22.	The applicant shall provide a 'stamped' engineering plan and supporting information that shows the proposed street light locations meet the appropriate AASHTO lighting

	standards for all proposed streets and pedestrian alleyways.
PF 23.	All required pavement markings, in conformance with the Transportation Systems Plan and the Bike and Pedestrian Master Plan, shall be completed in conjunction with any conditioned street improvements.
PF 24.	Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.
PF 25.	The applicant shall provide adequate sight distance at all project driveways by driveway placement or vegetation control. Specific designs to be submitted and approved by the City Engineer. Coordinate and align proposed driveways with driveways on the opposite side of the proposed project site.
PF 26.	Access requirements, including sight distance, shall conform to the City's Transportation Systems Plan (TSP) or as approved by the City Engineer. Landscaping plantings shall be low enough to provide adequate sight distance at all street intersections and alley/street intersections.
PF 27.	Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and Allied Waste Management (United Disposal) for access and use of their vehicles.
PF 28.	Applicant shall prepare an Ownership and Maintenance agreement between the City and the Owner. Stormwater or rainwater facilities may be located within the public right-of-way upon approval of the City Engineer. The Ownership and Maintenance agreement shall specify that the rainwater and stormwater facilities shall be privately maintained by the Applicant; maintenance shall transfer to the respective homeowners association when it is formed.
PF 29.	The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
PF 30.	All water lines that are to be temporary dead-end lines due to the phasing of construction shall have a valved tee with fire-hydrant assembly installed at the end of the line.
PF 31.	Applicant shall provide a minimum 6-foot Public Utility Easement on lot frontages to all public right-of-ways. An 8-foot PUE shall be provided along Minor and Major Collectors. A 10-ft PUE shall be provided along Minor and Major Arterials.
PF 32.	Mylar Record Drawings: At the completion of the installation of any required public improvements, and before a 'punch list' inspection is scheduled, the Engineer shall perform a record survey. Said survey shall be the basis for the preparation of 'record drawings' which will serve as the physical record of those changes made to the plans and/or specifications, originally approved by Staff, that occurred during construction. Using the record survey as a guide, the appropriate changes will be made to the construction plans and/or specifications and a complete revised 'set' shall be submitted. The 'set' shall consist of drawings on 3 mil. Mylar and an electronic copy in AutoCAD, current version, and a digitally signed PDF.
Specific Comments:	
PF 33.	At the request of Staff, DKS Associates completed a Transportation Impact Analysis (TIA) dated October 21, 2013. The study was completed anticipating 113 residential

	units in the development; the proposed development has 100 units resulting in a reduced impact to City streets and intersections from what is reported in the TIA. The project is hereby limited to no more than the following impacts. 100 Units (113 Units) Estimated New PM Peak Hour Trips 101 (114) Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area 36 (40)
PF 34.	The TIA indicates the intersection of Grahams Ferry Road and Tooze Road would operate at LOS F with these and other approved Villebois subdivisions. Improvements to this intersection are planned and funded by the City and construction work is anticipated to be completed by spring 2016.
PF 35.	All construction traffic shall access the site via Grahams Ferry Road. No construction traffic will be allowed on internal Villebois streets, except where water and sanitary work will occur on the south end of Villebois Drive.
PF 36.	In the 2013 Transportation Systems Plan Grahams Ferry Road is identified as a Minor Arterial. Applicant shall dedicate sufficient right-of-way to accommodate Grahams Ferry Road as a Minor Arterial; this will require an additional 8.5 feet of right-of-way dedication to the City to accommodate a half-street width of 38.5-ft (total right-of-way width of 77 feet).
PF 37.	Applicant shall reconstruct Grahams Ferry Road with a modified street cross-section. North of Athens Lane, west to east: storm swale, 1-ft gravel shoulder, 3-ft asphalt shoulder, two 11-ft travel lanes, 3-ft asphalt shoulder, 1-ft gravel shoulder, swale, landscaping and a 10-ft multi-use pathway. The center turn lane/median will not be constructed at this time. The centerline of street will match the existing centerlines north and south of the proposed project. South of Athens Lane the 10-ft pathway shall become a 5-ft sidewalk. Locate the pathway and sidewalk to minimize impacts to existing trees. Applicant will be eligible for Street SDC credits for all roadwork beyond 24 feet from edge of asphalt and for 5 feet of the 10-foot wide multi-use path.
PF 38.	On Grahams Ferry Road, stormwater will continue to be collected in storm swales; however the Applicant shall be required to provide detention and water quality requirements for impervious surfaces created with the reconstruction of Grahams Ferry Road.
PF 39.	On Grahams Ferry Road adjacent to the Villebois Village development the standard street light is a 35-ft black fiberglass direct bury pole (30-ft mounting height) with 6-ft black arm and black full-cutoff cobra head luminaire.
PF 40.	South of Villebois SAP South PDP 4, Grahams Ferry Road runs through a forested corridor. It is both the desire and direction of the City to allow a lower lighting standard on this section of roadway adjacent to the proposed development, with the exception of the intersection of Athens Lane and Grahams Ferry Road which shall be

	lighted per national guidelines. Applicant's lighting engineer shall work with City staff to determine an acceptable lighting level on Grahams Ferry Road.
PF 41.	With the improvements to Grahams Ferry Road applicant shall cause to have all overhead utilities along the east side of the road installed underground along the entire property frontage.
PF 42.	Internal street lighting: the proposed subdivision is located in what was referred to as the Future Study Area. While the Villebois street lighting master plan does not cover this area specifically, all internal streets shall be lighted with approved Westbrooke style street lights to maintain consistency with the other recently approved or constructed Villebois subdivisions.
PF 43.	Applicant has indicated this will be a two-phase project, with the first phase applicant shall complete full street design and construction through the far right-of-way and corner radii of all planned streets within the development. Streets shall be designed in conformance to the applicable street types as shown in the Villebois Village Master Plan.
PF 44.	Pedestrian Linkage - to provide school and pedestrian connectivity applicant shall provide a rocked, paved or bark-mulch pathway from the Phase 1 area to Villebois Drive.
PF 45.	The applicant shall provide 'stamped' engineering details with dimensions for intersection sight distance verification and AutoTURN layouts for all proposed intersections, including alley/street connections. Adequate clearance shall be provided at all intersections and alleyways. The sight distance point for exiting vehicles shall be located 14.4 feet from the edge of the traveled way. At a minimum, the applicant shall provide 'stamped' engineering AutoTURN layouts for fire trucks and buses (WB-60) that show the overhang and/or mirrors of the vehicle as opposed to the wheel paths. Turning vehicles may use the width of the minor street to start the appropriate turn. The vehicle must however, stay within the appropriate receiving (inside) lane of the major street. Additionally, the turning vehicle must not intrude onto the wheel chair ramp on the inside of the turning movement.
PF 46.	Alleys that are identified by Tualatin Valley Fire and Rescue (TVF&R) as possible routes for medical and/or fire emergencies shall meet TVF&R's design requirements.
PF 47.	At the time of plan submittal for a Public Works Permit, the applicant shall provide to the City a copy of correspondence showing that the plans have also been distributed to the franchise utilities. Prior to issuance of a Public Works Permit, the applicant shall have coordinated the proposed locations and associated infrastructure design for the franchise utilities. Should permanent/construction easements or right-of-way be required to construct the public improvements or to relocate a franchised utility, the applicant shall provide a copy of the recorded documents. Should the construction of public improvements impact existing utilities within the general area, the applicant shall obtain written approval from the appropriate utility prior to commencing any construction.
PF 48.	Applicant shall provide sufficient mail box units for the proposed phasing plan; applicant shall construct mail kiosk at locations coordinated with City staff and the

	Wilsonville U.S. Postmaster.
PF 49.	Rainwater management components will be allowed to be located in the public right-of-way, however such components shall be maintained by the Applicant, or subsequent HOA, and this shall be included in the Ownership and Maintenance agreement as required in PF 28.
PF 50.	Applicant shall connect sanitary sewer to the existing line at Villebois Drive & Amalfi Lane.
PF 51.	Applicant shall plug the abandoned existing force main and grout interior of sewer manhole at the corner of Villebois Drive and Normandy.
PF 52.	Most of the proposed development will require service from a wastewater pump station to be constructed by the Applicant, then owned and maintained by the City. Wastewater pump station shall be designed and constructed in compliance with the City standards in Exhibit C6.
PF 53.	Applicant shall construct a "looped" water system per PF 29 with phase 1 of the development with connections at Villebois Drive and Grahams Ferry Road. On Grahams Ferry Road this can be done by tying onto the south end of the existing 12" water line and extending an 8" water line down Grahams Ferry Road and into the proposed subdivision and tying into the 8" water line shown at Sicily Street and Como Drive.
PF 54.	With construction of the Villebois SAP South PDP 3 development there was a water vault and meter installed at the northwest corner of Villebois Drive and Amalfi Lane. Applicant shall remove this vault, piping and meter; water meter shall be returned to the City.
PF 55.	Existing abandoned water, sanitary, and storm water lines shall either be completely removed, grouted in place, or abandoned per a City approved recommendation from a Registered Geotechnical Engineer.
PF 56.	SAP South PDP 7 consists of 100 lots, 56 lots in the first phase and 44 lots in the second phase. All construction work in association with the Public Works Permit and Project Corrections List shall be completed prior to the City Building Division issuing a certificate of occupancy, or a building permit for the housing unit(s) in excess of 50% of total (29th lot for first phase and 23rd lot for the second phase).
PF 57.	Where "Good" and "Important" preserved trees are located within, or the drip-line extends across, the PUE, if conduits are placed in these areas they shall be bored under the tree's root system and not open trenched.

Request D: Tentative Subdivision Plat

PFE 1.	Subdivision or Partition Plats: Paper copies of all proposed subdivision/partition plats shall be provided to the City for review. Once the subdivision/partition plat is approved, applicant shall have the documents recorded at the appropriate County office. Once recording is completed by the County, the applicant shall be required to provide the City with a 3 mil Mylar copy of the recorded subdivision/partition plat.
PFE 2.	Subdivision or Partition Plats: All newly created easements shown on a subdivision or partition plat shall also be accompanied by the City's appropriate Easement document (on City approved forms) with accompanying survey exhibits that shall be recorded immediately after the subdivision or partition plat.
PFE 3.	Street names may need to be modified to meet Clackamas County GIS requirements.

	The street name "Estonia Way" cannot be used as there is an existing street by that name in Villebois SAP East PDP 1.

All Requests:

Natural Resource Division Conditions:	
Rainwater Management Plan:	
NR 1.	The Rainwater Management Plan does not match the proposed utility plan. Submit an updated Rainwater Management Plan, which reflects the current plan.
NR 2.	The applicant shall submit a detailed operations and maintenance manual for the rainwater management components that has been reviewed and approved by city staff before 50% of the units are occupied in **Plan Area 2, SAP South.**
NR 3.	Pursuant to the City of Wilsonville Public Works Standards, access should be provided for the entire perimeter of the rainwater management components. At a minimum, at least one access shall be provided for maintenance and inspection.
NR 4.	All Rainwater Management Components and associated infrastructure located in public areas shall be designed to the Public Works Standards. Rainwater Management Components in private areas shall comply with the plumbing code.
NR 5.	Plantings in Rainwater Management Components located in public areas shall comply with the Public Works Standards. Plantings in Rainwater Management Components located in private areas shall comply with the Plant List in the Rainwater Management Program or Community Elements Plan.
NR 6.	The rainwater management components shall comply with the requirements of the Oregon DEQ UIC (Underground Injection Control) Program.
Stormwater Management:	
NR 7.	Provide profiles, plan views and specifications for the proposed water quality treatment facilities consistent with the requirements of the City of Wilsonville's Public Works Standards.
NR 8.	Pursuant to the Public Works Standards, the applicant shall submit a maintenance plan (including the City's stormwater maintenance covenant) for the proposed stormwater facilities, inclusive of the rainwater management components, prior to approval for occupancy of the associated development.
NR 9.	Pursuant to the City of Wilsonville's Public Works Standards, access shall be provided to all areas of the proposed water quality treatment facilities. At a minimum, at least one access shall be provided for maintenance and inspection.
Other:	
NR 10.	The applicant shall comply with all applicable state and federal requirements for the proposed construction activities and proposed facilities (e.g. DEQ NPDES #1200–C permit).
Building Division Conditions:	
None	
Tualatin Valley Fire & Rescue Conditions:	
None	

MASTER EXHIBIT LIST:

The following exhibits are hereby entered into the public record by the Development Review Board as confirmation of its consideration of the application as submitted. This is the exhibit list that includes exhibits for Planning Case Files DB14-0002 through DB14-0007, SI14-0002.

A1. Staff report and findings (this document)
A2. Slides and notes for Staff's Public Hearing Presentation *(available at Public Hearing)*
B1. Applicant's Notebook for SAP Amendments and SROZ: *Under separate cover*
Section I: General Information
IA) Introductory Narrative
IB) Form/Ownership Documentation
IC) Copy of Certification of Assessment & Liens
ID) Fee Calculation
IE) Mailing List *Staff Note: This information has been revised*
Section II: SAP Amendment & SROZ Map Refinement
IIA) Supporting Compliance Report
IIB) Reduced Drawings *Staff Note: Sheet 8 revised, see Exhibit B9.*
IIC) Utility & Drainage Report
IID) Traffic Analysis
IIE) Historic/Cultural Resource
IIF) Significant Resource Impact Report
IIG) Tree Report
IIH) Architectural Pattern Book Proposed Amendments
III) Community Elements Book Proposed Amendments
IIJ) Master Signage and Wayfinding Plan Proposed Amendments
IIK) Rainwater Management Book
IIL) Sample Elevations of Mailbox Kiosk
IIM) Utility Sequencing Plan
B2. Applicant's SAP Large Format Plans (Smaller 11x17 plans included in Sections IIB of the applicant's notebook Exhibit B1.) *Under separate cover.*
Sheet 1 Cover Sheet
Sheet 2 Existing Conditions
Sheet 3 Aerial Photograph
Sheet 4 Land Use Key
Sheet 5 Land Use Plan
Sheet 6 Circulation Plan
Sheet 7 Street Sections
Sheet 8 Park/Open Space/Pathways Plan *Revised, see Exhibit B9.*
Sheet 9 SROZ Plan
Sheet 10 Street Tree Plan
Sheet 11 Tree Preservation Plan
Sheet 12 Grading Plan
Sheet 13 Utility Plan
Sheet 14 Phasing Plan

B3. Applicant's Notebook for PDP/Tentative Plat/Zone Change/Tree Removal Plan/Final Development Plan: *Under separate cover*

Section I: General Information
- IA) Introductory Narrative
- IB) Form/Ownership Documentation
- IC) Fee Calculation
- ID) Mailing List *Staff Note: This information has been revised*

Section II: Preliminary Development Plan
- IIA) Supporting Compliance Report
- IIB) Reduced Drawings
- IIC) Utility & Drainage Reports
- IID) Traffic Analysis
- IIE) Tree Report
- IIF) Significant Resource Impact Report (SRIR)
- IIG) Conceptual House Elevations

Section III: Tentative Subdivision Plat
- IIIA) Supporting Compliance Report
- IIIB) Tentative Plat *Staff Note: Sheet 4.1 revised, see Exhibit B9.*
- IIIC) Draft CC&R's
- IIID) Copy of Certification of Assessments and Liens
- IIIE) Subdivision Name Approval

Section IV: Zone Change
- IVA) Supporting Compliance Report
- IVB) Zone Change Map
- IVC) Legal Description & Sketch

Section V: Tree Removal Plan
- VA) Supporting Compliance Report
- VB) Tree Report
- VC) Tree Preservation Plan

Section VI: Final Development Plan
- VIA) Supporting Compliance Report
- VIB) Reduced Plans *Staff Note: Sheets L2, L3, L4 revised, see Exhibit B9.*
- VIC) Illustrative Plans
- VID) Sample Elevations of Mailbox Kiosks

B4. Applicant's Large Format Plans PDP/Tentative Plat/Tree Plan (Smaller 11x17 plans included in Sections IIB and IIIB of the applicant's notebook Exhibit B3.) *Under separate cover.*
- Sheet 1 Cover Sheet
- Sheet 2 Existing Conditions
- Sheet 3 Aerial Photograph
- Sheet 4.1 Tentative Plat *Staff Note: revised to add Tract 'X' above Lot 91. See Exhibit B9.*
- Sheet 4.2 Tentative Plat
- Sheet 5.1 Grading and Erosion Control
- Sheet 5.2 Grading and Erosion Control

Sheet 6 Composite Utility Plan
Sheet 7.1 Circulation Plan
Sheet 7.2 Street Sections
Sheet 8.1 Site/Land Use Plan
Sheet 8.2 Typical Lot Pattern
Sheet 9.1 Tree Preservation Plan
Sheet 9.2 Tree Preservation Plan
Sheet 10 Street Tree/Lighting Plan
Sheet 11 Phasing Plan

B5. Large Format Plans for Final Development Plan (Smaller 11x17 plans included in Section VIB of the applicant's notebook, Exhibit B1.) *Under separate cover.*
Sheet L0 Cover Sheet
Sheet L1 Street Tree Plan
Sheet L2 Planting Plan North *Staff Note: Revised, see Exhibit B9*
Sheet L3 Planting Plan South *Staff Note: Revised, see Exhibit B9*
Sheet L4 Pocket Park 16 Park Plan *Staff Note: Revised, see Exhibit B9*
Sheet L5 Entry Plan East
Sheet L6 Entry Plan West
Sheet L7 Nature Trail Activity Area Plan
Sheet L8 Plant Legend and Details
Sheet L9 Details

B6. House Front Elevations Approved by Steve Coyle, City's Consultant Architect

B7. Arborist Memo Dated April 2, 2014 Regarding Important Oregon White Oak Trees
Memo
Site Plan Drawing for Tree 618
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 625
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 856
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 860
Modified Profile for Hardscape within Critical Root Zone
Site Plan Drawing for Tree 1023
Modified Profile for Hardscape within Critical Root Zone

B8. Conservation Easement Exhibit
Sheet 1.1 South
Sheet 1.2 North

B9. Revised Sheets Submitted April 2, 2014 Regarding Changes Related to Preserved Important Oregon White Oak Trees
Sheet 8 from Exhibit B2 Park/Open Space/Pathways Plan
Sheet 4.1 from Exhibit B4 Tentative Plat
Sheet L2 from Exhibit B5 Planting Plan North
Sheet L3 from Exhibit B5 Planting Plan South
Sheet L4 from Exhibit B5 Pocket Park 16 Park Plan

B10. Fire Truck AutoTURN Exhibit for Alta Court

C1. Comments and Conditions from Engineering Division

C2. Comments and Conditions from Building Division
C3. Comments, Findings, and Conditions from Natural Resources
C4. Comments and Conditions from TVF&R
C5. Comments from Public Works
C6. Wastewater Pump Station Design Standards
C7. Revised Engineering Conditions PF 37 and 38 regarding Grahams Ferry Rd.
D1. Email Letter from Gary Templer dated March 27, 2014
D2. Email from John Danahy dated March 31, 2014

FINDINGS OF FACT:

1. The statutory 120-day time limit applies to this application. The application was received on January 17, 2014. On February 13, 2014, staff conducted a completeness review within the statutorily allowed 30-day review period, and, on February 21, 2014, the Applicant submitted new materials. On February 26, 2014 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 26, 2014

2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	V	Single-family residential
East:	V	Single-family residential/ Graham Oaks Nature Park
South:	PF/V	Graham Oaks Nature Park
West:	--	Unincorporated Rural Residential

3. Prior land use actions include:

Legislative:
02PC06 - Villebois Village Concept Plan
02PC07A - Villebois Comprehensive Plan Text
02PC07C - Villebois Comprehensive Plan Map
02PC07B - Villebois Village Master Plan
02PC08 - Village Zone Text
04PC02 – Adopted Villebois Village Master Plan
LP-2005-02-00006 – Revised Villebois Village Master Plan
LP-2005-12-00012 – Revised Villebois Village Master Plan (Parks and Recreation)
LP10-0001 – Amendment to Villebois Village Master Plan (School Relocation from SAP North to SAP East)
LP13-0005 – Amendment to Villebois Village Master Plan (Future Study Area)

Quasi-Judicial:
03DB21 - SAP-South

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

CONCLUSIONARY FINDINGS:

NOTE: Pursuant to Section 4.014 the burden of proving that the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

GENERAL INFORMATION

Section 4.008 Application Procedures-In General

Review Criteria: This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.
Finding: These criteria are met.
Explanation of Finding: The application is being processed in accordance with the applicable general procedures of this Section.

Section 4.009 Who May Initiate Application

Review Criterion: "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."
Finding: This criterion is satisfied.
Explanation of Finding: The application has been submitted on behalf of contract purchaser Polygon Homes, and is signed by Bo Oswald, an authorized member of the current owner, Northwest Wilsonville Properties, LLC.

Subsection 4.010 (.02) Pre-Application Conference

Review Criteria: This section lists the pre-application process
Finding: These criteria are satisfied.
Explanation of Finding: A pre-application conference was held on May 2, 2013 in accordance with this subsection.

Subsection 4.011 (.02) B. Lien Payment before Application Approval

Review Criterion: "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."
Finding: This criterion is satisfied.
Explanation of Finding: No applicable liens exist for the subject property. The application can thus move forward.

Subsection 4.035 (.04) A. General Site Development Permit Submission Requirements

Review Criteria: "An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code." Listed 1. through 6. j.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has provided all of the applicable general submission requirements contained in this subsection.

Section 4.110 Zoning-Generally

Review Criteria: "The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192." "The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise."
Finding: These criteria are satisfied.
Explanation of Finding: This proposed development is in conformity with the Village zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

REQUEST A: DB14-0002 SAP-SOUTH AMENDMENTS FOR PLAN AREA 2

The applicant's findings in Section IIA of their notebook, Exhibit B1, respond to the majority of the applicable criteria.

Wilsonville Comprehensive Plan

Implementation Measure 4.1.6.a. Development in the "Residential-Village" Map Area

A1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
Finding: These criteria are satisfied.
Explanation of Finding: As found in this report, development is being proposed consistent with the Villebois Village Master Plan and the "Village" Zone District. See Findings A3 through A69.

Implementation Measure 4.1.6.c. Application of the "Village" Zone District

A2. **Review Criteria:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
Finding: These criteria are satisfied.
Explanation of Finding: The "Village" Zone is proposed to be applied. See Request C.

Villebois Village Master Plan

General- Land Use Plan

Goal: Villebois Village shall be a complete community that integrates land use, transportation, and natural resource elements to foster a unique sense of place and cohesiveness.

General-Land Use Plan Policy 1 Range of Choices

A3. **Review Criteria:** "The Villebois Village shall be a complete community with a wide range of living choices, transportation choices, and working and shopping choices. Housing shall be provided in a mix of types and densities resulting in a minimum of 2,300 dwelling units within the *Villebois Village Master Plan* area."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP amendment continues the provision of a mix of types and densities resulting in a minimum of 2,300 dwelling units within the Villebois area. The proposed SAP amendment also facilitates mode choice in transportation with facilities for bicycles and pedestrians in addition to vehicles. Commercial areas continue to be concentrated around the Village Center.

General-Land Use Plan Policy 2 Compliance with Figure 1 – Land Use Plan

A4. **Review Criteria:** "Future development applications within the Villebois Village area shall provide land uses and other major components of the Plan such as roadways and parks and open space in general compliance with their configuration as illustrated on *Figure 1 – Land Use Plan* or as refined by Specific Area Plans. The proposed uses for the Future Study Area Specific Area Plan Amendment to SAP South shall be those identified in *Figure 1 – Land Use Plan*, which includes residential uses being limited to single-family lots in the medium to estate land use category identified in Wilsonville Code Subsection 4.125 (.18) F. 1. a. iv. arranged in a similar pattern as other areas on the edges of Villebois. Due to its location outside the general trapezoidal shape of Villebois and distance from the Village Center and neighborhood commons as well as its relatively small size, the Future Study Area Specific Area Plan Amendment to SAP South shall not be considered a neighborhood plan as defined in Section 2.1 of the *Villebois Village Master Plan*."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP Amendment further defines the residential uses in the Future Study Area and other components are in the general configuration shown in the Master Plan. As can be seen on Sheet 5 *Land Use Plan* of the applicant's submitted plan set, Exhibit B2, the residential uses are limited to medium to large lots. They are arranged as a similar pattern as other areas in Villebois with large and standard lots on the edges with a mix of lot sizes on the interior of the site. The applicant has not requested the area be considered a neighborhood plan.

General-Land Use Plan Policy 3 Civic, Recreational, Educational, and Open Space Opportunities

A5. **Review Criteria:** "The Villebois Village shall provide civic, recreational, educational and open space opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP Amendment shows recreational opportunities shown in the Master Plan for the subject area.

General-Land Use Plan Policy 4 Full Public Services

A6. **Review Criteria:** "The Villebois Village shall have full public services including: transportation; rainwater management; water; sanitary sewer; fire and police services; recreation, parks and open spaces; education; and transit."
Finding: These criteria are satisfied.
Explanation of Finding: All the listed public services are proposed to be provided consistent with the Master Plan.

General-Land Use Plan Policy 5 Development Guided by Finance Plan and CIP

A7. **Review Criteria:** "Development of Villebois shall be guided by a Finance Plan and the City's Capital Improvement Plan, ensuring that the availability of services and development occur in accordance with the City's concurrency requirements (see Implementation Measure 4, below)."
Finding: These criteria are satisfied.
Explanation of Finding: All city requirements for concurrency and Development Agreements remain in effect and will be applied, including concurrency requirements with the PDP approval. See Request B.

General-Land Use Plan Implementation Measure 1 Unique Planning and Regulatory Tools

A8. **Review Criteria:** "Allow for unique planning and regulatory tools that are needed to realize the *Villebois Village Master Plan*. These tools shall include, but are not limited to: Specific Area Plans; Pattern Books; and Community Elements Books."
Finding: These criteria are satisfied.
Explanation of Finding: All the listed tools are being utilized for the area proposed to be added to SAP South as Plan Area 2.

General-Land Use Plan Implementation Measure 3 Master Plan Refinements

A9. **Review Criteria:** "Refinements to the *Villebois Village Master Plan* are anticipated as more detailed plans are developed for the Specific Area Plans. Specific Area Plans may propose refinements to the *Villebois Village Master Plan* without requiring an amendment to the *Villebois Village Master Plan* provided the refinement is not significant. Non-significant refinements shall be defined in the Village ("V") Zone text and may include, but are not limited to: minor alterations to street alignments or minor changes in area or uses. Disagreement about whether a refinement is significant shall be resolved by a process provided in the Village ("V") Zone text."
Finding: These criteria are satisfied.
Explanation of Finding: Refinements are proposed consistent with this allowance.

General-Land Use Plan Implementation Measure 4 Coordinating Finance Plan and Development Agreements

A10. **Review Criteria:** "The Master Planner shall coordinate with the City on the development of a Finance Plan for necessary urban services and public infrastructure. Each developer within Villebois Village will sign their own Development Agreement that will address the necessary urban services and public infrastructure as appropriate."
Finding: These criteria are satisfied.
Explanation of Finding: All city requirements for concurrency and Development Agreements remain in effect and will be applied, including concurrency requirements with the PDP approval. See Request B.

General-Land Use Plan Implementation Measure 5 SAP South Amendment for Future Study Area

A11. **Review Criteria:** "The Specific Area Plan (SAP) Amendment to SAP South for the Future Study Area shall demonstrate compliance with the *Villebois Village Master Plan*, the City's Comprehensive Plan and its sub-elements, the City's Planning and Land Development Ordinance, and all other applicable regulatory requirements. The developer of the Future Study Area shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal."
Finding: These criteria are satisfied.
Explanation of Finding: Villebois Village Master Plan amendments were approved by the City Council in October 2013 for single-family residential development in the Future Study Area (City Case File LP13-0005, Ordinance No. 724). Further land use requests, including the SAP Amendment are able to proceed.

Residential Neighborhood Housing

Goal: The Villebois Village shall provide neighborhoods consisting of a mix of homes for sale, apartments for rent, row homes, and single-family homes on a variety of lot sizes, as well as providing housing for individuals with special needs. The Villebois Village shall provide housing choices for people of a wide range of economic levels and stages of life through diversity in product type.

Residential Neighborhood Housing Policy 1 Variety of Housing Options

A12. **Review Criteria:** "Each of the Villebois Village's neighborhoods shall include a wide variety of housing options and shall provide home ownership options ranging from affordable housing to estate lots."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed mix of housing for the subject area is similar to that in the adjacent area of SAP South, PDP 4 as well as other areas on the edges of Villebois with large and standard lots on the outer edge with a mix of medium, large, and standard lots inside the initial edge.

Residential Neighborhood Housing Policy 2 Affordable Rental and Ownership Opportunities

A13. **Review Criteria:** "Affordable housing within Villebois shall include rental and home ownership opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: Affordable rental and home ownership opportunities at the level shown in the adopted Master Plan remain. The proposed mix of housing for the subject area is similar to that in the adjacent area of SAP South, PDP 4 as well as other areas on the edges of Villebois with large and standard lots on the outer edge with a mix of medium, large, and standard lots inside the initial edge.

Residential Neighborhood Housing Policy 3 Average Density Requirement

A14. **Review Criteria:** "The mix of housing shall be such that the Village development provides an overall average density of at least 10 dwelling units per net residential acre."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed development helps maintain an overall average density in Villebois of more than 10 dwellings units per net residential acre with the type of residential development shown in Figure 1 of the Villebois Village Master Plan.

Residential Neighborhood Housing Policy 4 Minimum Total Dwelling Units

A15. **Review Criteria:** "The Villebois Village shall accommodate a total of at least 2,300 dwelling units within the boundary of the *Villebois Village Master Plan.*"
Finding: These criteria are satisfied.
Explanation of Finding: This dwelling unit minimum for Villebois continues to be exceeded.

Residential Neighborhood Housing Policy 5 Mix of Housing Types in Neighborhoods

A16. **Review Criteria:** "The Villebois Village shall provide a mix of housing types within each neighborhood and on each street to the greatest extent practicable."
Finding: These criteria are satisfied.
Explanation of Finding: A variety of housing types are proposed in the subject area consistent with Figure 1 of the Villebois Village Master Plan.

Residential Neighborhood Housing Policy 6 Community Housing Requirements

A17. **Review Criteria:** "The Villebois Village shall include community housing types consistent with Oregon Revised Statute 426.508(4), which requires that no more than 10 acres be retained from the sale of the former Dammasch State Hospital property for development of community housing for chronically mentally ill persons. The City of Wilsonville, the Oregon Department of Administrative Services, and the Mental Health and Developmental Disability Services Division shall jointly coordinate the identification of the acreage to be retained."
Finding: These criteria are satisfied.
Explanation of Finding: None of the designated 10 acres are within the subject area.

Residential Neighborhood Housing Policy 7 Governor's Quality Development Objectives and Governor's Livability Initiative

A18. **Review Criteria:** "The development standards and Specific Area Plans required by the Village zone shall be consistent with the Governor's Quality Development Objectives and the Governor's Livability Initiative."
Finding: These criteria are satisfied.
Explanation of Finding: The Governor's Quality Development Objectives (QDO's), part of the Oregon Initiative adopted in 1997, have guided the design and development of Villebois. The Development Objectives promote the building of strong livable communities, economic growth and the efficient use of public resources, and are listed as follows:

- Promote compact development within urban growth boundaries.
- Give priority to a quality mix of development that addresses the economic and community goals of a community and region.
- Encourage mixed-use, energy efficient development.
- Support development that is compatible with community and regional environmental concerns and available natural resources.
- Support development for a balance of jobs and affordable housing within the community.
- Promote sustainable local and regional economies.

The Villebois Village Concept Plan, the Villebois Village Master Plan and the Village zone were developed, and have all been adopted, to guide the creation of a community that is consistent with these objectives. The SAP amendment does not alter any of these circumstances. The proposed uses are consistent Figure 1 – Land Use Plan which has been found to meet these objectives.

Residential Neighborhood Housing Policy 8 Increasing Transportation Options

A19. **Review Criteria:** "Each neighborhood shall be designed to increase transportation options. Neighborhoods shall be bike and pedestrian friendly."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed SAP amendment continues to show trails, paths, bike facilities, block lengths, etc. consistent with the Master Plan to be pedestrian friendly and increase transportation options.

Residential Neighborhood Housing Policy 10 Incorporating Natural Features

A20. **Review Criteria:** "Natural features shall be incorporated into the design of each neighborhood to maximize their aesthetic character while minimizing impacts to said natural features."
Finding: These criteria are satisfied.
Explanation of Finding: Wetlands and forested areas are incorporated into the design of the subject area.

Residential Neighborhood Housing Implementation Measure 1 Compact, Pedestrian Oriented Character

A21. **Review Criteria:** "Ensure, through the development standards and Pattern Book(s) required by the Village zone, that the design and scale of dwellings are compatible with the compact, pedestrian-oriented character of the concepts contained in the *Villebois Village Concept Plan* and the contents of this *Villebois Village Master Plan*."
Finding: These criteria are satisfied.
Explanation of Finding: The same development standards and Pattern Book is being applied as other areas of SAP South to ensure design of dwellings consistent with the compact, pedestrian-oriented character and other development in Villebois.

Residential Neighborhood Housing Implementation Measure 2 Pattern Books

A22. **Review Criteria:** "Create a set of design guidelines for the development of Pattern Books with the Village zone requirements. Pattern Books shall address, at a minimum, architectural styles and elements, scale and proportions, and land use patterns with lot diagrams."
Finding: These criteria are satisfied.
Explanation of Finding: The pattern book previously used for the rest of SAP South is also being applied to the subject area.

Park Descriptions Pocket Park 16

A23. **Review Criteria:** "Pocket Park 16 provides a neighborhood focal point and gathering spot, and connections to the adjacent nature trail system. This pocket park provides nature paths, a picnic table, benches, and a play structure."
Finding: These criteria are satisfied.
Explanation of Finding: Pocket Park 16 provides all of the required elements, in addition to other elements including a shelter. See Park Refinement Request below and Final Development Plan request, Request F.

Park Descriptions Miscellaneous Linear Greens (Future Study Area)

A24. **Review Criteria:** "These linear greens offer visual and physical linkages to open space areas and areas adjacent to existing landscaping. Some linear green spaces include lawn areas, benches, and existing trees where feasible."
Finding: These criteria are satisfied.
Explanation of Finding: Linear greens are proposed consistent with the Master Plan. See Final Development Plan request, Request F.

Park Descriptions OS-3: Forested Wetland Preserve (Future Study Area SROZ)

A25. **Review Criteria:** "This site contains intact and functioning wetlands within forested areas. While the plan does not include restoration or expansion of the wetlands in this site, any work or impacts within the forested wetland preserve shall comply with SROZ regulations as applicable. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Benches will be located along nature trails in forested areas, and will be distanced from residential areas and play areas. These areas will offer opportunity for wildlife viewing and quiet contemplation that complements the undeveloped nature of this open space. This open space will also include a creative child play area, benches, and picnic tables. Additionally, connections to trails in Graham Oaks Natural Area will be provided."
Finding: These criteria are satisfied.
Explanation of Finding: Minor refinements are proposed for Open Space 3. See Finding A114. All improvements in Open Space 3 are being reviewed through the SROZ regulations. See Request G.

Trails and Pathways Descriptions Forested Wetland Preserve (OS-3, 4, 5, and 6)

A26. **Review Criteria:** "The Villebois Village Master Plan includes 5,998 lineal feet of nature trails around the edge of the forested wetland, connecting the Future Study Area with the West Neighborhood Park and Greenway via a short sidewalk."
Finding: These criteria are satisfied.
Explanation of Finding: The connections and network of trails described in the Master Plan for Open Space 3 are provided.

Chapter 3 Parks & Open Space/Off-Street Trails & Pathways

Goal The Parks system within Villebois Village shall create a range of experiences for its residents and visitors through an interconnected network of pathways, parks, trails, open space and other public spaces that protect and enhance the site's natural resources and connect Villebois to the larger regional park/open space system.

Parks and Open Spaces Policy 1 Incorporating Existing Trees, Planting Shade Trees

A27. **Review Criteria:** "Parks and open space areas shall incorporate existing trees where feasible and large shade trees shall be planted in appropriate locations in parks and open spaces."
Finding: These criteria are satisfied.
Explanation of Finding: The site includes numerous existing trees. To minimize the impacts to existing trees on the site, the proposed development footprint is predominantly

located within the areas previously impacted by development. Trees have only been inventoried within the proposed development footprint; outside of the development footprint all existing trees will be retained within proposed parks and open space areas.

Parks and Open Spaces Policy 2 Interconnected Trail System

A28. **Review Criteria:** "An interconnected trail system shall be created linking the park and open spaces and key destination points within Villebois and to the surrounding neighborhoods. The trails system shall also provide loops of varying length to accommodate various activities such as walking, running and rollerblading."
Finding: These criteria are satisfied.
Explanation of Finding: The site is located at the southwest corner of Villebois, abutting earlier phases of Villebois to the north and east. The site also abuts Grahams Ferry Road to the west and Grahams Oaks Nature Park to the south and east. Key destination points include other park areas, the Village Center and the Lowrie Primary School within Villebois, as well as the trail system within Graham Oaks Nature Park and the middle school east of Graham Oaks Nature Park. The Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 and B9, shows creation of an interconnected trail system linking the proposed parks and open spaces with the key destination points within this phase and with the surrounding neighborhoods. The proposed trail system provides loops of varying length that will accommodate various types of activities. Condition of Approval PF 44 requires an interim path to provide connectivity through Phase II prior to construction for residents of Phase I.

Parks and Open Spaces Policy 3 Variety of Facilities and Activities

A29. **Review Criteria:** "Parks shall encourage the juxtaposition of various age-oriented facilities and activities, while maintaining adequate areas of calm."
Finding: These criteria are satisfied.
Explanation of Finding: The Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, shows proposed park and open space areas. The proposed homes will be surrounded by large open space areas that include a nature trail system with nature trail activity areas and benches distributed along the trails to provide for areas of creative play or quiet reflection in ways that minimize impacts to the SROZ resources. A centrally located pocket park is planned adjacent to, but outside of, the SROZ and is bordered by two of the main roads within this phase. This pocket park will serve as a neighborhood gathering space, located at the convergence of multiple trail segments from different directions and multiple streets from different directions. The pocket park provides a mix of age-oriented facilities and activity areas, including a sheltered seating area, child play structures for older and younger aged children, a lawn play area, and creative play through interaction opportunities with the non-significant wetland and with an active lawn area located to complement child play structures. Additionally, linear greens and landscape tracts are provided to connect the park and open space areas through the middle of the project. The planned park and open space areas provide activities for a range of ages and activity levels.

Parks and Open Spaces Policy 4 Wildlife Habitat

A30. **Review Criteria:** "Park designs shall encourage opportunities for wildlife habitat, such as plantings for wildlife foraging and/or habitat, bird and/or bat boxes and other like elements."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed park designs include large open space tracts for the preservation and enhancement of SROZ areas. The proposed nature trail system with nature trail activity areas will be established in ways that preserve and encourage opportunities for wildlife habitat.

Parks and Open Spaces Policy 5 Power of Ten

A31. **Review Criteria:** "Gathering spaces in parks shall generate social interaction by adding layers of activity (Power of Ten)."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed pocket park will serve as the primary gathering space within this phase. The design to this pocket park will generate social interactions through the layers of activities planned within and adjacent to the park, including the convergence of various trails and adjacent streets, a shelter with seating, two play structures for different age groups, creative play opportunities through interaction with a non-significant wetland area in conjunction with a seating area overlooking the wetland area and an active lawn area located to complement child play structures, and an adjacent roadside mailbox.

Parks and Open Spaces Policy 6 Compliance with SROZ Regulations

A32. **Review Criteria:** "Build-out of the Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Any encroachment into the SROZ will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways shall be made to comply with SROZ regulations."
Finding: These criteria are satisfied.
Explanation of Finding: SROZ regulations are being reviewed, see Request G.

Parks and Open Spaces Policy 9 Parks Flexibility Over Time

A33. **Review Criteria:** "Parks and recreation spaces shall provide for flexibility over time to allow for adaptation to the future community's park, recreation and open space needs."
Finding: These criteria are satisfied.
Explanation of Finding: No park programming is such as to preclude future flexibility.

Parks and Open Spaces Policy 11 Parking along Park Frontages

A34. **Review Criteria:** "On-street parking will not be allowed along the frontages of parks and open spaces where views into and out of the park spaces should be protected. Parking will be allowed along parks and open spaces in circumstances where it is necessary for the function of the park and will not obstruct the views into and out of the park area."
Finding: These criteria are satisfied.

Explanation of Finding: On-street parking along parks is not proposed, consistent with this Policy.

Parks and Open Spaces Implementation Measure 1 Compliance with Parks Figures

A35. **Review Criteria:** "Future and pending development applications within Villebois (Specific Area Plans, Preliminary Development Plans and Final Development Plans) shall comply with the park, trail, open space system proposed in Figure 5 – Parks and Open Space Plan, Figure 5A – Recreational Experiences Plan, and Table 1: Parks Programming. Refinements may be approved in accordance with Village Zone section 4.125(.18) (F)."
Finding: These criteria are satisfied.
Explanation of Finding: SAP South Plan Area 2 is generally consistent with Figure 5, Figure 5A and Table 1 of the Villebois Village Master Plan. Minor refinements are proposed as discussed in Findings A114 through A119 as allowed in Subsection 4.125 (.18) F.

Parks and Open Spaces Implementation Measure 3 Native Vegetation, Landforms, and Hydrology

A36. **Review Criteria:** "Parks and open spaces shall be designed to incorporate native vegetation, landforms and hydrology to the fullest extent possible."
Finding: These criteria are satisfied.
Explanation of Finding: As shown on the Park/Trail/Open Space Plan , Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, parks and open space areas are designed to incorporate native vegetation (existing trees are retained within park & open space areas), landforms (minimal grading will occur within parks and no grading will occur within SROZ open space areas aside from identified impact areas) and hydrology (the locally significant wetland is preserved within an SROZ open space area and non-locally significant wetlands are retained within the pocket park and with open space areas).

Parks and Open Spaces Implementation Measure 4 Community Elements Book

A37. **Review Criteria:** "Each Specific Area Plan shall include a Community Elements Book that (1) meets the requirements of Master Plan Chapter 3; (2) specifies the value system and methodology for tree preservation, protection and tree planting; and (3) provides a proposed plant list. The Community Elements Book also includes specifications for site furnishings and play structures. Proposed parks shall closely comply with the specifications of the applicable Community Elements Book."
Finding: These criteria are satisfied.
Explanation of Finding: A Community Elements Book was submitted and approved with the application for Specific Area Plan South. This application proposes to add Plan Area 2 to SAP South. This application includes a proposal to add Plan Area 2 to the SAP South Community Elements Book (see Exhibit B1, notebook, Section II I).

Parks and Open Spaces Implementation Measure 5 Artwork is Encouraged

A38. **Review Criteria:** "Artwork is encouraged to be incorporated into parks."
Finding: These criteria are satisfied.

Explanation of Finding: Space has been reserved for placement of artwork in parks closer to the Village Center and within neighborhood and community gathering spaces. The addition of Plan Area 2 does alter this approach.

Parks and Open Spaces Implementation Measure 6 Interface with Graham Oaks

A39. **Review Criteria:** "The interface with the Graham Oaks Natural Areas should contain enhancements such as trail connections, landscaping, gateway features, seating and overlook opportunities."
Finding: These criteria will be satisfied by Condition of Approval PDA 1.
Explanation of Finding: The Park/ Open Space/Pathways Plan illustrates connections from the nature trail system in Plan Area 2 to the Graham Oaks Natural Area, with two (2) connections to the east and one (1) connection to the south. Benches and nature trail activity areas are provided along nature trails in parks and open space areas, including trails connecting to Graham Oaks Natural Area. The Applicant will coordinate with Metro regarding appropriate interfaces/enhancements at trail connections which may include some gateway features such as signage. The condition of approval ensures the coordination occurs between the applicant and Metro.

Parks and Open Spaces Implementation Measure 7 Year Round Recreation

A40. **Review Criteria:** "The ability to recreate year round shall be preserved through measures such as: the provision of some hard surfaces that function in the wet season; areas shaded from the sun; areas protected from the rain; safely lit areas and indoor recreation opportunities."
Finding: These criteria are satisfied.
Explanation of Finding: Specific Area Plan South includes a variety of year-round recreation and open space opportunities, including a neighborhood commons, multi-use trails, and play and park structures. The Park/ Open Space/Pathways Plan illustrates how Plan Area 2 will contribute additional parks and open space areas that contribute to the ability to recreate year round. Through the preservation of existing trees within parks and open space areas, shade from the sun and rain is provided along the nature trail system and the nature trail activity areas. The pocket park includes a shelter with a small hardscape area, which will be functional in the wet season and provide shade from the sun. This area will also be safely lit due to the adjacent roads and street lights.

Parks and Open Spaces Implementation Measure 9 Tree Retention

A41. **Review Criteria:** "The design of Villebois shall retain the maximum number of existing trees practicable that are six inches or more DBH in the "Important" and "Good" tree rating categories, which are defined in the Community Elements Books. Trees rated "Moderate" shall be evaluated on an individual basis as regards retention. Native species of trees and trees with historical importance shall be given special consideration for retention."
Finding: These criteria are satisfied.
Explanation of Finding: The site includes numerous existing trees, including a significant number of mature Oregon White Oak. To minimize the impacts to existing trees on the site, the proposed development footprint is predominantly located within areas previously impacted by development. Trees have only been inventoried within the proposed development footprint; outside of the development footprint all existing trees will be

retained within proposed parks and open space areas. The Tree Preservation Plan identifies the inventoried existing trees, their classification and their whether they will be retained or removed. Specific Methodology used to determine DBH and tree ratings is described in the Tree Report (see Exhibit B1, notebook, Section IIG). Efforts have been undertaken in the site layout to retain as many "Important" and "Good" trees as practicable, with special consideration given to Oregon White Oak trees.

Parks and Open Spaces Implementation Measure 10 Tree Preservation and Planting Plans

A42. **Review Criteria:** "Each Specific Area Plan, Preliminary Development Plan and Final Development Plan shall include tree preservation plans and planting plans to indicate proposed tree planting within parks and along streets and descriptions of the size of trees when planted and upon maturity."
Finding: These criteria are satisfied.
Explanation of Finding: The Tree Preservation Plan (see Exhibit B1, notebook, Section IIG) has been submitted with SAP South Plan Area 2. The Preliminary Development Plan and Final Development Plan include additional information on tree preservation and street tree plans.

Parks and Open Spaces Implementation Measure 11 Cultural and Historic Resources

A43. **Review Criteria:** "Provide for review of cultural and historic resources on portions of Villebois that are to be annexed into the City of Wilsonville with the Specific Area Plan."
Finding: These criteria are satisfied.
Explanation of Finding: A cultural resources inventory has been completed and is available in Exhibit B1, notebook, Section IIE. No resources have been identified for preservation.

Parks and Open Spaces Implementation Measure 13 SROZ Compliance

A44. **Review Criteria:** "The Villebois Master Plan shall comply with the Significant Resource Overlay Zone (SROZ) regulations. Proposed encroachments into the SROZ for exempt or non-exempt development shall be reviewed for compliance with the requirements of Section 4.139 of the Wilsonville Code."
Finding: These criteria are satisfied.
Explanation of Finding: Request G reviews compliance with the SROZ regulations.

Parks and Open Spaces Implementation Measure 14 Park Lighting

A45. **Review Criteria:** "A conceptual plan for the lighting of park spaces throughout Villebois is provided on the plan included in Appendix H. Future development applications shall comply with the lighting system proposed in Appendix H. Refinements may be approved in accordance with Village Zone Section 4.125(.18)(F)."
Finding: These criteria are satisfied.
Explanation of Finding: No park lighting is shown for the subject area in Appendix H. Portions of Pocket Park 16 as well as the linear greens will be lit by adjacent street lights.

Parks and Open Spaces Implementation Measure 15 Variety of Child Play Areas

A46. **Review Criteria:** "Each child play area shall include uses suitable for a range of age groups."
Finding: These criteria are satisfied.
Explanation of Finding: The pocket park includes two (2) play structures suitable for younger children and older children, as well as an active lawn play area and access to a non-significant wetland for creative play. Additionally nature trails pass through the pocket park connecting to the open space areas and linear greens which also include nature trails and nature trail activity areas. The attached Park/Open Space/Pathways Plan, see Sheet 8 of Exhibit B2 as shown modified in Exhibit B9, illustrates proposed park elements, which provide a variety of uses suitable for a range of age groups.

Parks and Open Spaces Implementation Measure 18 Completion of Parks and Home Occupancy

A47. **Review Criteria:** "The park spaces included within each phase of development will be completed prior to occupancy of 50% of the housing units in that particular phase unless weather or other special circumstances prohibit completion, in which case bonding for the improvements shall be permitted."
Finding: These criteria are satisfied.
Explanation of Finding: A Condition of Approval PDB 3 under the Request B, Preliminary Development Plan, ensures compliance with this implementation measure.

Parks and Open Spaces Implementation Measure 20 ADA Park Access

A48. **Review Criteria:** "The adequacy, amount and location of the proposed parking (including ADA parking) necessary to serve the proposed park uses shall be evaluated in detail at the SAP and PDP level. Off-street parking may be required to serve the various park users."
Finding: These criteria are satisfied.
Explanation of Finding: With only local pocket parks and linear greens no off-street parking is required.

Sanitary Sewer Goal, Policy, and Implementation Measures

A49. **Review Criteria:** "Goal: The Villebois Village shall include adequate sanitary sewer service.

Policy

1. The sanitary sewer system for Villebois Village shall meet the necessary requirements for the City of Wilsonville Wastewater Master Plan.

Implementation Measures

1. Implement the following list of policies and projects of the City of Wilsonville Wastewater Master Plan:

- Policies: 1-7; and
- Projects: CIP-UD2.

2. Incorporate the construction of CIP-UD2 into the Finance Plan.

3. Insure the 537 gpm capacity of the Evergreen Road sewer line is not exceeded with Specific Area Plan South application.

4. Insure the 340 gpm capacity of the Park at Merryfield sewer line is not exceeded with Specific Area Plan South application.

5. At the time of development of the Future Study Area, replace private pump station with Public Sanitary Sewer Lift Station build consistent with Technical Appendix I."

Finding: These criteria are satisfied.
Explanation of Finding: Construction of the Barber Main sewer line has been completed and now serves the subject site. A supporting utility report is included in Exhibit B1, notebook, Section IIC, demonstrating the sanitary sewer for SAP South Plan Area 2 will insure the 153 gpm capacity of the Barber Main sewer line is not exceeded. The Utility Plan, see Sheet 13 of Exhibit B2, shows the provision of a Public Sanitary Sewer Lift Station to replace the private pump station. The Public Sanitary Sewer Lift Station will be built consistent with Technical Appendix I. Additional design details for the Public Sanitary Sewer Lift Station will be provided to the City for review with subsequent construction plans for the first phase of this development. Additional design standards for the lift station are included in Exhibit C6.

Water System Goal, Policy, and Implementation Measures

A50. **Review Criteria:**

"Goal

The Villebois Village shall include adequate water service.

Policy

The water system for Villebois Village shall meet the necessary requirements of the City of Wilsonville Water System Master Plan.

Implementation Measures
1. Implement the following list of Water System Master Plan policies and projects with development of Villebois Village:

- Policies: 1-7
- Projects:
  1) 18-inch main in Barber Street from Kinsman Road to Brown Road
  2) 48-inch main in Kinsman Road from Barber Street to Boeckman Road
  3) 24-inch main in Boeckman Road from Kinsman Road to Villebois Drive
  4) 18-inch main in Villebois Drive from Boeckman Road to Barber Street
  5) 18-inch main in Barber Street from Brown Road to Grahams Ferry Road
  6) 18-inch main in Grahams Ferry Road from Barber Street to Tooze Road.
  7) 12-inch main in Grahams Ferry Road from the Future Study Area to Barber Street

8) 30-inch main in Tooze Road from Villebois Drive to Grahams Ferry Road
9) 12-inch main in extension of Villebois Drive from Barber Street to the Future Study Area
10) 12-inch main connections from Barber Street to Evergreen Road

2. Incorporate the construction of the above referenced projects into the Finance Plan."

Finding: These criteria are satisfied.
Explanation of Finding: A water system is proposed consistent with Master Plan requirements.

Storm Water Goal

The Villebois Village shall include adequate storm water systems to prevent unacceptable levels of flooding, protect receiving streams and water bodies from pollution and increased runoff rates due to development, and create a connection between people and the environment.

Storm Water Policy 1 Meeting Stormwater Master Plan and Public Works Standards

A51. **Review Criteria:** "The onsite storm water system for Villebois shall meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards."
Finding: These criteria are satisfied.
Explanation of Finding: The Utility Plan, Sheet 13 of Exhibit B2, shows the proposed stormwater system for Specific Area Plan South Plan Area 2. A supporting utility report is included in Exhibit B1, notebook, Section IIC, which demonstrates that the stormwater system will meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards.

Storm Water Policy 2 and 3 Minimizing Development "Footprint" on Hydrological Cycle, Rainwater Management

A52. **Review Criteria:** "Villebois Village shall strive to minimize the development "footprint" on the hydrological cycle through the combination of stormwater management and rainwater management."
"Villebois Village shall integrate rainwater management systems into parks and open space areas."
Finding: These criteria are satisfied.
Explanation of Finding: Rainwater Management Systems are integrated into parks and open space areas as shown on the Park/Open Space/Pathways Plan, Sheet 8 of Exhibit B2 as shown modified in Exhibit B9. The Rainwater Management Program for SAP South Plan Area 2 is described in Exhibit B1, notebook, Section IIK.

Storm Water Implementation Measure 11 Stormwater Facility Maintenance

A53. **Review Criteria:** "Pursuant to the City's Stormwater Master Plan Policies 9.2.4 and 9.2.5, maintenance of stormwater conveyance facilities, including detention/retention facilities, will be planned as part of the Specific Area Plans for the Villebois Village."
Finding: These criteria are satisfied.

Explanation of Finding: Ownership and maintenance of stormwater conveyance facilities in SAP South Plan Area 2 will be addressed through the future Ownership & Maintenance Agreement to be prepared with Final Plat Review.

Circulation System Goal

The Villebois Village shall provide for a circulation system that is designed to reflect the principles of smart growth.

Circulation System Policy 1 Encourage Alternative Modes, Accommodate All Modes

A54. **Review Criteria:** "The Villebois Village shall encourage alternatives to the automobile, while accommodating all travel modes, including passenger cars, trucks, buses, bicycles and pedestrians."
Finding: These criteria are satisfied.
Explanation of Finding: Transportation facilities including streets, sidewalks, and trails are proposed consistent with the Master Plan accommodating different travel modes.

Circulation System Implementation Measure 5 Curb Extensions

A55. **Review Criteria:** "Curb extensions may be utilized within the Villebois Village area under the following basic principles for their placement and design:

- A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located. In the Village Center (inside the Village Loop), the minimum curb-to-curb public street width should be 22 feet, in order to accommodate delivery and garbage truck movements.
- Fire trucks, buses, and single-unit trucks (i.e., garbage trucks) shall be able to negotiate from Collector/Arterial streets without crossing the Collector/Arterial street centerline. Fire trucks shall be able to negotiate through Residential streets, although it is acceptable for them to cross the street centerline on Residential streets.
- Passenger car turning movements shall be able to stay within the street centerline on all streets.
- Bike lanes shall not be forced into vehicle travel lanes.

Placement of curb extensions shall be reviewed through the City's minor alteration process with Specific Area Plans."
Finding: These criteria are satisfied.
Explanation of Finding: Curb extensions are proposed to be placed as shown within the Specific Area Plan Drawings, Exhibit B2, and the Community Elements Book (see Exhibit B1, notebook, Section III). Approval of a minor alteration for placement of the curb extensions is requested.

Circulation System Implementation Measure 6 Alignment Compliant with SROZ

A56. **Review Criteria:** "Street and pathway alignments shall be demonstrated to be in compliance with Significant Resource Overlay Zone (SROZ) regulations with Specific Area Plans."
Finding: These criteria are satisfied.
Explanation of Finding: SROZ compliance is reviewed in Request G.

Circulation System Implementation Measure 7 Connectivity Between Street Termination Points and Adjacent Trails/Pathways

A57. **Review Criteria:** "Pedestrian and bicycle connectivity shall be provided between public and private street termination points and adjacent trails/pathways at the discretion of the City Engineer."
Finding: These criteria are satisfied.
Explanation of Finding: Sufficient pedestrian and bicycle connectivity is provided including a number of trails. No specific termination points have been identified in need of additional pedestrian and bicycle connectivity by the City Engineer.

Technical Appendix I Sanitary Sewer Pump Station for Future Study Area

A58. **Review Criteria:**

"Pump Station Building

Pump stations shall have building enclosures that contain all electrical panels, instrumentation, control systems, generator, and other components are required by the City. Exterior walls shall meet building code structural requirements and meet the Villebois Village Architectural pattern book. The generator shall have its own room with an appropriately sized louver for ventilation. The roof shall be constructed with fire proof materials and have a minimum of 10 feet of clear space above the floor.

Access

Design specifications shall incorporate all applicable and reasonable efforts to maximize close and efficient access for removal, replacement and maintenance of all major and minor equipment. This includes but is not limited to adequate clearances, sufficient anchorage, hoists, hatches and platforms.

Design Capacity

Wetwells and force mains shall be designed and sized to accommodate full buildout within the identified basin(s) contributing to the pump station, unless otherwise approved by the City.

Service area shall include all land that can be provided with gravity wastewater collection service. Service area shall also include basins, which may discharge wastewater into the subject basin, as identified in the City's master plan and/or by City staff. Design population shall be determined per the City's master plan and with additional guidance provided by the City. For facilities being constructed to serve new developments, design population should be based on planned build-out densities.

Design Flow

Pumping stations and related components shall be designed to discharge the Peak Hourly Flow (PHF) with criteria as approved by the City, based on approved master plans.

Project Engineer shall also review the City's master plans and the DEQ's guidelines.

Receiving System

Project Engineer shall evaluate the downstream sanitary sewer system to determine the impacts of the increase in flow (e.g. peak pumping capacity) from the proposed pump station."
Finding: These criteria are satisfied.
Explanation of Finding: The location of the lift station has been identified, and design consistent with this subsection will be reviewed during the Public Works permitting process for the development.

Statewide Planning Goals

Goal 1 Citizen Involvement

A59. **Review Criterion:** "To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."
Finding: This criterion is satisfied.
Explanation of Finding: The adoption process for the proposed SAP amendment includes duly noticed public hearings before the Development Review Board. The current process was preceded by a Master Plan adoption process found compliant with Goal 1.

Goal 2 Part I Land Use Planning

A60. **Review Criterion:** "To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions."
Finding: This criterion is satisfied.
Explanation of Finding: The City is currently in compliance with Goal 2 because it has an acknowledged Comprehensive Plan and regulations implementing the plan. The Villebois Village Master Plan was adopted consistent with the planning policies in the Comprehensive Plan. The Villebois Village Master Plan was found to be consistent with Goal 2 because it creates a more specific plan for a portion of the City that provides additional guidance for future regulations. The proposed SAP amendment does not alter these circumstances.

Goal 5 Natural Resources, Scenic and Historic Areas, and Open Spaces

A61. **Review Criterion:** "To protect natural resources and conserve scenic and historic areas and open spaces."
Finding: This criterion is satisfied.
Explanation of Finding: The proposed SAP amendment complies with local and regional policies and requirements to implement this goal. A significant amount of natural area and open space is shown preserved in the SAP South, Plan Area 2, including Open Space 3.

Goal 6 Air, Water and Land Resource Quality

A62. **Review Criteria:** "To maintain and improve the quality of the air, water and land resources of the state."
Finding: These criteria are satisfied.

Explanation of Finding: The Villebois Village Master Plan is consistent with the air, water and land resources policies of the Comprehensive Plan. The Villebois Village Master Plan protects water and land resources by providing protection for natural resource areas and limiting development to areas that have less impact on natural resources. The Master Plan does not propose any residential structures within the 100-year floodplain. The Plan also calls for measures to use environmentally sensitive techniques for storm drainage. The Plan provides for a mixed-use, compact, interconnected Village that will provide transportation benefits by reducing the need for lengthy vehicle trips and increase the opportunity for bicycle and pedestrian transportation. The proposed SAP amendment does not alter these conditions as it remains consistent with the Master Plan in this regard.

Goal 7 Areas Prone to Natural Disasters and Hazards

A63. **Review Criteria:** "To protect life and property from natural disasters and hazards."
Finding: These criteria are satisfied.
Explanation of Finding: No areas prone to floods, erosion, landslides, wildfire, etc. have been identified in SAP South, Plan Area 2.

Goal 8 Recreational Needs

A64. **Review Criteria:** "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."
Finding: These criteria are satisfied.
Explanation of Finding: Recreational amenities are shown throughout SAP South, Plan Area 2. The amenities include a variety of play areas, trails, and gathering spots. In addition, connections are provided to the regional Graham Oaks Nature Park and the regional Ice Age Tonquin Trail.

Goal 10 Housing

A65. **Review Criteria:** "To provide for the housing needs of citizens of the state."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan complies with local and regional policies and requirements to implement this goal. The housing density and number goals for Villebois continue to be met with the number units and type of housing proposed for SAP South, Plan Area 2.

Goal 11 Public Facilities and Services

A66. **Review Criteria:** "To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan is consistent with the applicable provisions of the City's various utility plans (see Chapter 4 – Utilities of the Master Plan). It proposes to coordinate future development with the provision of the public facility infrastructure in the area (Figure 6 – Conceptual Composite Utilities Plan).

The proposed SAP amendment does not change the planned utilities as shown in the Master Plan.

Goal 12 Transportation

A67. **Review Criteria:** "To provide and encourage a safe, convenient and economic transportation system."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan provides plans (Figure 7 – Street Plan and Figure 8 – Proposed Arterial/Collectors Street System) for a transportation system that is integrated with the transportation system existing and proposed for the City and surrounding areas of Clackamas County. Street sections (Figures 9A and 9B – Street and Trail Sections) are designed to slow traffic, encourage walking and bicycling, and create a pleasant environment. The proposed SAP amendment remains consistent with the transportation components of the Villebois Village Master Plan, and thus this goal.

Goal 13 Energy Conservation

A68. **Review Criteria:** "Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
Finding: These criteria are satisfied.
Explanation of Finding: The Comprehensive Plan has been acknowledged to be consistent with Goal 13, and the Villebois Village Master Plan is consistent with Comprehensive Plan energy conservation policies. The Villebois Village Master Plan provides for a compact mixed-use development that will conserve energy by reducing the amount of and length of vehicle trips by making bicycle and pedestrian transportation viable alternatives for many trips. The proposed SAP amendment remains consistent with the Villebois Village Master Plan in this regard, and thus Goal 13.

Goal 14 Urbanization

A69. **Review Criteria:** "To provide for an orderly and efficient transition from rural to urban land use."
Finding: These criteria are satisfied.
Explanation of Finding: The Villebois Village Master Plan is consistent with Comprehensive Plan urbanization policies and the Residential – Village Land Use designation. The proposed SAP amendment for SAP South, Plan Area 2 continues to comply with and further the intent of Goal 14 by providing a coordinated plan for urbanization of the Master Plan area that coordinates development of the area with development of public facilities, including the transportation system, and protects natural resources. The SAP amendment continues to provide more detailed plans for the urbanization of an area already determined to be within the City's urban growth boundary.

Village Zone

Subsection 4.125 (.01) Purpose

The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan.

Subsection 4.125 (.02) Permitted Uses in Village Zone

A70. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone, including single-family detached dwellings, row houses, and non-commercial parks, playgrounds, and recreational facilities.
Finding: These criteria are satisfied.
Explanation of Finding: The uses proposed includes single-family homes, parks and playgrounds, and open space which are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in the Village Zone

"All development in this zone shall be subject to the V Zone and the applicable provisions of the Wilsonville Planning and Land Development Ordinance. If there is a conflict, then the standards of this section shall apply. The following standards shall apply to all development in the V zone:"

Subsection 4.125 (.05) A. 1.-2 Block, Alley, Pedestrian and Bicycle Standards: Maximum Block Perimeter and Spacing Between Streets for Local Access

A71. **Review Criteria:** "Maximums Block Perimeter: 1,800 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent a block perimeter from meeting this standard."
"If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard."
Finding: These criteria are satisfied.
Explanation of Finding: Circulation patterns along the perimeter of SAP South Plan Area 2 are dictated by a 600-foot access spacing standard on Grahams Ferry Road (City of Wilsonville Transportation System Plan requirement for a minor arterial) along the west property line, surrounding SROZ boundaries, Metro's Graham Oaks Nature Park to the east and south, and existing development patterns along the north boundary of the site (e.g. adjacent single-family residential lots and parks in SAP South). Internal circulation patterns are impacted by incorporation of the following design features: rear-loaded garages with access provided through alleys for medium lots along the main entry road, retention of wetlands, and retention of existing trees.

Block perimeters in SAP South Plan Area 2 meet the maximum 1,800-foot perimeter and maximum 530-foot street spacing standards except in a few areas where the presence of the SROZ, existing development patterns, Graham Oaks Nature Park, or western property line at Grahams Ferry Road prevent compliance with this standard. Specific areas that do not meet block perimeter areas are described below.

- Blocks along the west/southwestern portion of Plan Area 2 that are bounded by Grahams Ferry Road, SW Sicily Street, and SW Waterford Lane, as illustrated on the Land Use Key (Sheet 4, Exhibit B2), can only be developed to the property line. Additionally, circulation within these streets is dictated by the 600-foot Grahams Ferry Road spacing standard. These blocks are bordered by the SROZ to the north and south, as well as Graham Oaks Natural Area to the south; local streets cannot be extended into SROZ and Graham Oaks Natural Areas to achieve block and street spacing standards. Therefore, blocks bounded by Grahams Ferry Road, SW Sicily Street, and SW Waterford Lane cannot meet the maximum 1,800-foot block perimeter and maximum 530 street spacing requirements.

- Blocks in the northeastern portion of Plan Area 2, consisting of blocks to the north of SW Amalfi Lane and blocks bounded by SW Amalfi Lane and SW Beaumont Avenue as illustrated on the Land Use Key (Sheet 4, Exhibit B2), are bordered by SROZ area to the west and north. Additionally, an existing residential development of SAP South borders these blocks to the east. Therefore, local street access cannot be extended without adversely impacting the SROZ area. Blocks north of SW Amalfi Lane and blocks bounded by SW Amalfi Lane and SW Beaumont Avenue cannot meet the maximum 1,800-foot maximum block perimeter and 530 maximum street spacing requirements

- Blocks bounded by NW Naples Drive, SW Alta Lane, and SW Alta Court in the southeastern portion of Plan Area 2, as illustrated on the Land Use Key (Sheet 4, Exhibit B2), are bordered by the SROZ and Metro's Graham Oaks Natural Area to the south and east. Therefore, local street access cannot be extended to serve the subject blocks. Blocks bounded by NW Naples Drive, SW Alta Lane, and SW Alta Court cannot meet the 1,800 maximum block perimeter and 530 maximum street spacing requirements.

- Other blocks not mentioned here meet the maximum 1,800 foot block perimeter and maximum 530 street spacing requirements.

Bike/pedestrian connections are provided, where feasible. Due to the surrounding SROZ areas and the intent to minimize adverse impacts to the SROZ, the majority of trails are soft surface nature trails.

Subsection 4.125 (.05) A. 3. Block, Alley, Pedestrian and Bicycle Standards: Intervening Pedestrian and Bicycle Access

A72. **Review Criteria:** "If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard."

Finding: These criteria are satisfied.
Explanation of Finding: The SROZ surrounding the proposed the developed portions of SAP South Plan Area 2 does limit pedestrian and bicycle access improvements. A network of trails is provided but are soft surface in order to minimize impact to the SROZ.

Subsection 4.125 (.05) B. Access

A73. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion is satisfied.
Explanation of Finding: The design of the subdivision shown in the SAP allows this criterion to be met during the review of the subdivision plat.

Subsection 4.125 (.05) D. Fences

A74. **Review Criterion:** This subsection establishes provisions for fences in the Village Zone, including being consistent with the Master Fencing Program and the Architectural Pattern Book.
Finding: This criterion is satisfied.
Explanation of Finding: The SAP South Master Fencing Plan is part of the SAP South Architectural Pattern Book. This application proposes adding the subject area to the SAP South Master Fencing Plan in the SAP South Architectural Pattern Book. This amendment includes the continuation of Enhanced Full View or Partial View Fence w/ Landscaping along Grahams Ferry Road where residential lots are proposed, Monumentation B at the site entrance, and SROZ fencing at lots adjacent to the SROZ. Residential lot fencing occurs when each home is constructed, details of which are provided with Building Permit review. Residential lot fencing will occur in compliance with the fencing specified for the specific lot type and style in accordance with the SAP South Master Fencing Plan.

Subsection 4.125 (.08) Parks & Open Space

A75. **Review Criteria:** This subsection prescribes the open space requirement for development in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: Figure 5 – Parks & Open Space Plan of the Villebois Village Master Plan indicates that approximately 33% of Villebois is in Parks and Open Space. SAP South Plan Area 2 includes 24.06 acres of Parks and Open Space areas, which is in excess of the acreage proposed for the subject area in the Villebois Village Master Plan. Therefore, SAP South Plan Area 2 is consistent with the overall development and will provide the planned parks and open spaces for the subject area.

Subsection 4.125 (.09) Street Alignment and Access Improvements

Subsection 4.125 (.09) A. 1. a. Street Alignment and Access Improvements Conformity with Master Plan, etc.

A76. **Review Criterion:** "All street alignment and access improvements shall conform to the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan . . ."

Finding: This criterion will be satisfied.
Explanation of Finding: The street alignments are generally consistent with those shown in the Villebois Village Master Plan. Some minor refinements are proposed. See Findings A108 through A113.

Subsection 4.125 (.09) A. 1. a. i. Street Improvement: Conformity with Public Works Standards and Continuation of Streets

A77. **Review Criteria:** "All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed street network will enable conformance with the Public Work Standards. The street system is designed to provide for the continuation of streets within Villebois and to adjoining properties or subdivisions according to the Master Plan.

Subsection 4.125 (.09) A. 1. a. ii. Streets Developed According to Master Plan

A78. **Review Criterion:** "All streets shall be developed according to the Master Plan."
Finding: This criterion is satisfied.
Explanation of Finding: All streets are proposed to be developed with cross sections shown in the Master Plan.

Subsection 4.125 (.09) A. 2. a. & b. Intersections of Streets: Angles and Intersections

A79. **Review Criteria:**
- "Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District."

Finding: These criteria are satisfied.
Explanation of Finding: The applicant's drawings in Exhibit B2 show all proposed streets are developed consistent with these standards.

Subsection 4.15 (.09) A. 2. c. Intersection of Streets: Offsets

A80. **Review Criterion:** "Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:
- 1000 ft. for major arterials
- 600 ft. for minor arterials
- 100 ft. for major collector
- 50 ft. for minor collector"

Finding: These criteria are satisfied.
Explanation of Finding: No intersections violating the defined offsets are proposed.

Subsection 4.125 (.09) A. 2. d. Curb Extensions

A81. **Review Criteria:** "Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F) below, and shall:

- Not obstruct bicycle lanes on collector streets.
- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: Proposed curb extensions are shown on the Circulation Plan (Sheet 6 of Exhibit B2), none of which are located on collector streets. The submitted drawings illustrate that all street intersections will have a minimum 20 foot wide clear distance between curb extensions.

Subsection 4.125 (.09) A. 3. Street Grades

A82. **Review Criteria:** "Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%, may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards."

Finding: These criteria are satisfied.

Explanation of Finding: No street grades approaching these maximums are proposed.

Subsection 4.125 (.09) A. 4. Centerline Radius Street Curves

A83. **Review Criterion:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: The submitted plan sheets, see Exhibit B2, show all street curves meet these standards.

Subsection 4.125 (.09) A. 5. Rights-of-way

A84. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for rights-of-way as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: Proposed rights-of-way are shown on the applicant's plan sheets, Exhibit B2. Rights-of-way will also be reviewed as part of the Preliminary Development Plan and Tentative Plat to ensure compliance. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177.

Subsection 4.125 (.09) A. 6. Access Drives

A85. **Review Criteria:** Access drives are required to be 16 feet for two-way traffic. Otherwise, pursuant to subsection (.09) A. above, the provisions of 4.177 apply for access drives as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states in the narrative in Exhibit B1, "Access drives (alleys) will be paved at least 16-feet in width within a 20-foot tract, as shown on the Circulation Plan. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions."

Subsection 4.125 (.09) A. 7. Clear Vision Areas

A86. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for clear vision areas as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that clear vision areas will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 8. Vertical Clearance

A87. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for vertical clearance as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that Vertical clearance will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

A88. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states, "All sidewalks and pathways within SAP South Plan Area 2 will be constructed in accordance with the standards of Section 4.178 and the Villebois Village Master Plan." Sidewalks and pathways are shown in the circulation plan and street cross-sections (Sheets 6 and 7, Exhibit B2).

Subsection 4.125 (.11) Landscaping, Screening and Buffering

A89. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:

- Streets in the Village Zone shall be developed with street trees as described in the Community Elements Book."

Finding: These criteria are satisfied.
Explanation of Finding: The appropriate landscaping is provided. The proposed street trees, except for SW Alta Court are among the choices provided in the Community Elements Book, as proposed to be amended by this application to add SAP South Plan

Area 2. Condition of Approval PDF 9 ensures the proper street trees are planted for SW Alta Court.

Subsection 4.125 (.12) Signage and Wayfinding

A90. **Review Criteria:** "Except as this subsection may otherwise be amended, or until such time as a Signage and Wayfinding Plan is approved as required by Section 4.125(.18)(D)(2)(f), signs within the Village zone shall be subject to provisions of Section 4.156."
Finding: These criteria are satisfied.
Explanation of Finding: A Secondary Site Identifier is proposed at the entrance from Grahams Ferry Road with this proposed amendment to SAP South. All signage in the subject area will comply with the proposed amendment to SAP South Master Signage & Wayfinding Plan for the addition of Plan Area 2.

Subsection 4.125 (.13) Design Principles Applying to the Village Zone

A91. **Review Criteria:** "The following design principles reflect the fundamental concepts, and support the objectives of the Villebois Village Master Plan, and guide the fundamental qualities of the built environment within the Village zone.

- The design of landscape, streets, public places and buildings shall create a place of distinct character.
- The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the Villebois Village Master Plan.
- The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.
- The design of exterior lighting shall minimize off-site impacts, yet enable functionality."

Finding: These criteria are satisfied.
Explanation of Finding: The SAP Drawings, Exhibit B2, the Architectural Pattern Book, Exhibit B1, notebook Section IIH, and the Community Elements Book, Exhibit B1, notebook, Section II I, are intended to guide the Preliminary Development Plan and Final Development Plan applications to achieve a built environment that reflects the fundamental concepts and objectives of the Master Plan. The Design Principles of Section (.13) have driven the development of the SAP Drawings, the Architectural Pattern Book and the Community Elements Book, which have previously been approved for the remainder of SAP South, and will work in concert to assure that the vision of Villebois is realized in SAP South Plan Area 2.

Subsection 4.125 (.14) A. 1. a. Design Standards: Flag Lots

A92. **Review Criterion:** "Flag lots are not permitted."
Finding: This criterion is satisfied.
Explanation of Finding: No flag lots are proposed.

Subsection 4.125 (.14) A. 2. a. - e. and h. – k. Building and Site Design Requirements

A93. **Review Criteria:** "Building and site design shall include:

- Proportions and massing of architectural elements consistent with those established in an approved Architectural Pattern Book or Village Center Architectural Standards.

- Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards.
- Protective overhangs or recesses at windows and doors.
- Raised stoops, terraces or porches at single-family dwellings.
- Exposed gutters, scuppers, and downspouts, or approved equivalent.
- Building elevations of block complexes shall not repeat an elevation found on an adjacent block.
- Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.
- A porch shall have no more than three walls.
- A garage shall provide enclosure for the storage of no more than three motor vehicles, as described in the definition of Parking Space."

Finding: These criteria are satisfied.

Explanation of Finding: The Architectural Pattern Book and Community Elements Book previously approved for the remainder of SAP South are proposed to also be applied to SAP South Plan Area 2 ensuring compliance with these standards and consistent with surrounding development.

Subsection 4.125 (.14) A. 3. Lighting and Site Furnishings

A94. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."

Finding: These criteria are satisfied.

Explanation of Finding: The SAP South Architectural Pattern Book and Community Elements Book is proposed to be amended to add Plan Area 2 to provide the necessary details for lighting and site furnishings, compliance with which will be ensured during PDP, FDP, and building/construction plan review.

Subsection 4.125 (.14) A. 4. Building Systems

A95. **Review Criteria:** "Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein. Design creativity is encouraged. The LEED Building Certification Program of the U.S. Green Building Council may be used as a guide in this regard."

Finding: These criteria are satisfied.

Explanation of Finding: Subsequent Building Permit applications will review proposed buildings for consistency with the criteria of Table V-3 and the Architectural Pattern Book, as proposed to be amended to add SAP South Plan Area 2.

Subsection 4.125 (.18) C. Specific Area Plan (SAP) Approval Process

Subsection 4.125 (.18) C. 1. Specific Area Plan Purpose

A96. **Review Criterion:** "Purpose – A SAP is intended to advance the design of the Villebois Village Master Plan."

Finding: This criterion is satisfied.

Explanation of Finding: As shown in Findings A3 through A58 above, the proposed SAP amendment for Plan Area 2 is advancing the design of the Villebois Village Master Plan.

Subsection 4.125 (.18) C. 2.-3. Who Can Initiate a SAP Application

A97. **Review Criterion:** "If not initiated by the City Council, Planning Commission or Development Review Board, an application for SAP approval shall be submitted by the Master Planner, or by landowners pursuant to subsection C.3 below. The application shall be accompanied by payment of a fee established in accordance with the City's fee schedule.
The owners of property representing at least 80 percent of a SAP area may request in writing that the Master Planner submit a SAP application. The Master Planner must provide a written response within thirty days. If the Master Planner agrees to submit a request, the Master Planner shall have 180 days to submit the SAP application. If the Master Planner denies the request, fails to respond within 30 days, or fails as determined by the Planning Director to diligently pursue the application after agreeing to submit it, by providing drafts of a pattern book and all other SAP elements within 60 days and thereafter pursuing approval in good faith, the property owners may submit a SAP application for review and approval. A copy of a SAP application submitted by property owners must be provided to the Master Planner. Once the application has been deemed complete by the City, the Master Planner shall have 30 days to review and comment in writing before the proposed SAP is scheduled for public hearing by the DRB."
Finding: This criterion is satisfied.
Explanation of Finding: The entirety of SAP South Plan Area 2 is under the ownership of Northwest Wilsonville Properties, LLC, who has signed the application. No Master Planner is currently functioning as outlined in this subsection, wherefore the requirement for their involvement does not apply.

Subsection 4.125 (.18) D 1. SAP Submittal Requirements: Existing Conditions

A98. **Review Criterion:** "Existing Conditions – An application for SAP approval shall specifically and clearly show the following features and information on maps, drawings, application form or attachments. The SAP shall be drawn at a scale of 1" = 100' (unless otherwise indicated) and may include multiple sheets depicting the entire SAP area, as follows:" Listed a. through h.
Finding: These criteria are satisfied.
Explanation of Finding: All the required existing condition drawings have been submitted. See Sheet 2 of Exhibit B2.

Subsection 4.125 (.18) D. 2. SAP Submittal Requirements: Development Information

A99. **Review Criterion:** "SAP Development Information – The following information shall also be shown at a scale of 1" = 100' and may include multiple sheets depicting the entire SAP area:" Listed a. through n.
Finding: These criteria are satisfied.
Explanation of Finding: All the required existing condition drawings have been submitted. See Exhibit B2.

Subsection 4.125 (.18) D. 3. SAP Submittal Requirements: Architectural Pattern Book

A100. **Review Criterion:** "Architectural Pattern Book – An Architectural Pattern Book shall be submitted with a SAP application. The Architectural Pattern Book shall apply to all development

outside of the Village Center Boundary, as shown on Figure 1 of the currently adopted Villebois Village Master Plan. An Architectural Pattern Book shall address the following:" Listed a. through h.

Finding: These criteria are satisfied.

Explanation of Finding: The SAP South Architectural Pattern Book (see Exhibit B1, notebook, Section IIH) includes information addressing all of the above items. This application includes a request to amend SAP South Architectural Pattern Book to include Plan Area 2. Specific amendments proposed with Plan Area 2 are as follows:

- Update *Guiding Principles of the Village Master Plan* to include Plan Area 2 in SAP South on Introduction, page A4
- Update SAP South Lot Types & Sustainability plan to include Plan Area 2 on Introduction, page A5
- Update Community Fencing map to include Plan Area 2 in SAP South: continue Enhanced Full or Partial View Fence w/ Landscaping along Grahams Ferry Road, add monumentation B at site entrance, and show SROZ Fencing at lots adjacent to SROZ, page E3 and E4.

Subsection 4.125 (.18) D. 4. SAP Submittal Requirements: Community Elements Book

A101. **Review Criterion:** "Community Elements Book – A Community Elements Book shall be submitted, including the following:" Listed a. through n.

Finding: These criteria are satisfied.

Explanation of Finding: A standardized design for the above listed elements is included in the SAP South Community Elements Book (see Exhibit B1, notebook, Section II I). Specific amendments proposed with Plan Area 2 are listed below:

- • Add lighting detail to Lighting Master Plan Specifications, page 3
- • Update Lighting Master Plan Diagram to add Plan Area 2, page 4
- • Update Curb Extension Concept Plan Diagram to add Plan Area 2, page 5
- • Update Street Tree Master Plan Diagram to add Plan Area 2, page 7

Subsection 4.125 (.18) D. 5. SAP Submittal Requirements: Rainwater Management Program

A102. **Review Criterion:** "Rainwater Management Program – A Rainwater Management Program shall be submitted, addressing the following:" Listed a. through c. vii.

Finding: These criteria are satisfied or will be satisfied by Condition of Approval NR 1.

Explanation of Finding: The previously approved Rainwater Management Program for SAP South is proposed to be applied to SAP South Plan Area 2. Condition of Approval NR 1 requires the plan to be updated to match the proposed utility plan.

Subsection 4.125 (.18) D. 6. SAP Submittal Requirements: Master Signage and Wayfinding

A103. **Review Criterion:** "Master Signage and Wayfinding – A Master Signage and Wayfinding Plan shall be submitted with an SAP application and shall address the following:" Listed a. through e.

Finding: These criteria are satisfied.

Explanation of Finding: A standardized design for the above-listed elements is included in the SAP South Master Signage and Wayfinding Plan (see Exhibit B1, notebook, Section IIJ). Specific amendments proposed with Plan Area 2 include updated Site Plan G0.4 to include Plan Area 2, include Enhanced Full View or Partial View Fence with landscaping along Grahams Ferry Road, secondary site identifier at site entrance, and SROZ fencing where lots are adjacent to SROZ.

Subsection 4.125 (.18) D. 8. SAP Submittal Requirements: SAP Narrative Statement

A104. **Review Criterion:** "SAP Narrative Statement – A narrative statement shall be submitted, addressing the following:" Listed a. through f.
Finding: These criteria are satisfied.
Explanation of Finding: The required narrative has been submitted. See Exhibit B1.

Subsection 4.125 (.18) E. 1. b. i. SAP Elements Consistent with Villebois Village Master Plan

A105. **Review Criteria:** "Is consistent with the Villebois Village Master Plan. Those elements of the Village Master Plan with which the SAP must be consistent are the Plan's Goals, Policies, and Implementation Measures, and, except as the text otherwise provides, Figures 1, 5, 6A, 7, 8, 9A, and 9B."
Finding: These criteria are satisfied.
Explanation of Finding: Findings A3 through A58 above demonstrate compliance of proposed SAP South Plan Area 2 with the Villebois Village

Subsection 4.125 (.18) E. 1. b. ii. SAP Phasing Reasonable

A106. **Review Criteria:** "If the SAP is to be phased, as enabled by Sections 4.125(.18)(D)(2)(g) and (h), that the phasing sequence is reasonable."
Finding: These criteria are satisfied.
Explanation of Finding: Consistent with Figure 3 of the Villebois Village Master Plan the proposal adds an additional phase to SAP South, Phase 7. All other phases of SAP South have been built. The phasing of the subject area as the 7th phase is reasonable as it is the final and only available SAP South Phase to be constructed. Phasing of construction of the phase will be further reviewed under the concurrent PDP request, Request B.

Subsection 4.125 (.18) E. 1. b. iii. DRB Modification of SAP

A107. **Review Criteria:** "The Development Review Board may require modifications to the SAP, or otherwise impose such conditions, as it may deem necessary to ensure conformance with the Villebois Village Master Plan, and compliance with applicable requirements and standards of the Planning and Land Development Ordinance, and the standards of this section."
Finding: These criteria are satisfied.
Explanation of Finding: No specific findings are recommended pursuant to this subsection.

Subsection 4.125 (.18) F. SAP Refinements to Villebois Village Master Plan

Refinement 1 Street Network

Subsection 4.125 (.18) F. 1. a. i. Refinements to the Master Plan: Streets

A108. **Review Criteria:** "Changes to the street network or functional classification of streets that do not significantly reduce circulation system function or connectivity for vehicles, bicycles or pedestrians."

Finding: These criteria are satisfied.

Explanation of Finding: The Villebois Village Master Plan was amended in October 2013 to update information for the Future Study Area. The street network within proposed SAP South Plan Area 2 is generally consistent with the street network shown in the amended Villebois Village Master Plan. No change in the functional classification of streets is proposed. The only refinements are in relation to SW Waterford Lane, SW Naples Street, and SW Athens Lane. The SROZ analysis, which refines the boundaries of the SROZ based on scientific analysis of the characteristics of the site, identified areas adjacent to the south and east sides of SW Waterford Lane and SW Naples Street that are not within the SROZ. This allowed for the addition of subtle curves in these roadways. Subtle curvature was also added to SW Athens Lane. This design feature adds aesthetic interest to the streets and allows for the additional and wider linear greens into and throughout the site. This refinement does not affect the function of the circulation system or connectivity for vehicles, bicycles or pedestrians.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A109. **Review Criteria:** "As used herein, "significant" means:

i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: Quantifiable measures related to this refinement request include circulation system function and connectivity. Level of Service (LOS) is the quantifiable performance measure related to circulation system function for motor vehicles. No data is available nor practical to obtain regarding the circulation system function for bicycles and pedestrians. Pedestrian and bicycle connections will be maintained where shown in the master plan with only slightly different alignments. While the traffic study did not compare LOS as various intersections with and without the proposed refinements, LOS of service continues to be met with the proposed changes. The quantifiable measure of connectivity is number of connecting routes. No connecting routes for vehicles are lost.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A110. **Review Criteria:** "As used herein, "significant" means:

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals, policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A111 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A111. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The adding of curves does not affect compliance with any of the goals, policies and implementation measures in the Villebois Village Master Plan.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A112. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"
Finding: These criteria are satisfied.
Explanation of Finding: The SROZ analysis, which refines the boundaries of the SROZ based on scientific analysis of the characteristics of the site, identified areas adjacent to the south and east sides of SW Waterford Lane and SW Naples Street that are not within the SROZ. This allowed for the addition of subtle curves in these roadways. The SROZ analysis helps protects from significant detrimental impacts to the natural areas. See also Request G.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A113. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The interaction with adjoining areas of already developed SAP South are consistent with the Master Plan and not affected by the proposed street refinement.

Refinement 2 Parks, Trails, and Open Spaces

Subsection 4.125 (.18) F. 1. a. ii. Refinements to the Master Plan: Parks, Trails, and Open Space

A114. **Review Criteria:** "Changes to the nature or location of park types, trails or open space that do not significantly reduce function, usability, connectivity, or overall distribution or availability of these uses in the Specific Area Plan."
Finding: These criteria are satisfied.

Explanation of Finding: The Villebois Village Master Plan was amended in October 2013 to update information for the Future Study Area. The parks, trails and open space within proposed SAP South Plan Area 2 are generally consistent with the parks, trails and open spaces shown in the amended Villebois Village Master Plan.

The Master Plan included a total of 23.6 acres of parks and open space, consisting of Open Space 3 (OS-3), Pocket Park 16 (PP-16), and multiple Linear Greens (LG) and landscape tracts. The proposed plan for SAP South Plan Area 2 includes a total of 24.06 acres of parks and open space, also consisting of Open Space 3 (OS-3), Pocket Park 16 (PP-16), and multiple Linear Greens (LG) and landscape tracts.

The *Master Plan* describes **Open Space 3** as follows:

OS-3: Forested Wetland Preserve (Future Study Area SROZ) **(23.05 acres)**
This site contains intact and functioning wetlands within forested areas. While the plan does not include restoration or expansion of the wetlands in this site, any work or impacts within the forested wetland preserve shall comply with SROZ regulations as applicable. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Benches will be located along nature trails in forested areas, and will be distanced from residential areas and play areas. These areas will offer opportunity for wildlife viewing and quiet contemplation that complements the undeveloped nature of this open space. This open space will also include a creative child play area, benches, and picnic tables. Additionally, connections to trails in Graham Oaks Natural Area will be provided.

OS-3 within the SAP South Plan Area 2 is generally consistent with the *Master Plan*, with refinements that update its size in recognition of the refined SROZ boundaries and remove picnic tables and the play structure previously shown within the SROZ in order to minimize impacts to the SROZ. With this application OS-3 is described as follows:

Open Space 3 (OS-3): Forested Wetland Preserve (21.48 Acres)
Preserves existing functional wetlands and wildlife habitat within SROZ areas. Includes smaller soft surface nature trails, with benches and nature trail activity areas that meander through the forest and link with neighborhoods to the north and east and to trails in the Graham Oaks Nature Area to the east and south. Nature trails, benches and nature trail activity areas will comply with SROZ regulations and any impacts will be mitigated through SROZ enhancement and/or creation.

The Master Plan describes **Pocket Park 16** as follows:

PP-16 **(0.26 acres)**
Pocket Park 16 provides a neighborhood focal point and gathering spot, and connections to the adjacent nature trail system. This pocket park provides nature paths, a picnic table, benches, and a play structure.

PP-16 within the SAP South Plan Area 2 is generally consistent with the Master Plan, with refinements that increase its size and add a shelter and small hardscape area to the park, hardscape paths, an additional child play structure, and creative play opportunities through interaction with natural features (non-significant wetland) within the park and an active lawn area located to complement child play structures. With this application PP-16 is described as follows:

Pocket Park 16 (PP-16) (0.89 Acres)
Provides a neighborhood focal point and gathering spot, connections to nature trail system, and opportunities for creative play through interaction with a non-locally significant wetland and an active lawn area located to complement child play structures. Includes child play structures for younger and older-aged children, a sheltered seating area and hardscape plaza, hardscape paths, and benches.

The Master Plan describes **Linear Greens** as follows:

Miscellaneous Linear Greens (Future Study Area) **(Total 0.29 acres)**
These linear greens offer visual and physical linkages to open space areas and areas adjacent to existing landscaping. Some linear green spaces include lawn areas, benches, and existing trees where feasible.

Linear greens within the SAP South Plan Area 2 are generally consistent with the *Master Plan*, with refinements that increase the overall area of linear greens by adding more linear greens to the plan and adding small creative play feature(s) within linear greens. Linear greens have been added along both sides of the entry road and along the west side of SW Naples Street. With this application, linear greens are described as follows:

Linear Greens (LG) (1.14 Acres)
Provides visual and physical linkages to the neighborhood gathering spot and the nature trail system within Open Space areas. Includes small patches of lawn areas, seating areas, and small creative play features. Provides aesthetic appeal of open space, a sense of place, and safer pedestrian environment along major road from Grahams Ferry Road site entrance.

Landscape tracts have been added throughout the site, in areas between residential lots and the adjacent street or providing pedestrian connections. A total of 0.55 acres of landscape tracts are provided with SAP South Plan Area 2.

Nature Trails are shown throughout the parks and open space within the subject area in both the Master Plan and in SAP South Plan Area 2, with neighborhood connections to the north and east and to Graham Oaks Nature Area to the east and south. The Nature Trails continue to be shown as smaller soft surface trails and continue to provide the network of connections shown in the Master Plan.

The refinements to the parks, trails and open space described above enhance and improve these features. These refinements do not reduce function, usability, connectivity, or overall distribution or availability of these uses.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A115. **Review Criteria:** "As used herein, "significant" means:
i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,
Finding: These criteria are satisfied.
Explanation of Finding: The performance measures, etc. being measured for the purpose of this refinement are the reduction of function, usability, connectivity, or overall distribution or availability of park uses in the Preliminary Development Plan. While a creative play structure and tables are being removed from Open Space 3 to further protect

the natural resources of the areas, new amenities are being added to adjacent Pocket Park 16 including a covered seating area and additional play structure. Additional small creative play structures are also proposed in the linear greens. Especially with the addition of the amenities in Pocket Park 16 and the linear greens, the amenities being removed from Open Space 3 remain available in the SAP South Plan Area 2.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A116. **Review Criteria:** "As used herein, "significant" means:

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals, policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A117 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A117. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."

Finding: These criteria are satisfied.

Explanation of Finding: As discussed in details in Finding A114 above, goals, policies, and implementation measures related to parks and open space are equally or better met. Protection of natural areas and wildlife habitat are enhanced, the network of pathways continues, trees continue to be preserved, a variety of activities remain, and additional layers of activity are added in Pocket Park 16, the main neighborhood gathering area.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A118. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"

Finding: These criteria are satisfied.

Explanation of Finding: The creative play area and picnic tables are being removed from the SROZ to reduce impacts on the natural area, none of the other changes negatively impact the natural areas.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A119. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed refinements do not impact the surrounding areas. All the surrounding area in the Villebois Village has already been developed.

Refinement 3 Land Use and Density

Subsection 4.125 (.18) F. 1. a. ii. Refinements to the Master Plan: Parks, Trails, and Open Space

A120. **Review Criteria:** "Changes to the location or mix of land uses that do not significantly alter the overall distribution or availability of uses in the affected SAP."
"A change in density that does not exceed ten percent, provided such density change does not result in fewer than 2,300 dwelling units in the Village."
Finding: These criteria are satisfied.
Explanation of Finding: The land uses and density within proposed SAP South Plan Area 2 are generally consistent with the land uses and density shown in the Villebois Village Master Plan.

Figure 1 – Land Use Plan of the Master Plan shows a mix of mediums, standards and larges within the subject area with standards and larges around the edges of the development and mediums concentrated in the internal blocks. The proposed land use plan for SAP South Plan Area 2 continues this pattern with standards and larges located around the edges of the development and mediums located internally.

Refinements to the mix and locations include fewer mediums with mediums being the primary alley-loaded land use proposed. Mediums are located where they will front onto the main entry road (SW Athens Lane) into the project from Grahams Ferry Road, as well as along SW Waterford Lane, SW Beaumont Avenue, and a portion of SW Naples Street. Refinements have occurred along SW Athens Lane to allow for a wider green space feel along this entry street. The mediums along SW Athens Lane will include courtyards in their front yards. The other areas where mediums were previously shown have been refined to show front loaded standards and larges, which results in fewer lots within these blocks. Additionally, lots have been removed from the south side of SW Waterford Lane in order to open up views into the forest.

SAP South Plan Area 2 proposes a total of 100 residential units, including 40 mediums, 25 standards and 35 larges. The proposed refinements do not significantly alter the overall distribution or availability of uses within SAP South as all of these residential units fall within the same land use category as defined by Wilsonville Code. The table below shows the total number of units (larger land use category) shown within SAP South including the subject area in the Master Plan and the total number with the proposed refinements.

	SAP South Unit Count within MP	**Proposed SAP South Unit Count**	**% Change**
Medium/Standard/ Large/Estate	312	299	-4.2%

The proposed refinements do not exceed the 10% standard. This proposal results in a total of 2,632 units within Villebois, which remains above the minimum density of 2,300 units required to be obtained across Villebois. The refinements described above improve the overall aesthetic of the proposed plan by enhancing the entry street into the project with the addition of linear greens and courtyards in front of these mediums, by increasing views into the forested open space, and by adding linear greens and landscape tracts along several of the internal streets.

Subsection 4.125 (.18) F. 1. b. i. Refinements: Definition of Significant-Quantitative

A121. **Review Criteria:** "As used herein, "significant" means:

i. More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,

Finding: These criteria are satisfied.

Explanation of Finding: Quantifiable measures related to this refinement include number of units within the aggregate land use category, which is being reduced within the allowable 10% limit and maintains more than 2300 units in the Villebois Village.

Subsection 4.125 (.18) F. 1. B. ii. Refinements: Definition of Significant-Qualitative

A122. **Review Criteria:** "As used herein, "significant" means:

ii. That which negatively affects an important, qualitative feature of the subject, as specified in (.18)(F)(1)(a), above."

Finding: These criteria are satisfied.

Explanation of Finding: This subsection does not provide clear definition of what an important qualitative feature might be. Absent details in this subsection, staff interprets the primary qualitative factors to consider being the three guiding design principles of the Villebois Village Master Plan: Connectivity, Diversity, and Sustainability. The three guiding design principles are further defined by the goals, policies, and implementation measures of the Master Plan. By virtue of better or equally implementing the goals, policies, and implementation measures of the Villebois Village Master Plan, as described in Finding A123 below, the proposed refinements do not negatively affect qualitative features of the street network.

Subsection 4.125 (.18) F. 2. a. Refinements: Equally or Better Meeting Master Plan

A123. **Review Criteria:** "The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan."

Finding: These criteria are satisfied.

Explanation of Finding: For housing in SAP South Plan Area 2, a specific pattern is established in the Master Plan. A mix of mediums, standards and larges within the subject area with standards and larges around the edges of the development and mediums concentrated in the internal blocks. The proposed land use plan for SAP South Plan Area 2 continues this pattern with standards and larges located around the edges of the development and mediums located internally. See also Finding A120.

Subsection 4.125 (.18) F. 2. b. Refinements: Impact on Resources

A124. **Review Criteria:** "The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and"
Finding: These criteria are satisfied.
Explanation of Finding: Part of the unit reduction is to preserve a treed area not in the SROZ helping to maintain and natural and scenic resource.

Subsection 4.125 (.18) F. 2. c. Refinements: Relation to Adjoining Areas

A125. **Review Criteria:** "The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: Adjoining areas of the Master Plan have previously been developed.

Section 4.139.01 SROZ Purpose

A126. **Review Criteria:** "The Significant Resource Overlay Zone (SROZ) is intended to be used with any underlying base zone as shown on the City of Wilsonville Zoning Map. The purpose of the Significant Resource Overlay Zone is to implement the goals and policies of the Comprehensive Plan relating to natural resources, open space, environment, flood hazard, and the Willamette River Greenway. In addition, the purposes of these regulations are to achieve compliance with the requirements of the Metro Urban Growth Management Functional Plan (UGMFP) relating to Title 3 Water Quality Resource Areas, and Title 13 Habitat Conservation Areas, and that portion of Statewide Planning Goal 5 relating to significant natural resources. It is not the intent of this ordinance to prevent development where the impacts to significant resources can be minimized or mitigated."
Finding: These criteria are satisfied.
Explanation of Finding: SAP South Plan Area 2 includes a significant amount of area in the SROZ. Request G, being reviewed concurrently with the SAP Amendment, includes a detailed review of SROZ related regulations.

Section 4.139.02 Where the SROZ Regulations Apply

A127. **Review Criteria:** "The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas". The text provisions of the Significant Resource Overlay Zone ordinance take precedence over the Significant Resource Overlay Zone maps. The Significant Resource Overlay Zone is described by boundary lines shown on the City of Wilsonville Significant Resource Overlay Zone Map. For the purpose of implementing the provisions of this Section, the Wilsonville Significant Resource Overlay Zone Map is used to determine whether a Significant Resource Impact Report (SRIR) is required. Through the development of an SRIR, a more specific determination can be made of possible impacts on the significant resources.

Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations. Where the provisions of this Section conflict with other provisions of the City of Wilsonville Planning and Land Development Ordinance, the more restrictive shall apply.

The SROZ represents the area within the outer boundary of all inventoried significant natural resources. The Significant Resource Overlay Zone includes all land identified and protected under Metro's UGMFP Title 3 Water Quality Resource Areas and Title 13 Habitat Conservation Areas, as currently configured, significant wetlands, riparian corridors, and significant wildlife habitat that is inventoried and mapped on the Wilsonville Significant Resource Overlay Zone Map."

Finding: These criteria are satisfied.

Explanation of Finding: The SROZ areas within SAP South Plan Area 2 include wetlands and upland forest habitat. Request G, being reviewed concurrently with the SAP Amendment, includes a detailed review of SROZ related regulations.

Section 4.171 Protection of Natural Features & Other Resources

Subsection 4.171 (.02) General Terrain Preparation

A128. **Review Criteria:**

- "All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.
- All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code, all development shall be planned, designed, constructed and maintained so as to:
    - Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.
    - Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.
    - Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.

Finding: These criteria are satisfied.

Explanation of Finding: The SAP Drawings (see Exhibit B2) demonstrate that SAP South Plan Area 2 is designed with maximum regard to natural terrain features and topography including keeping development focused on the areas disturbed by previous development. No hillside areas or floodplains are located within SAP South Plan Area 2. Plan Area 2 includes non-locally significant wetland areas adjacent to the southwestern portion of the subject area, locally significant wetland areas, and areas within the SROZ Zone, as illustrated by the Existing Conditions (see Sheet 2 of Exhibit B2). These features are proposed to be maintained within open space areas. The Tree Preservation Plan shows proposed tree preservation and the Grading Plan conceptually shows proposed grading within the subject area. All subsequent grading, filling and excavating will be done in accordance with the Uniform Building Code. Disturbance of soils and removal of trees and other native vegetation will be limited to the extent necessary to construct the proposed development. Construction will occur in a manner that avoids substantial probabilities of accelerated erosion; pollution, contamination or siltation of lakes, rivers, streams and wetlands; damage to vegetation; and injury to wildlife and fish habitats.

Subsection 4.171 (.03) Hillsides

A129. **Review Criterion:** "Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:"

Finding: This criterion does not apply.

Explanation of Finding: The subject Preliminary Development Plan does not include any areas of slopes in excess of 25%. Therefore, this standard does not apply to this application.

Subsection 4.171 (.04) Trees and Wooded Area

A130. **Review Criteria:**

- "All developments shall be planned, designed, constructed and maintained so that:
  - Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.
  - Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.
  - Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.
- Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:
  - Avoiding disturbance of the roots by grading and/or compacting activity.
  - Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.
  - Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.
  - Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

Finding: These criteria are satisfied.

Explanation of Finding: The Tree Preservation Plan, Sheet 11 of Exhibit B2, depicts existing trees within the subject area and identifies trees to be retained and to be removed. This application includes a request for approval of a Type "C" Tree Removal Plan. See Request E.

Subsection 4.171 (.05) High Voltage Power Lines

A131. **Review Criteria:** "High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:

- Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage power line easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage power line easements and rights of way and petroleum pipeline easement shall be carefully reviewed.
- Any proposed non-residential development within high voltage power line easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.

Finding: These criteria do not apply.
Explanation of Finding: The development area and surrounding area are not around high voltage power lines.

Subsection 4.171 (.06) Safety Hazards

A132. **Review Criteria:** "

- To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.
- To protect lives and property from damage due to soil hazards.
- To protect lives and property from forest and brush fires.
- To avoid financial loss resulting from development in hazard areas.

Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that development of the subject area will occur in a manner that minimizes potential hazards to safety.

Subsection 4.171 (.07) Earth Movement Hazard Areas

A133. **Review Criterion:** "No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions."
Finding: This criterion is satisfied.
Explanation of Finding: No areas of land movement, slump, earth flow, or mud or debris flow have been identified in the project area.

Subsection 4.171 (.08) Standards for Soil Hazard Areas

A134. **Review Criteria:**

- "Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.
- The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Finding: These criteria are satisfied.
Explanation of Finding: No soil hazard areas have been identified within the subject area.

Subsection 4.171 (.09) Historic Protection

A135. **Review Criteria:** This subsection establishes requirements for protection of historic resources.
Finding: This criterion is satisfied.
Explanation of Finding: A Cultural Resources Inventory for SAP South – Plan Area 2 (see Exhibit B2, notebook, Section IIE) describes methods, conditions, findings, and recommendations related to historic, cultural, and archeological resources on the subject site in detail. This report states that one archeological resource was identified on the subject site. However, the resource is an isolated find, which does not qualify for site designation or listing on the National Register of Historical Places. Therefore, no further

archeological work or avoidance measures are recommended at this time. If any resources are discovered during construction, activities should be halted and the resource consultant should be notified.

Section 4.178 Sidewalk and Pathway Standards

A136. **Review Criteria:**

- "Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.
- Pathways
    - Bicycle facilities shall be provided using a bicycle lane as the preferred facility design. The other facility designs listed will only be used if the bike lane standard cannot be constructed due to physical or financial constraints. The alternative standards are listed in order of preference.
    - Bike lane. This design includes 12-foot minimum travel lanes for autos and paved shoulders, 5-6 feet wide for bikes that are striped and marked as bicycle lanes. This shall be the basic standard applied to bike lanes on all arterial and collector streets in the City, with the exception of minor residential collectors with less than 1,500 (existing or anticipated) vehicle trips per day."

Finding: These criteria are satisfied.

Explanation of Finding: Sheet 7 of the applicant's plan sheets, Exhibit B2, depict cross-sections of the proposed sidewalks and pathways in compliance with the above standards and Master Plan figures

REQUEST B: DB14-0003 SAP-SOUTH PDP 7, PRELIMINARY DEVELOPMENT PLAN

The applicant's findings in Section IIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Village Zone

Subsection 4.125 (.02) Permitted Uses in Village Zone

B1. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone, including single-family detached dwellings, row houses, and non-commercial parks, playgrounds, and recreational facilities.
Finding: These criteria are satisfied.
Explanation of Finding: The uses proposed includes single-family homes, parks and playgrounds, a sewer pump station, and open space which are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in the Village Zone

"All development in this zone shall be subject to the V Zone and the applicable provisions of the Wilsonville Planning and Land Development Ordinance. If there is a conflict, then the standards of this section shall apply. The following standards shall apply to all development in the V zone:"

Subsection 4.125 (.05) A. Block, Alley, Pedestrian, and Bicycle Standards

B2. **Review Criteria:** This subsection lists the block, alley, pedestrian, and bicycle standards applicable in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan drawings, Exhibit B4, shows blocks, alleys, pedestrian, and bicycle paths consistent with this subsection and the SAP, as proposed to be amended.

Subsection 4.125 (.05) B. Access

B3. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion is satisfied.
Explanation of Finding: A condition of approval for the Tentative Subdivision Plat will ensure compliance with this standard. See Request D.

Table V-1, Development Standards

B4. **Review Criteria:**

Table V-1: Development Standards

Building Type	Min. Lot Size (sq.ft.)	Min. Lot Width (ft.)	Min. Lot Depth (ft.)	Max. Lot Coverage (note)	Min. Frontage Width [16, 12] (%age)	Max. Bldg. Height [9] (ft.)	Setbacks [10, 13, 20] Front Min. (ft.)	Front Max. (ft.)	Rear Min. (ft.)	Side Min. (ft.)	Alley-Loaded Garage (note)	Street-Loaded Garage (note)
Commercial Buildings - Village Center [14]	NR	NR	NR	1	90	60	NR [3]	5	NR	NR	NR	NA
Hotels - Village Center [14]	NR	NR	NR	1	80	60	NR [3]	15	NR	NR	NR	NA
Mixed Use Buildings - Village Center [14]	NR	NR	NR	1	90	60	NR [3]	8	NR	NR	NR	NA
Multi-Family Dwellings - Village Center [14]	NR	NR	NR	1	80	45	5 [4]	15	NR	NR	NR	NA
Row Houses [11] - Village Center [14]	NR	NR	NR	1	80	45	5 [4]	10	NR	NR	NR	NA
Commercial Buildings	NR	NR	NR	1	60	45	NR	15	NR	NR	NR	NA
Mixed Use Buildings	NR	NR	NR	1	60	45	NR	15	NR	NR	NR	NA
Multi-Family Dwellings	NR	NR	NR	1	60	45	8 [4]	15	NR	NR	NR	NA
Row Houses [11]	NR	15	50	1	80	45	8 [5]	15	NR	NR	NR	NA
Duplexes	4,000	45	70	3	60 [16]	35	12 [5, 6]	20 [6]	5	5 [15]	7	8,17,18
Single-Family Dwellings	2,250	35	50	2	60 [16]	35	12 [5, 6]	20 [6]	5	5 [15]	7	8,17

Notes: NR No Requirement

NA Not Allowed

1 Lot < 8000sf: NR; Lot >8000sf: 80% (Max. Lot Coverage)

2 Small lots: 75%, Medium Lots: 65%, Standard and Large Lots: 55%, Estate Lots: 45% Maximum Lot Coverage
On lots where detached accessory buildings are built, maximum lot coverage may be increased by 10%.

3 Bay windows, balconies, and other structural building projections above 8 ft. may encroach up to 5 ft. into the Public Way; canopies, awnings, and other non-structural projections may encroach up to 8 ft. into the Public Way.

4 Porches, stairs, stoops, decks, canopies, balconies, bay windows, chimneys, awnings, and other building projections may encroach up to the Public Way.

5 Porches, stoops, decks, canopies, balconies, bay windows, chimneys, awnings, and other building projections may encroach to within 8 ft. of the Public Way. Stairs may encroach to the Public Way.

6 For Standard, or Large Lots on Collector Avenues, front setbacks are 20 ft. min., (13' setback to porch), side street setbacks are 15' (8' setback to porch). Pie-shaped lots or lots with significant trees or grade banks at frontage have no maximum front setback.

7 The garage setback from alley shall be between 3 and 5 foot or, when as optional parking space is located between the garage and the alley, shall be 16 ft. minimum. Lots with important trees, as identified in the Master Plan, or grade differences at the alley, affecting garage location shall be exempt from this requirement.

8 Street-loaded garages shall be a minimum 20 ft. front setback to face of garage, and located a minimum of 5 ft. behind main façade of the associated dwelling unit.

9 Vertical encroachments are allowed up to ten additional feet, for up to 10% of the building footprint; vertical encroachments shall not be habitable space.

10 For Village Center buildings with lots fronting two or more streets, at least two facades shall be subject to the minimum frontage width and front setback requirements.

11 Row Houses are typically attached, but may be detached within the Village Center Boundary. When attached, no more than ten units shall be contiguous along a street edge. When row houses are detached, the Minimum Frontage Width is 65%. The Minimum Frontage Width for detached row houses may be less than 65% on corner lots or to accommodate the curve radius of street frontage, public utility easements, important trees, grade differences, public open space requirements, or as otherwise approved by the DRB.

12 See Definitions, 4.125.01, for measurement of Minimum Frontage Width.

13 Front Setback is measured as the offset of the front lot line or a vehicular or pedestrian access easement line. On lots with alleys, Rear Setback shall be measured from the rear lot line abutting the alley.

14 See Figure 2A - Village Center Boundary & Land Use Plan in the Villebois Village Master Plan for areas included within the Village Center.

15 On Estate Lots and Large Lots with frontage 70 ft. or wider, the minimum combined side yard setbacks shall total 15 ft. with a minimum of 5 ft. On Small and Medium Lots, minimum side setback shall be 0 ft. or as required by Building Code.

16 For cluster housing with lots arranged on a courtyard, frontage shall be measured at the front door face of the building adjacent to a public right of way or a public pedestrian access easement linking the courtyard with the Public Way.

17 Dwellings on lots without alley access shall be at least 36 feet wide.

18 Duplexes with front-loaded garages are limited to one shared standard-sized driveway/apron.

19 Maximum setbacks may be increased as necessary to accommodate deeper porches, building code, public utility easements or public open space requirements.

20 Lots are categorized as small, medium, standard, large or estate as shown in the Pattern Book.

[Table V-1 amended by Ord. 667 on 8/17/09; Ord. 682, 9/9/10]

Finding: These criteria are satisfied.

Explanation of Finding: In previous PDP's it has consistently been interpreted to allow the lot width and lot sizes to be governed by the Pattern Book. All lot dimensions and sizes meet the standards established in the SAP South Pattern Book.

Subsection 4.125 (.07) Table V-2 Off-Street Parking, Loading & Bicycle Parking

B5. **Review Criteria:**

Table V-2: Off Street Parking Requirements				
Permitted or Conditional Use	Min. Vehicle Spaces	Max. Vehicle Spaces	Bicycle Short-term (Spaces)	Bicycle Long-term (Spaces)
Permitted Uses				
Single-Family Detached Dwellings	1.0/DU	NR	NR	NR
Single-Family Accessory Dwelling Units*	1.0/DU	NR	NR	NR
Duplex	1.0/DU	NR	NR	NR
Row Houses	1.0/DU	NR	NR	NR
Multi-Family Dwellings	1.0/1 Bdr 1.5/2 Bdr 1.75/3 Bdr	NR	1 per 20 units Min. of 2	1 per 4 units Min. of 2
Community Housing	1 per 4 residents	1 per unit	None	1 per 8 residents Min. of 2
Commercial Uses				
Convenience Store	2/1000 sf	5/1000 sf	1 per 5000 sf Min. of 2	1 per 12,000 sf Min. of 2
Restaurant/Pub	2/1000 sf	10/1000 sf	1 per 5000 sf Min. of 2	1 per 12,000 sf Min. of 2
Child Day Care	0.2 per student/staff	0.3 per student/staff	None	1 per 10,000 sf Min. of 2
Medical/Dental	3/1000 sf	4/1000 sf	1 per 40,000 sf Min. of 2	1 per 70,000 sf Min. of 2
All other commercial uses	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2
Conditional Uses				
Schools	0.2 per student/staff	0.3 per student/staff	0.3 per student/staff	0.2 per classroom
Recreational Facilities	3/1000 sf [1]	5/1000 sf [1]	1 per 3,000 sf Min. of 4	1 per 3000 sf Min. of 4
Conference Center	0.3 per seat	0.5 per seat	1 per 15 seats Min. of 2	1 per 40 seats Min. of 10
Library/Museum	2/1000 sf	4/1000 sf	1 per 1000 sf Min. of 6	1 per 1000 sf Min. of 6
Religious Institution	.25 per seat	.5 per seat	1 per 2,000 sf Min. of 2	1 per 4,000 sf Min. of 2
Theater	.25 per seat	.5 per seat	1 per 20 seats Min. of 2	1 per 50 seats Min. of 4
Overnight Lodging Facility	1 per room	1.5 per room	1 per 20 rooms Min. of 2	1 per 20 rooms Min. of 2
Light Manufacturing/Research and Development	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2
All other Conditional Uses	2/1000 sf	4/1000 sf	1 per 10,000 sf Min. of 2	1 per 40,000 sf Min. of 2

Notes: [1] 1/1000 sf min. for court facilities

NR No requirement

* See WC Section 4.113(.11) Assessory Dwelling Units

[Table 4-2 amended by Ord. 677, 3/1/10]

Finding: These criteria are satisfied.

Explanation of Finding: At least two (2) parking spaces are provided for each home, exceeding the minimum of one (1).

Subsection 4.125 (.08) Parks & Open Space

B6. **Review Criteria:** This subsection prescribes the open space requirement for development in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: Figure 5 – Parks & Open Space Plan of the Villebois Village Master Plan states that there are a total of 159.73 acres within Villebois, which is approximately 33% of Villebois. An amendment to SAP South to include Plan Area 2 has been submitted concurrently. See Request A. SAP South Plan Area 2 included minor refinements to park and open space areas, which increased parks and open space areas within the subject site. Parks and open space areas within PDP 7 South are 24.06 acres in size, consistent with the acreage proposed for the subject area with SAP South Plan Area 2. Additionally, parks and open spaces compromise 56% of PDP 7 South, exceeding the minimum requirement of 25%. Therefore, PDP 7 South is consistent with the overall development and will provide the planned parks and open space areas for the subject area.

Subsection 4.125 (.09) Street Alignment and Access Improvements

Subsection 4.125 (.09) A. 1. a. Street Alignment and Access Improvements Conformity with Master Plan, etc.

B7. **Review Criterion:** "All street alignment and access improvements shall conform to the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan . . ."
Finding: This criterion is satisfied.
Explanation of Finding: The street alignments and access improvements conform with SAP South Plan Area 2 plans which have been found to be in compliance with the Villebois Village Master Plans with some minor refinements regarding alignment of the streets. See Request A Findings A76 and Findings A108 through A113.

Subsection 4.125 (.09) A. 1. a. i. Street Improvement: Conformity with Public Works Standards and Continuation of Streets

B8. **Review Criteria:** "All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan."
Finding: These criteria are satisfied.
Explanation of Finding: All street improvements within this PDP will comply with the applicable Public Works Standards. The connection to Villebois Drive South and Grahams Ferry Road are provided as shown in the Master Plan. No other connections to adjoining properties or subdivisions are planned.

Subsection 4.125 (.09) A. 1. a. ii. Streets Developed According to Master Plan

B9. **Review Criterion:** "All streets shall be developed according to the Master Plan."
Finding: This criterion is satisfied.
Explanation of Finding: All streets within this PDP will be developed with curbs, landscape strips, sidewalks, and bikeways or pedestrian pathways as depicted on the

Circulation Plan, Sheet 7.1 of Exhibit B4, and Street Sections, Sheet 7.2 of Exhibit B4, which are consistent with the cross sections shown in the Master Plan and as approved by the City Engineer for Grahams Ferry Road.

Subsection 4.125 (.09) A. 2. a. & b. Intersections of Streets: Angles and Intersections

B10. **Review Criteria:**

- "Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: The Circulation Plan, Sheet 7.1 of Exhibit B4, demonstrates that all proposed streets will intersect at angles consistent with the above standards.

Subsection 4.15 (.09) A. 2. c. Intersection of Streets: Offsets

B11. **Review Criterion:** "Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:

- 1000 ft. for major arterials
- 600 ft. for minor arterials
- 100 ft. for major collector
- 50 ft. for minor collector"

Finding: These criteria are satisfied.

Explanation of Finding: The Circulation Plan, Sheet 7.1 of Exhibit B4, demonstrate that opposing intersections on public streets are offset, as appropriate, so that no danger to the traveling public is created.

Subsection 4.125 (.09) A. 2. d. Curb Extensions

B12. **Review Criteria:** "Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F) below, and shall:

- Not obstruct bicycle lanes on collector streets.
- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: Curb extensions are shown on the Circulation Plan, Sheet 7.1 of Exhibit B4. Curb extensions will not obstruct bicycle lanes on collector streets. The plan sheets illustrate that all local street intersections will have a minimum 20 foot wide clear distance between curb extensions.

Subsection 4.125 (.09) A. 3. Street Grades

B13. **Review Criteria:** "Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%,

may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards."

Finding: These criteria are satisfied.

Explanation of Finding: No streets are proposed that exceed or approach the maximum grade.

Subsection 4.125 (.09) A. 4. Centerline Radius Street Curves

B14. **Review Criterion:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: Compliance is shown on the Circulation Plan, Sheet 7.1 of Exhibit B4.

Subsection 4.125 (.09) A. 5. Rights-of-way

B15. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for rights-of-way as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: Proposed rights-of-way are shown on the applicant's plan sheets, including Sheets 4.1 and 4.2, Tentative Subdivision Plat, in Exhibit B4. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177.

Subsection 4.125 (.09) A. 6. Access Drives

B16. **Review Criteria:** Access drives are required to be 16 feet for two-way traffic. Otherwise, pursuant to subsection (.09) A. above, the provisions of 4.177 apply for access drives as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states, "Access drives (alleys) will be paved at least 16-feet in width within a 20-foot tract, as shown on the Circulation Plan. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions."

Subsection 4.125 (.09) A. 7. Clear Vision Areas

B17. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for clear vision areas as no other provisions are noted.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states that clear vision areas will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 8. Vertical Clearance

B18. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for vertical clearance as no other provisions are noted.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant states that Vertical clearance will be provided and maintained in compliance with the Section 4.177.

Subsection 4.125 (.09) A. 9. Interim Improvement Standards

B19. **Review Criteria:** Pursuant to subsection (.09) A. above, the provisions of 4.177 apply for interim improvement standards as no other provisions are noted.
Finding: This criterion will be satisfied.
Explanation of Finding: An interim street section improvement will be provided on Grahams Ferry Road to create consistency with street improvements completed previously with phased development of SAP North and SAP South. No other interim street improvements are proposed.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

B20. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: All sidewalks and pathways within SAP South Plan Area 2 will be constructed in accordance with the standards of Section 4.178 and the Villebois Village Master Plan. Sidewalks and pathways are shown in the Circulation Plan and Street Cross-sections. See Sheets 7.1 and 7.2, Exhibit B4.

Subsection 4.125 (.11) Landscaping, Screening and Buffering

B21. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:
- Streets in the Village Zone shall be developed with street trees as described in the Community Elements Book."

Finding: These criteria are satisfied.
Explanation of Finding: The appropriate landscaping is provided. The proposed street trees are among the choices provided in the Community Elements Book, except SW Alta Court which Condition of Approval PDF 9 ensures appropriate street trees are placed.

Subsection 4.125 (.12) Signage and Wayfinding

B22. **Review Criteria:** "Except as this subsection may otherwise be amended, or until such time as a Signage and Wayfinding Plan is approved as required by Section 4.125(.18)(D)(2)(f), signs within the Village zone shall be subject to provisions of Section 4.156."
Finding: These criteria are satisfied.
Explanation of Finding: Signage will be provided consistent with the SAP South Signage & Wayfinding Plan, as amended by Request A.

Subsection 4.125 (.13) Design Principles Applying to the Village Zone

B23. **Review Criteria:** "The following design principles reflect the fundamental concepts, and support the objectives of the Villebois Village Master Plan, and guide the fundamental qualities of the built environment within the Village zone.

- The design of landscape, streets, public places and buildings shall create a place of distinct character.
- The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the Villebois Village Master Plan.
- The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.
- The design of exterior lighting shall minimize off-site impacts, yet enable functionality."

Finding: These criteria are satisfied.

Explanation of Finding: The Architectural Pattern Book and Community Elements Book ensure the design meets the fundamental design concepts and support the objectives of the Villebois Village Master Plan. By complying with an approved Architectural Pattern Book and Community Elements Book, as amended in Request A, the design of the PDP will satisfy these criteria. See also Final Development Plan, Request F.

Subsection 4.125 (.14) A. 1. a. Design Standards: Flag Lots

B24. **Review Criterion:** "Flag lots are not permitted."

Finding: This criterion is satisfied.

Explanation of Finding: No flag lots are proposed.

Subsection 4.125 (.14) A. 2. a. - e. and h. – k. Building and Site Design Requirements

B25. **Review Criteria:** "Building and site design shall include:

- Proportions and massing of architectural elements consistent with those established in an approved Architectural Pattern Book or Village Center Architectural Standards.
- Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards.
- Protective overhangs or recesses at windows and doors.
- Raised stoops, terraces or porches at single-family dwellings.
- Exposed gutters, scuppers, and downspouts, or approved equivalent.
- Building elevations of block complexes shall not repeat an elevation found on an adjacent block.
- Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.
- A porch shall have no more than three walls.
- A garage shall provide enclosure for the storage of no more than three motor vehicles, as described in the definition of Parking Space."

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.

Explanation of Finding: The application requests PDP approval for single family detached houses. Conformance with the Pattern Book and Community Elements Book will assure consistency with the Design Standards of subsection (.14). Conformance with the

Architectural Pattern Book will be reviewed at the issuance of each building permit. Expected front elevations of the planned homes are provided which have been found satisfactorily consistent with the Architectural Pattern Book by the city's consultant architect, Steve Coyle. See Section IIG) of Exhibit B3 and Exhibit B6. Compliance with the Community Elements Book is being reviewed as part of Request F Final Development Plan. In order to increase consistency with the Architectural Pattern Book and other development elsewhere in Villebois Condition of Approval PDB 5 requires courtyard fencing consistent with the pattern book and the architectural style of the home for at least 30% of the homes with usable courtyards not exceeding a 5% slope.

Subsection 4.125 (.14) A. 2. g. Landscape Plans

B26. **Review Criterion:** "Building and site design shall include:

- A landscape plan in compliance with Sections 4.125(.07) and (.11), above."

Finding: This criterion is satisfied.

Explanation of Finding: The appropriate landscape plans have been provided. See Exhibit B5.

Subsection 4.125 (.14) A. 2. f. Protection of Significant Trees

B27. **Review Criterion:** "Building and site design shall include:

- The protection of existing significant trees as identified in an approved Community Elements Book."

Finding: This criterion is satisfied.

Explanation of Finding: Tree protection information is provided. See also Request E.

Subsection 4.125 (.14) A. 3. Lighting and Site Furnishings

B28. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."

Finding: These criteria are satisfied or will be required to do so by Condition of Approval PDB 2.

Explanation of Finding: Park plans show furnishings consistent with the Community Elements Book. A condition of approval ensure the final street lighting installation is consistent with the Community Elements Book.

Subsection 4.125 (.14) A. 4. Building Systems

B29. **Review Criteria:** "Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein. Design creativity is encouraged. The LEED Building Certification Program of the U.S. Green Building Council may be used as a guide in this regard."

Finding: These criteria are satisfied.

Explanation of Finding: Subsequent Building Permit applications will review proposed buildings for consistency with the criteria of Table V-3 and the Architectural Pattern Book.

Subsection 4.125 (.18) G. Preliminary Development Plan Approval Process

Subsection 4.125 (.18) G. 1. a. Preliminary Development Plan: Submission Timing

B30. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be filed with the City Planning Division for the entire SAP, or when submission of the SAP in phases has been authorized by the Development Review Board, for a phase in the approved sequence."
Finding: This criterion is satisfied.
Explanation of Finding: This PDP addresses Phase 7 on the SAP South Phasing Plan as amended with Request A.

Subsection 4.125 (.18) G. 1. b. Preliminary Development Plan: Owners' Consent

B31. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be made by the owner of all affected property or the owner's authorized agent;"
Finding: This criterion is satisfied.
Explanation of Finding: This application is made by Fred Gast of Polygon Homes. The PDP is all under the ownership of Northwest Wilsonville Properties, LLC. The application has been signed by managing member Bo Oswald.

Subsection 4.125 (.18) G. 1. c. Preliminary Development Plan Permit Process: Proper Form & Fees

B32. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall be filed on a form prescribed by the City Planning Division and filed with said division and accompanied by such fee as the City Council may prescribe by resolution;"
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has used the prescribed form and paid the required application fees.

Subsection 4.125 (.18) G. 1. d. Preliminary Development Plan Permit Process: Professional Coordinator

B33. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall set forth the professional coordinator and professional design team for the project;"
Finding: This criterion is satisfied.
Explanation of Finding: A professional design team is working on the project with Stacy Connery AICP from Pacific Community Design as the professional coordinator.

Subsection 4.125 (.18) G. 1. e. Preliminary Development Plan Permit Process: Mixed Uses

B34. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall state whether the development will include mixed land uses, and if so, what uses and in what proportions and locations."
Finding: This criterion is satisfied.

Explanation of Finding: The proposed PDP includes only residential uses with supporting recreational amenities and utilities, including a sanitary sewer lift station.

Subsection 4.125 (.18) G. 1. f. Preliminary Development Plan Permit Process: Land Division

B35. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall include a preliminary land division (concurrently) per Section 4.400, as applicable."
Finding: This criterion is satisfied.
Explanation of Finding: A preliminary subdivision plat has been submitted concurrently with this request. See Request D.

Subsection 4.125 (.18) G. 1. g. Preliminary Development Plan Permit Process: Zone Map Amendment

B36. **Review Criterion:** "An application for approval of a Preliminary Development Plan for a development in an approved SAP shall include a concurrent application for a Zone Map Amendment (i.e., Zone Change) for the subject phase."
Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment request has been submitted concurrently with this request. See Request C.

Subsection 4.125 (.18) G. 2. a. – c. Preliminary Development Plan Permit Process: Information Required

B37. **Review Criteria:** "The application for Preliminary Development Plan approval shall include conceptual and quantitatively accurate representations of the entire development sufficient to demonstrate conformance with the approved SAP and to judge the scope, size and impact of the development on the community and shall be accompanied by the following information:

- A boundary survey or a certified boundary description by a surveyor licensed in the State of Oregon.
- Topographic information sufficient to determine direction and percentage of slopes, drainage patterns, and in environmentally sensitive areas, (e.g., flood plain, wetlands, forested areas, steep slopes or adjacent to stream banks). Contour lines shall relate to North American Vertical Datum of 1988 and be at minimum intervals as follows:
  - One (1) foot contours for slopes of up to five percent (5%);
  - Two (2) foot contours for slopes from six percent (6%) to twelve (12%);
  - Five (5) foot contours for slopes from twelve percent (12%) to twenty percent (20%). These slopes shall be clearly identified, and
  - Ten (10) foot contours for slopes exceeding twenty percent (20%).
- The location of areas designated Significant Resource Overlay Zone (SROZ), and associated 25-foot Impact Areas, within the PDP and within 50 feet of the PDP boundary, as required by Section 4.139.

Finding: These criteria are satisfied.
Explanation of Finding: All of the listed information has been provided. See Exhibits B3 and B4.

Subsection 4.125 (.18) G. 2. d. Preliminary Development Plan Permit Process: Land Area Tabulation

B38. **Review Criteria:** "A tabulation of the land area to be devoted to various uses, and a calculation of the average residential density per net acre."
Finding: These criteria are satisfied.
Explanation of Finding: Following is a tabulation of land area devoted to the various uses and a calculation of net residential density:

Approx. Gross Acreage	42.76 Acres
Parks and Open Space	24.06 Acres
Public Streets	6.83 Acres
Lots and Alleys	11.58 Acres

Net Residential Density: 100 lots / 11.58 Acres = 8.6units per net acre

Subsection 4.125 (.18) G. 2. e. Preliminary Development Plan Permit Process: Streets, Alleys, and Trees

B39. **Review Criteria:** "The location, dimensions and names, as appropriate, of existing and platted streets and alleys on and within 50 feet of the perimeter of the PDP, together with the location of existing and planned easements, sidewalks, bike routes and bikeways, trails, and the location of other important features such as section lines, section corners, and City boundary lines. The plan shall also identify all trees 6 inches and greater d.b.h. on the project site only."
Finding: These criteria are satisfied.
Explanation of Finding: Information on planned alleys and streets are provided or the information is readily available. Easements, sidewalks, bike routes and bikeways, trails, and other relevant features are shown. The required trees are shown. See Exhibit B4.

Subsection 4.125 (.18) G. 2. f. Preliminary Development Plan Permit Process: Building Drawings

B40. **Review Criteria:** "Conceptual drawings, illustrations and building elevations for each of the listed housing products and typical non-residential and mixed-use buildings to be constructed within the Preliminary Development Plan boundary, as identified in the approved SAP, and where required, the approved Village Center Design."
Finding: This criterion is satisfied.
Explanation of Finding: The proposed PDP includes Large, Standard, and Medium, detached single-family housing products. Elevations approved by the city consultant architect, Steve Coyle, have been provided. See Section IIG) of applicant's notebook, Exhibit B3, and Exhibit B6.

Subsection 4.125 (.18) G. 2. g. Preliminary Development Plan Permit Process: Utility Plan

B41. **Review Criterion:** "A composite utility plan illustrating existing and proposed water, sanitary sewer, and storm drainage facilities necessary to serve the SAP."
Finding: This criterion is satisfied.
Explanation of Finding: A composite utility plan has been provided. See applicant's Sheet 6, Exhibit B4.

Subsection 4.125 (.18) G. 2. h. Preliminary Development Plan Permit Process: Phasing Sequence

B42. **Review Criterion:** "If it is proposed that the Preliminary Development Plan will be executed in Phases, the sequence thereof shall be provided."
Finding: This criterion is satisfied.
Explanation of Finding: The PDP is proposed to be executed in two phases. The proposed phases of the subject PDP are shown on the PDP Phasing Plan, Sheet 11 of Exhibit B4.

Subsection 4.125 (.18) G. 2. i. Preliminary Development Plan Permit Process: Security for Capital Improvements

B43. **Review Criterion:** "A commitment by the applicant to provide a performance bond or other acceptable security for the capital improvements required by the project."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant states "the applicant will provide a performance bond or other acceptable security for the capital improvements required by the project."

Subsection 4.125 (.18) G. 2. j. Preliminary Development Plan Permit Process: Traffic Report

B44. **Review Criterion:** "At the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the SAP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire SAP, and it shall meet Subsection 4.140(.09)(J)(2)."
Finding: This criterion is satisfied.
Explanation of Finding: The required traffic report has been provided, and can be found in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) H. PDP Application Submittal Requirements

Subsection 4.125 (.18) H. 1. PDP Application Submittal Requirements: General

B45. **Review Criteria:** "The Preliminary Development Plan shall conform with the approved Specific Area Plan, and shall include all information required by (.18)(D)(1) and (2), plus the following:

- The location of water, sewerage and drainage facilities;
- Conceptual building and landscape plans and elevations, sufficient to indicate the general character of the development;
- The general type and location of signs;
- Topographic information as set forth in Section 4.035;
- A map indicating the types and locations of all proposed uses; and
- A grading and erosion control plan illustrating existing and proposed contours as prescribed previously in this section."

Finding: These criteria are satisfied.
Explanation of Finding: The PDP matches the requested approval of SAP South Plan Area 2 and the application includes all of the requested information.

Subsection 4.125 (.18) H. 2. PDP Application Submittal Requirements: Traffic Report

B46. **Review Criteria:** "In addition to this information, and unless waived by the City's Community Development Director as enabled by Section 4.008(.02)(B), at the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the PDP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire PDP, and it shall meet Subsection 4.140(.09)(J)(2) for the full development of all five SAPs."

Finding: These criteria are satisfied.

Explanation of Finding: The required traffic report is included in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) H. 3. PDP Application Submittal Requirements: Level of Detail

B47. **Review Criterion:** "The Preliminary Development Plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the phase of development. However, approval of a Final Development Plan is a separate and more detailed review of proposed design features, subject to the standards of Section 4.125(.18)(L) through (P), and Section 4.400 through Section 4.450."

Finding: This criterion is satisfied.

Explanation of Finding: The required level of detail has been shown, similar to other PDP's approved throughout Villebois.

Subsection 4.125 (.18) H. 4. PDP Application Submittal Requirements: Copies of Legal Documents

B48. **Review Criterion:** "Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted."

Finding: This criterion is satisfied.

Explanation of Finding: The required legal documents for review have been provided. See Section IIIC in the applicant's notebook, Exhibit B3.

Subsection 4.125 (.18) I. PDP Approval Procedures

B49. **Review Criteria:** "An application for PDP approval shall be reviewed using the following procedures:

- Notice of a public hearing before the Development Review Board regarding a proposed PDP shall be made in accordance with the procedures contained in Section 4.012.
- A public hearing shall be held on each such application as provided in Section 4.013.
- After such hearing, the Development Review Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application."

Finding: These criteria are satisfied.

Explanation of Finding: The request is being reviewed according to this subsection.

Subsection 4.125 (.18) K. PDP Approval Criteria

Subsection 4.125 (.18) K. 1. a. PDP Approval Criteria: Consistent with Standards of Section 4.125

B50. **Review Criteria:** "Is consistent with the standards identified in this section."
Finding: These criteria are satisfied.
Explanation of Finding: As shown elsewhere in this request, the proposed Preliminary Development Plan is consistent with the standards of Section 4.125.

Subsection 4.125 (.18) K. 1. b. PDP Approval Criteria: Complies with the Planning and Land Development Ordinance

B51. **Review Criterion:** "Complies with the applicable standards of the Planning and Land Development Ordinance, including Section 4.140(.09)(J)(1)-(3)."
Finding: This criterion is satisfied.
Explanation of Finding: Findings are provided showing compliance with applicable standards of the Planning and Land Development Ordinance. Specifically Findings B57 through B59 address Subsections 4.140 (.09) J. 1. through 3.

Subsection 4.125 (.18) K. 1. c. PDP Approval Criteria: Consistent with Approved SAP

B52. **Review Criterion:** "Is consistent with the approved Specific Area Plan in which it is located."
Finding: This criterion is satisfied.
Explanation of Finding: The requested PDP approval is consistent with the SAP, as requested to be amended by Request A.

Subsection 4.125 (.18) K. 1. d. PDP Approval Criteria: Consistent with Approved Pattern Book

B53. **Review Criterion:** "Is consistent with the approved Pattern Book and, where required, the approved Village Center Architectural Standards."
Finding: This criterion is satisfied.
Explanation of Finding: As stated by the applicant, "No buildings are proposed with this Preliminary Development Plan. Subsequent Building Permit applications for residential buildings in this Preliminary Development Plan will document compliance with the Architectural Pattern Book. However, proposed lots are sized to accommodate proposed uses in a manner consistent with Table V-1 and the Architectural Pattern Book." Exhibit B6 shows front elevations of homes found to be consistent with the Pattern Book by the City's consultant architect, Steve Coyle.

Subsection 4.125 (.18) K. 2. PDP Approval Criteria: Reasonable Phasing Schedule

B54. **Review Criterion:** "If the PDP is to be phased, that the phasing schedule is reasonable and does not exceed two years between commencement of development of the first, and completion of the last phase, unless otherwise authorized by the Development Review Board."
Finding: This criterion is satisfied.
Explanation of Finding: Construction is anticipated to begin in 2014 on the first phase. As the DRB is not otherwise authorizing, completion of the final phase of construction

must be completed within two years of the commencement of construction of the first phase.

Subsection 4.125 (.18) K. 3. PDP Approval Criteria: Parks Concurrency

B55. **Review Criterion:** "Parks within each PDP or PDP Phase shall be constructed prior to occupancy of 50% of the dwelling units in the PDP or PDP phase, unless weather or other special circumstances prohibit completion, in which case bonding for such improvements shall be permitted."
Finding: This criterion will be satisfied by Condition of Approval PDB 3.
Explanation of Finding: A condition of approval ensures the parks within phase 1 and phase 2 of PDP 7S as shown on Sheet 11 of Exhibit B4 will be completed prior to occupancy of 50% of the housing units of the phase or bonding will be provided if special circumstances prevent completion. Specifically, park improvement shown in Phase 1 must be completed prior to the granting of the building permit for the 28th house in the phase. Park improvements in Phase II must be completed prior to granting the building permit for the 22nd house in the phase.

Subsection 4.125 (.18) K. 5. PDP Approval Criteria: DRB Conditions

B56. **Review Criterion:** "The Development Review Board may require modifications to the PDP, or otherwise impose such conditions as it may deem necessary to ensure conformance with the approved SAP, the Villebois Village Master Plan, and compliance with applicable requirements and standards of the Planning and Land Development Ordinance, and the standards of this section."
Finding: This criterion is satisfied.
Explanation of Finding: No additional conditions of approval are recommended.

Subsection 4.140 (.09) J. Planned Development Permit Review Criteria

"A planned development permit may be granted by the Development Review Board only if it is found that the development conforms to all the following criteria, as well as to the Planned Development Regulations in Section 4.140:"

Subsection 4.140 (.09) J. 1. Consistency with Comprehensive Plan and Other Plans, Ordinances

B57. **Review Criteria:** "The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council."
Finding: These criteria are satisfied.
Explanation of Finding: The applicant's findings demonstrate the location, design, size, and uses proposed with the PDP are both separately and as a whole consistent with SAP South as proposed to be amended in Request A, and thus the Villebois Village Master Plan, the City's Comprehensive Plan designation of Residential – Village for the area, and any other applicable ordinance of which staff is aware.

Subsection 4.140 (.09) J. 2. Meeting Traffic Level of Service D

B58. **Review Criteria:** That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.
Finding: These criteria are satisfied.
Explanation of Finding: The location, design, size and uses are such that traffic generated within the PDP at the most heavily used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D. The proposed uses and the circulation system are consistent with the requested SAP South amendment in Request A, which included an Internal Circulation Evaluation including an assessment of intersection performance by DKS Associates. A copy of the Traffic Impact Analysis is included in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.140 (.09) J. 3. Concurrency for Other Facilities and Services

B59. **Review Criteria:** "That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services."
Finding: These criteria are satisfied.
Explanation of Finding: As shown in the Utility and Drainage Report, Section IIC of the applicant's notebook, Exhibit B3, and the applicant's Composite Utility Plan, Sheet 6 of Exhibit B4, adequate or immediately planned facilities and services are sufficient to serve the planned development.

Section 4.171 Protection of Natural Features & Other Resources

Subsection 4.171 (.02) General Terrain Preparation

B60. **Review Criteria:**

- "All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.
- All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code, all development shall be planned, designed, constructed and maintained so as to:
    - Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.
    - Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.

- Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.

Finding: These criteria are satisfied.

Explanation of Finding: The PDP matches the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Subsection 4.171 (.03) Hillsides

B61. **Review Criterion:** "Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:"

Finding: This criterion does not apply.

Explanation of Finding: No development is proposed on such slopes.

Subsection 4.171 (.04) Trees and Wooded Area

B62. **Review Criteria:**

- "All developments shall be planned, designed, constructed and maintained so that:
  - Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.
  - Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.
  - Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.
- Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:
  - Avoiding disturbance of the roots by grading and/or compacting activity.
  - Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.
  - Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.
  - Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

Finding: These criteria are satisfied.

Explanation of Finding: The Tree Preservation Plan, Section V of Exhibit B3 and Sheets 9.1 and 9.2 of Exhibit B4, depicts existing trees within the subject area and identifies trees to be retained and to be removed. This application includes a request for approval of a Type "C" Tree Removal Plan. See Request E.

Subsection 4.171 (.05) High Voltage Power Lines

B63. **Review Criteria:** "High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:

- Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage power line easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage power

line easements and rights of way and petroleum pipeline easement shall be carefully reviewed.

- Any proposed non-residential development within high voltage power line easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.

Finding: These criteria do not apply.

Explanation of Finding: The development area and surrounding area are not around high voltage power lines.

Subsection 4.171 (.06) Safety Hazards

B64. **Review Criteria:** "

- To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.
- To protect lives and property from damage due to soil hazards.
- To protect lives and property from forest and brush fires.
- To avoid financial loss resulting from development in hazard areas.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant states that development of the subject area will occur in a manner that minimizes potential hazards to safety.

Subsection 4.171 (.07) Earth Movement Hazard Areas

B65. **Review Criterion:** "No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions."

Finding: This criterion is satisfied.

Explanation of Finding: No areas of land movement, slump, earth flow, or mud or debris flow have been identified in the project area.

Subsection 4.171 (.08) Standards for Soil Hazard Areas

B66. **Review Criteria:**

- "Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.
- The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Finding: These criteria are satisfied.

Explanation of Finding: No soil hazard areas have been identified within the subject area.

Subsection 4.171 (.09) Historic Protection

B67. **Review Criteria:** This subsection establishes requirements for protection of historic resources.

Finding: This criterion is satisfied.

Explanation of Finding: The PDP matches the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Section 4.176 Landscaping, Screening, and Buffering

B68. **Review Criteria:** This section establishes landscape, screening, and buffering requirements for development within the City.
Finding: These criteria are satisfied.
Explanation of Finding: Landscaping will be provided in accordance with the standards in Section 4.176. The Street Tree/Lighting Plan depicts street trees along rights-of-way within the subject Preliminary Development Plan area. The plan has been developed in conformance with the *Community Elements Book* and the applicable standards of Section 4.176. The variety of street tree shown for SW Alta Court is not consistent for the street type as shown in the Community Elements Book. However, Condition of Approval PDF 9 ensures appropriate street trees are planted consistent with the Community Elements Book. Landscaping in the parks and linear green areas will be reviewed with Request F, Final Development Plan.

Section 4.177 Street Improvement Standards

B69. **Review Criteria:** This section establishes street improvements standards for development within the City.
Finding: These criteria are satisfied.
Explanation of Finding: The PDP is consistent with the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

Section 4.178 Sidewalk and Pathway Standards

B70. **Review Criteria:**
- "Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.
- Pathways
    - Bicycle facilities shall be provided using a bicycle lane as the preferred facility design. The other facility designs listed will only be used if the bike lane standard cannot be constructed due to physical or financial constraints. The alternative standards are listed in order of preference.
    - Bike lane. This design includes 12-foot minimum travel lanes for autos and paved shoulders, 5-6 feet wide for bikes that are striped and marked as bicycle lanes. This shall be the basic standard applied to bike lanes on all arterial and collector streets in the City, with the exception of minor residential collectors with less than 1,500 (existing or anticipated) vehicle trips per day."

Finding: These criteria are satisfied.
Explanation of Finding: The PDP is consistent with the SAP South amendment for Plan Area 2, which in Request A has been found to meet the requirements of this subsection.

REQUEST C: DB14-0004 ZONE MAP AMENDMENT

The applicant's findings in Section IVA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Comprehensive Plan

Compact Urban Development-Implementation Measures

Implementation Measure 4.1.6.a

C1. **Review Criteria:** "Development in the "Residential-Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable."
Finding: These criteria are satisfied.
Explanation of Finding: Development in this area is being guided by all the listed plans and codes.

Implementation Measure 4.1.6.b.

C2. **Review Criteria:** This implementation measure identifies the elements the Villebois Village Master Plan must contain.
Finding: These criteria are not applicable
Explanation of Finding: The concurrent proposal for a preliminary development plan implements the procedures as outlined by the Villebois Village Master Plan, as previously approved.

Implementation Measure 4.1.6.c.

C3. **Review Criterion:** "The "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation."
Finding: This criterion is satisfied.
Explanation of Finding: The Village Zone zoning district is being applied to an area designated as Residential-Village in the Comprehensive Plan.

Implementation Measure 4.1.6.d.

C4. **Review Criterion:** "The "Village" Zone District shall allow a wide range of uses that befit and support an "urban village," including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses."
Finding: This criterion is satisfied.
Explanation of Finding: The area covered by the proposed zone change is proposed for residential uses, parks and open space, and sanitary sewer lift station as shown in the Villebois Village Master Plan.

Planning and Land Development Ordinance

Section 4.029 Zoning to be Consistent with Comprehensive Plan

C5. **Review Criterion:** "If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant is applying for a zone change concurrently with a Preliminary Development Plan, which is equivalent to a Stage II Final Plan for a planned development.

Subsection 4.110 (.01) Base Zones

C6. **Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.
Finding: This criterion is satisfied.
Explanation of Finding: The requested zoning designation of Village "V" is among the base zones identified in this subsection.

Subsection 4.125 (.01) Village Zone Purpose

C7. **Review Criteria:** "The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The subject lands are designated Residential-Village on the Comprehensive Plan map and are within the Villebois Village Master Plan area and the zoning designation thus being applied is the Village "V".

Subsection 4.125 (.02) Village Zone Permitted Uses

C8. **Review Criteria:** This subsection lists the uses permitted in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed residential, park and open space, and utility uses are consistent with the Village Zone designation and Villebois Village Master Plan.

Subsection 4.125 (.18) B. 2. Zone Change Concurrent with PDP Approval

C9. **Review Criterion:** "... Application for a zone change shall be made concurrently with an application for PDP approval..."
Finding: This criterion is satisfied.
Explanation of Finding: A zone map amendment is being requested concurrently with a request for PDP approval. See Request B.

Subsection 4.197 (.02) Zone Change Review

Subsection 4.197 (.02) A. Zone Change Procedures

C10. **Review Criteria:** "That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;"
Finding: These criteria are satisfied.
Explanation of Finding: The request for a zone map amendment has been submitted as set forth in the applicable code sections.

Subsection 4.197 (.02) B. Zone Change: Conformance with Comprehensive Plan Map, etc.

C11. **Review Criteria:** "That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: The proposed zone map amendment is consistent with the Comprehensive Map designation of Residential-Village and as shown in Findings C1 through C4 comply with applicable Comprehensive Plan text.

Subsection 4.197 (.02) C. Zone Change: Specific Findings Regarding Residential Designated Lands

C12. **Review Criteria:** "In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text;"
Finding: These criteria are satisfied.
Explanation of Finding: Implementation Measure 4.1.6.c. states the "Village" Zone District shall be applied in all areas that carry the Residential-Village Plan Map Designation. Since the Village Zone must be applied to areas designated "Residential Village" on the Comprehensive Plan Map and is the only zone that may be applied to these areas, its application is consistent with the Comprehensive Plan.

Subsection 4.197 (.02) D. Zone Change: Public Facility Concurrency

C13. **Review Criteria:** "That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized."
Finding: These criteria are satisfied.
Explanation of Finding: The Preliminary Development Plan compliance report and the plan sheets demonstrate that the existing primary public facilities are available or can be provided in conjunction with the project. Section IIC of the applicant's notebook, Exhibit B3, includes supporting utility and drainage reports. In addition, the applicant has provided a Traffic Impact Analysis, which is in Section IID of the applicant's notebook, Exhibit B3.

Subsection 4.197 (.02) E. Zone Change: Impact on SROZ Areas

C14. **Review Criteria:** "That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;"
Finding: These criteria are satisfied.
Explanation of Finding: A portion of the subject property is within the SROZ. Request G is reviewing SROZ regulations and ensuring the development does not have a significant adverse effect on natural resources. The proposed development is being focused on areas of the site previously disturbed by the development.

Subsection 4.197 (.02) F. Zone Change: Development within 2 Years

C15. **Review Criterion:** "That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change."
Finding: This criterion is satisfied.
Explanation of Finding: The applicant has provided information stating they reasonably expect to commence development within two (2) years of the approval of the zone change, beginning construction in 2014. However, in the scenario where the applicant or their successors due not commence development within two (2) years allow related land use approvals to expire, the zone change shall remain in effect.

Subsection 4.197 (.02) G. Zone Change: Development Standards and Conditions of Approval

C16. **Review Criteria:** "That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards."
Finding: These criteria are satisfied.
Explanation of Finding: As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

REQUEST D: DB14-0005 TENTATIVE SUBDIVISION PLAT

The applicant's findings in Section IIIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.125 (.02) Permitted Uses in the Village Zone

D1. **Review Criteria:** This subsection lists the permitted uses in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed subdivision is for uses including single family homes and row homes, parks and open space, and a sanitary sewer lift station are permitted in the Village Zone.

Subsection 4.125 (.05) Development Standards Applying to All Development in Village Zone

Subsection 4.125 (.05) A. Block, Alley, Pedestrian, and Bicycle Standards

D2. **Review Criteria:** This subsection lists the block, alley, pedestrian, and bicycle standards applicable in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows blocks, alleys, pedestrian, and bicycle paths consistent with this subsection and the proposed PDP.

Subsection 4.125 (.05) B. Access Standards

D3. **Review Criterion:** "All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer."
Finding: This criterion will be satisfied by Condition of Approval PDD 6.
Explanation of Finding: Condition of Approval PDD 6 requires a non-access reservation strip on the street side of lots with street access helping to ensure this criterion is met.

Table V-1: Development Standards in the Village Zone

D4. **Review Criteria:** This table shows the development standards, including setback for different uses in the Village Zone.
Finding: These criteria are satisfied.
Explanation of Finding: As been consistently interpreted for PDP approvals in Villebois, lot dimensions in the Architectural Pattern Book can govern such things as lot width and size even when it is not consistent with the table. The proposed lots facilitate the construction that meets relevant standards of the table.

Subsection 4.125 (.07) Off-Street Parking, Loading and Bicycle Parking

D5. **Review Criteria:** "Except as required by Subsections (A) through (D), below, the requirements of Section 4.155 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: Nothing concerning the tentative subdivision would prevent the required parking from being built.

Subsection 4.125 (.08) Open Space Requirements

D6. **Review Criteria:** This subsection establishes the open space requirements for the Village Zone.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDD 9.
Explanation of Finding: The tentative subdivision plat shows open space consistent with the requirements of the Village Zone and the proposed PDP. Consistent with the requirements of (.08) C. the condition of approval require the City Attorney to review and approve pertinent bylaws, covenants, or agreements prior to recordation.

Subsection 4.125 (.09) A. 1. Street and Improvement Standards: General Provisions

D7. **Review Criteria:** "Except as noted below, the provisions of Section 4.177 shall apply within the Village zone:

- General Provisions:
  - All street alignment and access improvements shall conform to Figures 7, 8, 9A, and 9B of the Villebois Village Master Plan, or as refined in an approved Specific Area Plan, Preliminary Development Plan, or Final Development Plan, and the following standards:
  - All street improvements shall conform to the Public Works Standards and the Transportation Systems Plan, and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan.
  - All streets shall be developed according to the Master Plan."

Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows street alignments, improvements, and access improvements consistent with the approved PDP and SAP found to be consistent with the Master Plan and Transportation Systems Plan.

Subsection 4.125 (.09) A. 2. Street and Improvement Standards: Intersection of Streets

D8. **Review Criteria:** "Intersections of streets:

- Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.
- Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of a thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety 90 degrees shall require approval by the City Engineer after consultation with the Fire District.
- Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:
  - 1000 ft. for major arterials
  - 600 ft. for minor arterials
  - 100 ft. for major collector
  - 50 ft. for minor collector
- Curb Extensions:
  - Curb extensions at intersections shall be shown on the Specific Area Plans required in Subsection 4.125(.18)(C) through (F), below, and shall:
    - Not obstruct bicycle lanes on collector streets.

- Provide a minimum 20 foot wide clear distance between curb extensions at all local residential street intersections, meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District."

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows street intersections as proposed in the proposed PDP consistent with these standards.

Subsection 4.125 (.09) A. 4. Street and Improvement Standards: Centerline Radius Street Curves

D9. **Review Criteria:** "The minimum centerline radius street curves shall be as follows:

- Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by the City Engineer.
- Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.
- Local streets: 75 feet"

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows streets found to meet these standards under Requests A and B.

Subsections 4.125 (.09) A. 5. and 4.177 (.01) C. Street and Improvement Standards: Rights-of-way

D10. **Review Criteria:**

- "Prior to issuance of a Certificate of Occupancy Building permits or as a part of the recordation of a final plat, the City shall require dedication of rights-of-way in accordance with the Street System Master Transportation Systems Plan. All dedications shall be recorded with the County Assessor's Office.
- The City shall also require a waiver of remonstrance against formation of a local improvement district, and all non-remonstrances shall be recorded in the County Recorder's Office as well as the City's Lien Docket, prior to issuance of a Certificate of Occupancy Building Permit or as a part of the recordation of a final plat.
- In order to allow for potential future widening, a special setback requirement shall be maintained adjacent to all arterial streets. The minimum setback shall be 55 feet from the centerline or 25 feet from the right-of-way designated on the Master Plan, whichever is greater."

Finding: These criteria are satisfied.

Explanation of Finding: As stated by the applicant, "rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177."

Subsections 4.125 (.09) A. 6.and 4.177 (.01) E. Street and Improvement Standards: Access Drives

D11. **Review Criteria:**

- Access drives are required to be 16 feet for two-way traffic.
- An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.

- Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.
- Secondary or emergency access lanes may be improved to a minimum 12 feet with an all-weather surface as approved by the Fire District. All fire lanes shall be dedicated easements.
- Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.
- Where access drives connect to the public right-of-way, construction within the right-of-way shall be in conformance to the Public Works Standards.

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows alleys of sufficient width to meet the width standards. The applicant states easements for fire access will be dedicated as required.

Subsections 4.125 (.09) A. 7. and 4.177 (.01) F. Street and Improvement Standards: Clear Vision Areas

D12. **Review Criteria:** "A clear vision area which meets the Public Works Standards shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. However, the following items shall be exempt from meeting this requirement:" Listed 1. a.-f.

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows streets found to meet these standards under Requests A and B.

Subsections 4.125 (.09) A. 8.and 4.177 (.01) G. Street and Improvement Standards: Vertical Clearance

D13. **Review Criterion:** "a minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives."

Finding: This criterion is satisfied.

Explanation of Finding: Nothing shown on the tentative subdivision plat would preclude the required clearance from being provided.

Subsections 4.125 (.09) A. 9.and 4.177 (.01) H. Street and Improvement Standards: Interim Improvement Standards

D14. **Review Criteria:** "It is anticipated that all existing streets, except those in new subdivisions, will require complete reconstruction to support urban level traffic volumes. However, in most cases, existing and short-term projected traffic volumes do not warrant improvements to full Master Plan standards. Therefore, unless otherwise specified by the Planning Commission, the following interim standards shall apply.

- Arterials - 24 foot paved, with standard sub-base. Asphalt overlays are generally considered unacceptable, but may be considered as an interim improvement based on the recommendations of the City Engineer, regarding adequate structural quality to support an overlay.
- Half-streets are generally considered unacceptable. However, where the Development Review Board finds it essential to allow for reasonable development, a half-street may be

approved. Whenever a half-street improvement is approved, it shall conform to the requirements in the Public Works Standards:

- When considered appropriate in conjunction with other anticipated or scheduled street improvements, the City Engineer may approve street improvements with a single asphalt lift. However, adequate provision must be made for interim storm drainage, pavement transitions at seams and the scheduling of the second lift through the Capital Improvements Plan.

Finding: These criteria are satisfied.

Explanation of Finding: The area covered by the tentative subdivision plat does not include any interim improvements addressed by this subsection.

Subsection 4.202 (.01) through (.03) Plats Reviewed by Planning Director or DRB

D15. **Review Criteria:** "Pursuant to ORS Chapter 92, plans and plats must be approved by the Planning Director or Development Review Board (Board), as specified in Sections 4.030 and 4.031, before a plat for any land division may be filed in the county recording office for any land within the boundaries of the City, except that the Planning Director shall have authority to approve a final plat that is found to be substantially consistent with the tentative plat approved by the Board.

The Development Review Board and Planning Director shall be given all the powers and duties with respect to procedures and action on tentative and final plans, plats and maps of land divisions specified in Oregon Revised Statutes and by this Code.

Approval by the Development Review Board or Planning Director of divisions of land within the boundaries of the City, other than statutory subdivisions, is hereby required by virtue of the authority granted to the City in ORS 92."

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat is being reviewed by the Development Review Board according to this subsection. The final plat will be reviewed by the Planning Division under the authority of the Planning Director to ensure compliance with the DRB review of the tentative subdivision plat.

Subsection 4.202 (.04) A. Lots must be Legally Created for Issuing Development Permit

D16. **Review Criterion:** "No person shall sell any lot or parcel in any condominium, subdivision, or land partition until a final condominium, subdivision or partition plat has been approved by the Planning Director as set forth in this Code and properly recorded with the appropriate county."

Finding: This criterion is satisfied.

Explanation of Finding: It is understood that no lots will be sold until the final plat has been approved by the Planning Director and recorded.

Subsection 4.202 (.04) B. Prohibition of Creating Undersized Lots

D17. **Review Criterion:** "It shall be a violation of this Code to divide a tract of land into a parcel smaller than the lot size required in the Zoning Sections of this Code unless specifically approved by the Development Review Board or City Council. No conveyance of any portion of a lot, for other than a public use, shall leave a structure on the remainder of the lot with less than the minimum lot size, width, depth, frontage, yard or setback requirements, unless specifically authorized through the Variance procedures of Section 4.196 or the waiver provisions of the Planned Development procedures of Section 4.118."

Finding: This criterion is satisfied.

Explanation of Finding: No lots will be divided into a size smaller than allowed by the proposed Village "V" zoning designation.

Subsection 4.210 (.01) Pre-Application Conference

D18. **Review Criterion:** "Prior to submission of a tentative condominium, partition, or subdivision plat, a person proposing to divide land in the City shall contact the Planning Department to arrange a pre-application conference as set forth in Section 4.010."
Finding: This criterion is satisfied.
Explanation of Finding: A pre-application meeting has been held. See case file PA13-0007.

Subsection 4.210 (.01) A. Preparation of Tentative Plat

D19. **Review Criterion:** "The applicant shall cause to be prepared a tentative plat, together with improvement plans and other supplementary material as specified in this Section. The Tentative Plat shall be prepared by an Oregon licensed professional land surveyor or engineer. An affidavit of the services of such surveyor or engineer shall be furnished as part of the submittal."
Finding: This criterion is satisfied.
Explanation of Finding: Sheets 4.1 and 4.2 of Exhibit B4, as shown modified in Exhibit B9, is a tentative subdivision plat prepared in accordance with this subsection.

Subsection 4.210 (.01) B. Tentative Plat Submission

D20. **Review Criteria:** "The design and layout of this plan plat shall meet the guidelines and requirements set forth in this Code. The Tentative Plat shall be submitted to the Planning Department with the following information:" Listed 1. through 26.
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat has been submitted with the required information.

Subsection 4.210 (.01) D. Land Division Phases to Be Shown

D21. **Review Criteria:** "Where the applicant intends to develop the land in phases, the schedule of such phasing shall be presented for review at the time of the tentative plat. In acting on an application for tentative plat approval, the Planning Director or Development Review Board may set time limits for the completion of the phasing schedule which, if not met, shall result in an expiration of the tentative plat approval."
Finding: These criteria are satisfied.
Explanation of Finding: Phasing is shown on Sheet 11 of the applicant's plan set, Exhibit B4.

Subsection 4.210 (.01) E. Remainder Tracts

D22. **Review Criteria:** "Remainder tracts to be shown as lots or parcels. Tentative plats shall clearly show all affected property as part of the application for land division. All remainder tracts, regardless of size, shall be shown and counted among the parcels or lots of the division."
Finding: These criteria are satisfied.

Explanation of Finding: All affected property has been incorporated into the tentative subdivision plat.

Subsection 4.236 (.01) Conformity to the Master Plan or Map

D23. **Review Criteria:** "Land divisions shall conform to and be in harmony with the Transportation Master Plan (Transportation Systems Plan), the Bicycle and Pedestrian Master Plan, the Parks and Recreation Master Plan, the Official Plan or Map and especially to the Master Street Plan."
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat is consistent with applicable plans including the Transportation Systems Plan and Villebois Village Master Plan.

Subsection 4.236 (.02) Relation to Adjoining Street System

D24. **Review Criteria:**

- A land division shall provide for the continuation of the principal streets existing in the adjoining area, or of their proper projection when adjoining property is not developed, and shall be of a width not less than the minimum requirements for streets set forth in these regulations. Where, in the opinion of the Planning Director or Development Review Board, topographic conditions make such continuation or conformity impractical, an exception may be made. In cases where the Board or Planning Commission has adopted a plan or plat of a neighborhood or area of which the proposed land division is a part, the subdivision shall conform to such adopted neighborhood or area plan.
- Where the plat submitted covers only a part of the applicant's tract, a sketch of the prospective future street system of the unsubmitted part shall be furnished and the street system of the part submitted shall be considered in the light of adjustments and connections with the street system of the part not submitted.
- At any time when an applicant proposes a land division and the Comprehensive Plan would allow for the proposed lots to be further divided, the city may require an arrangement of lots and streets such as to permit a later resubdivision in conformity to the street plans and other requirements specified in these regulations.

Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows streets meeting these standards consistent with the proposed PDP. See Request B.

Subsection 4.236 (.03) Streets: Conformity to Standards Elsewhere in the Code

D25. **Review Criteria:** "All streets shall conform to the standards set forth in Section 4.177 and the block size requirements of the zone."
Finding: These criteria are satisfied.
Explanation of Finding: The tentative subdivision plat shows streets consistent with the proposed SAP Amendment and PDP under Requests A and B which meets Section 4.177 and the block requirements of the zone.

Subsection 4.236 (.04) Creation of Easements

D26. **Review Criteria:** "The Planning Director or Development Review Board may approve an easement to be established without full compliance with these regulations, provided such an easement is the only reasonable method by which a portion of a lot large enough to allow

partitioning into two (2) parcels may be provided with vehicular access and adequate utilities. If the proposed lot is large enough to divide into more than two (2) parcels, a street dedication may be required."

Finding: These criteria are satisfied.

Explanation of Finding: No specific easements are requested pursuant to this subsection.

Subsection 4.236 (.05) Topography

D27. **Review Criterion:** "The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of these regulations."

Finding: This criterion is satisfied.

Explanation of Finding: The tentative subdivision plat shows street alignments recognizing topographic conditions consistent with the requested PDP.

Subsection 4.236 (.06) Reserve Strips

D28. **Review Criteria:** "The Planning Director or Development Review Board may require the applicant to create a reserve strip controlling the access to a street. Said strip is to be placed under the jurisdiction of the City Council, when the Director or Board determine that a strip is necessary:" Reasons listed A. through D.

Finding: These criteria are satisfied.

Explanation of Finding: No reserve strips are being required for the reasons listed in this subsection. However, reserve strips are being required by Condition of Approval PDD 6 to prevent access to the front side of lots served by an alley. See also Findings D3.

Subsection 4.236 (.07) Future Expansion of Street

D29. **Review Criteria:** When necessary to give access to, or permit a satisfactory future division of, adjoining land, streets shall be extended to the boundary of the land division and the resulting dead-end street may be approved without a turn-around. Reserve strips and street plugs shall be required to preserve the objective of street extension.

Finding: These criteria are satisfied.

Explanation of Finding: No street extensions are necessary pursuant to this subsection. Adjacent properties are either already developed or are preserved as a nature park.

Subsection 4.236 (.08) Additional Right-of-Way for Existing Streets

D30. **Review Criteria:** "Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall conform to the designated width in this Code or in the Transportation Systems Plan."

Finding: These criteria are satisfied.

Explanation of Finding: The necessary right-of-way for Grahams Ferry Road is being dedicated.

Subsection 4.236 (.09) Street Names

D31. **Review Criteria:** "No street names will be used which will duplicate or be confused with the names of existing streets, except for extensions of existing streets. Street names and numbers shall

conform to the established name system in the City, and shall be subject to the approval of the City Engineer."

Finding: These criteria are satisfied.

Explanation of Finding: Street names will be reviewed by Engineering staff and be subject to approval by the City Engineer consistent with this subsection.

Subsection 4.237 (.01) Blocks

D32. **Review Criteria:**

- The length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control, and safety of pedestrian, bicycle, and motor vehicle traffic, and recognition of limitations and opportunities of topography.
- Sizes: Blocks shall not exceed the sizes and lengths specified for the zone in which they are located unless topographical conditions or other physical constraints necessitate larger blocks. Larger blocks shall only be approved where specific findings are made justifying the size, shape, and configuration.

Finding: These criteria are satisfied.

Explanation of Finding: The tentative subdivision plat shows blocks consistent with those proposed Preliminary Development Plan. See Request B.

Subsection 4.237 (.02) Easements

D33. **Review Criteria:**

- Utility lines. Easements for sanitary or storm sewers, drainage, water mains, electrical lines or other public utilities shall be dedicated wherever necessary. Easements shall be provided consistent with the City's Public Works Standards, as specified by the City Engineer or Planning Director. All of the public utility lines within and adjacent to the site shall be installed within the public right-of-way or easement; with underground services extending to the private parcel constructed in conformance to the City's Public Works Standards. All franchise utilities shall be installed within a public utility easement. All utilities shall have appropriate easements for construction and maintenance purposes.
- Water courses. Where a land division is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the water course, and such further width as will be adequate for the purposes of conveying storm water and allowing for maintenance of the facility or channel. Streets or parkways parallel to water courses may be required.

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.

Explanation of Finding: As shown on the applicant's sheets 4.1 and 4.2 of their plan set, Exhibit B4, the required easements have been provided. Condition of Approvals ensures all easements dealing with utilities are on the final plat.

Subsection 4.237 (.03) Mid-block Pedestrian and Bicycle Pathways

D34. **Review Criteria:** "An improved public pathway shall be required to transverse the block near its middle if that block exceeds the length standards of the zone in which it is located.

- Pathways shall be required to connect to cul-de-sacs or to pass through unusually shaped blocks.

- Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.

Finding: These criteria are satisfied.

Explanation of Finding: Pathways are being provided consistent with the Village Zone requirements and the Villebois Village Master Plan. See Finding A4.

Subsection 4.237 (.04) Tree Planting & Tree Access Easements

D35. **Review Criteria:** "Tree planting plans for a land division must be submitted to the Planning Director and receive the approval of the Director or Development Review Board before the planting is begun. Easements or other documents shall be provided, guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees that are located on private property."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed street trees are within the proposed public right-of-way.

Subsection 4.237 (.05) Lot Size and Shape

D36. **Review Criteria:** "The lot size, width, shape and orientation shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots shall meet the requirements of the zone where they are located."

Finding: These criteria are satisfied.

Explanation of Finding: Proposed lot sizes, widths, shapes and orientations are appropriate for the proposed development and are in conformance with the Village Zone requirements as discussed under Requests A and B.

Subsection 4.237 (.06) Access

D37. **Review Criteria:** "The division of land shall be such that each lot shall have a minimum frontage on a street or private drive, as specified in the standards of the relative zoning districts. This minimum frontage requirement shall apply with the following exceptions:" Listed A. and B.

Finding: These criteria are satisfied.

Explanation of Finding: Each lot has the minimum frontage on a street or greenbelt, as allowed in the Architectural Pattern Book, as proposed to be amended in Request A.

Subsection 4.237 (.07) Through Lots

D38. **Review Criteria:** "Through lots shall be avoided except where essential to provide separation of residential development from major traffic arteries or adjacent non-residential activity or to overcome specific disadvantages of topography and orientation."

Finding: These criteria are satisfied.

Explanation of Finding: No through lots are proposed. The lots on Sicily Street backing up to Grahams Ferry Road have a common tract between the rear lot line and the Grahams Ferry Road right-of-way.

Subsection 4.237 (.08) Lot Side Lines

D39. **Review Criteria:** "The side lines of lots, as far as practicable for the purpose of the proposed development, shall run at right angles to the street or tract with a private drive upon which the lots face."
Finding: These criteria are satisfied.
Explanation of Finding: Generally side lot lines are at right angles with the front lot line. Where they do not, they run at the closest possible angle to 90 degrees as allowed by block shape, adjacent lot shape, required alley orientation, and natural resource preservation.

Subsection 4.237 (.09) Large Lot Land Divisions

D40. **Review Criteria:** "In dividing tracts which at some future time are likely to be re-divided, the location of lot lines and other details of the layout shall be such that re-division may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of buildings within future street locations shall be made a matter of record if the Development Review Board considers it necessary."
Finding: These criteria are satisfied.
Explanation of Finding: No future divisions of the lots included in the tentative subdivision plat.

Subsection 4.237 (.10) and (.11) Building Line and Built-to Line

D41. **Review Criteria:** The Planning Director or Development Review Board may establish special:
- building setbacks to allow for the future redivision or other development of the property or for other reasons specified in the findings supporting the decision. If special building setback lines are established for the land division, they shall be shown on the final plat.
- build-to lines for the development, as specified in the findings and conditions of approval for the decision. If special build-to lines are established for the land division, they shall be shown on the final plat.

Finding: These criteria are satisfied.
Explanation of Finding: No building lines or built-to lines are proposed or recommended.

Subsection 4.237 (.12) Land for Public Purposes

D42. **Review Criterion:** "The Planning Director or Development Review Board may require property to be reserved for public acquisition, or irrevocably offered for dedication, for a specified period of time."
Finding: This criterion is satisfied.
Explanation of Finding: No property reservation is recommended as described in this subsection.

Subsection 4.237 (.13) Corner Lots

D43. **Review Criterion:** "Lots on street intersections shall have a corner radius of not less than ten (10) feet."
Finding: This criterion is satisfied.
Explanation of Finding: All proposed corner lots meet the minimum corner radius of ten (10) feet.

Section 4.250 Lots of Record

D44. **Review Criteria:** "All lots of record that have been legally created prior to the adoption of this ordinance shall be considered to be legal lots. Tax lots created by the County Assessor are not necessarily legal lots of record."
Finding: These criteria are satisfied.
Explanation of Finding: The parcels being divided are of record, and the resulting subdivision lots will be lots of record.

Section 4.260 Improvements-Procedures

D45. **Review Criteria:** "In addition to other requirements, improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this Code and improvement standards and specifications of the City. The improvements shall be installed in accordance with the City's Public Works Standards."
Finding: These criteria are satisfied.
Explanation of Finding: The rights-of-way shown on the tentative subdivision plat are sufficient for installation of improvements to City standards. Conformance of the improvements with the City's Public Works Standards and other applicable standards will be ensured through the Engineering Division's permit and inspection process.

Section 4.262 Improvements-Requirements

D46. **Review Criteria:** This section establishes requirements for a number of different improvements including curbs, sidewalks, sanitary sewers, drainage, underground utility and service facilities, streetlight standards, street signs, monuments, and water.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has stated their intent to meet the requirements for all the types of improvements indicated in this subsection. Conformance with these requirements will be ensured through the Engineering Division's, and Building Division's where applicable, permit and inspection process.

REQUEST E: DB14-0006 TYPE C TREE PLAN

The applicant's findings in Section VA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.600.50 (.03) A. Access to Site for Tree Related Observation

E1. **Review Criterion:** "By submission of an application, the applicant shall be deemed to have authorized City representatives to have access to applicant's property as may be needed to verify the information provided, to observe site conditions, and if a permit is granted, to verify that terms and conditions of the permit are followed."
Finding: This criterion will be satisfied by Condition of Approval PDE 2.
Explanation of Finding: Condition of Approval PDE 2 ensures the required access is allowed including easement to inspect preserved Oregon White Oaks in private yards.

Subsection 4.610.00 (.03) B. Type C Tree Removal Review Authority

E2. **Review Criterion:** "Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council."
Finding: This criterion is satisfied.
Explanation of Finding: The requested tree removal is connected to site plan review by the Development Review Board for the proposed development. The tree removal is thus being reviewed by the DRB.

Subsection 4.610.00 (.06) A. Conditions Attached to Type C Tree Permits

E3. **Review Criterion:** "Conditions. Attach to the granting of the permit any reasonable conditions considered necessary by the reviewing authority including, but not limited to, the recording of any plan or agreement approved under this subchapter, to ensure that the intent of this Chapter will be fulfilled and to minimize damage to, encroachment on or interference with natural resources and processes within wooded areas;"
Finding: This criterion will be satisfied by a condition of approval.
Explanation of Finding: The condition requires tree preservation easements to be recorded with the final plat to protect important and good Oregon White Oak trees identified in the arborist report that are not otherwise within a conservation easement or HOA tract. The easements shall allow City access to inspect the tree and the area within the easement. The responsibility for landscaping and tree maintenance within the easement areas shall be held by the Homeowners Association. Landscaping within easement areas shall be limited to native plantings compatible with Oregon White Oaks. Drainage and irrigation shall be designed to optimize the amount of water in the root zone of the oak trees for the health of the oaks. In the event one of the preserved Oak dies a replacement Oregon White Oak shall be planted in its place. An additional condition requires tree protective fencing around all preserved important and good Oregon White Oaks to have a legible sign be placed on the tree protective fencing stating "Penalty for damaging this tree

may be up to $(assessed value)" or substantially similar language. The assessed value shall be that shown in a tree valuation report for the preserved important and good Oregon White Oaks prepared by the appropriate arboriculture professional and given to the City's Planning Division with the Type C Tree Permit request. These conditional are reasonable in consideration of the aesthetic, historical, and natural importance of the preserved Oregon White Oak trees and in consideration that the conditions are based on issues arising around preserved trees in previous phases of Villebois development including inappropriate landscaping and irrigation within drip lines of preserved trees leading to tree decline and death, and construction damage, especially from utility installation and grading leading to excessive pooling of storm water. In addition, Conditions of Approval PDE 10 and PDE 11 require special procedures are followed to protect the preserved trees during fence and utility installation within the root zone.

Subsection 4.610.00 (.06) B. Completion of Operation

E4. **Review Criterion:** "Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:" "Fix a reasonable time to complete tree removal operations;"
Finding: This criterion is satisfied.
Explanation of Finding: It is understood the tree removal will be completed by the time construction of all homes, parks, and other improvements in the PDP are completed, which is a reasonable time frame for tree removal.

Subsection 4.610.00 (.06) C. Security

E5. **Review Criterion:** "Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:" "Require the Type C permit grantee to file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount determined necessary by the City to ensure compliance with Tree Removal Permit conditions and this Chapter.
1. This requirement may be waived by the Planning Director if the tree removal must be completed before a plat is recorded, and the applicant has complied with WC 4.264(1) of this Code."
Finding: This criterion will be satisfied by Condition of Approval PDE 5.
Explanation of Finding: The condition of approval ensures the security requirement of this subsection is met.

Subsection 4.610.10 (.01) Standards for Tree Removal, Relocation or Replacement

Subsection 4.610.10 (.01) A. Standards for the Significant Resource Overlay Zone

E6. **Review Criteria:** "Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this chapter."
Finding: These criteria are satisfied.
Explanation of Finding: Request G fully reviews any impact to the Significant Resource Overlay Zone, including any tree removal.

Subsection 4.610.10 (.01) B. Standards for Preservation and Conservation

E7. **Review Criteria:** "No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a principle shall be equal in concern and importance as other design principles."
Finding: These criteria are satisfied.
Explanation of Finding: The preservation of on-site trees was an important factor in the design of PDP 7 South. To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within the areas of the site previously impacted by development. Care has been taken to preserve trees, especially good and important trees. Review of the site plan by staff has not produced any additional suggestions for reasonable design alternatives that would preserve additional trees.

Subsection 4.610.10 (.01) C. Standards for Development Alternatives

E8. **Review Criteria:** "Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements."
Finding: These criteria are satisfied.
Explanation of Finding: To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within the areas previously impacted by development. Care has been taken to preserve trees, especially good and important trees. Review of the site plan by staff has not produced any additional suggestions for reasonable design alternatives that would preserve additional trees.

Subsection 4.610.10 (.01) D. Standards for Land Clearing

E9. **Review Criteria:** "Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements."
Finding: These criteria are satisfied.
Explanation of Finding: This standard is being followed as shown in the applicant's plan set, Exhibit B4.

Subsection 4.610.10 (.01) E. Standards for Residential Development

E10. **Review Criteria:** "Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape."
Finding: These criteria are satisfied.
Explanation of Finding: The proposed development footprint is focused the areas previously impacted by development maintaining much of the surrounding natural setting.

Subsection 4.610.10 (.01) F. Standards for Compliance with Statutes and Ordinances

E11. **Review Criteria:** "The proposed activity shall comply with all applicable statutes and ordinances."
Finding: These criteria are satisfied.

Explanation of Finding: This standard is broad and duplicative. As found elsewhere in this report, the applicable standards are being applied.

Subsection 4.610.10 (.01) G. Standards for Relocation and Replacement

E12. **Review Criteria:** "The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not removed, in accordance with WC 4.620.10.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed tree activity is being reviewed in accordance to the referenced sections related to replacement and protection.

Subsection 4.610.10 (.01) H. Limitation on Tree Removal

E13. **Review Criteria:** "Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection." Listed 1. through 4.
Finding: These criteria are satisfied.
Explanation of Finding: The proposed tree removal is either necessary for construction or is due to the health and condition of the trees.

Subsection 4.610.10 (.01) I. 1. Additional Standards for Type C Permits: Tree Survey

E14. **Review Criteria:** "For all site development applications reviewed under the provisions of Chapter 4 Planning and Zoning, the developer shall provide a Tree Survey before site development as required by WC 4.610.40 , and provide a Tree Maintenance and Protection Plan, unless specifically exempted by the Planning Director or DRB, prior to initiating site development."
Finding: These criteria are satisfied.
Explanation of Finding: The required Tree Maintenance and Protection Plan has been submitted.

Subsection 4.610.10 (.01) I. 2. Additional Standards for Type C Permits: Platted Subdivision

E15. **Review Criteria:** "The recording of a final subdivision plat whose preliminary plat has been reviewed and approved after the effective date of Ordinance 464 by the City and that conforms with this subchapter shall include a Tree Survey and Maintenance and Protection Plan, as required by this subchapter, along with all other conditions of approval."
Finding: These criteria are satisfied.
Explanation of Finding: The required plan has been submitted, and additional conditions of approval are being attached to further protect "Important" and "Good" Oregon White Oaks trees.

Subsection 4.610.10 (.01) I. 3. Additional Standards for Type C Permits: Utilities

E16. **Review Criteria:** "The City Engineer shall cause utilities to be located and placed wherever reasonably possible to avoid adverse environmental consequences given the circumstances of existing locations, costs of placement and extensions, the public welfare, terrain, and preservation

of natural resources. Mitigation and/or replacement of any removed trees shall be in accordance with the standards of this subchapter."

Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.

Explanation of Finding: The Composite Utility Plan, Sheet 6 of Exhibit B4, shows the site has been designed to minimize the impact upon the environment to the extent feasible given existing conditions. Utility placement in relation to trees will be further reviewed during review of construction drawings and utility easement placement on the final plat. Conditions of Approval PDE 11 and PF 57 require boring to be used, and prohibits trenching, as necessary to avoid the root zone of preserved trees.

Subsection 4.610.40 (.01) Type C Tree Plan Reviewed with Stage II Final Plan

E17. **Review Criteria:** "Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any plan changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed Type C Tree Plan is being reviewed concurrently with the Preliminary Development Plan, which is the equivalent of a Stage II Final Plan in the Village Zone.

Section 4.610.40 (.02) Submission of Tree Maintenance and Protection Plan

E18. **Review Criteria:** "The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:" Listed A. 1. through A. 7.

Finding: These criteria are satisfied.

Explanation of Finding: The applicant has submitted the necessary copies of a Tree Maintenance and Protection Plan. See Section V of the applicant's notebook, Exhibit B3 and Sheets 9.1 and 9.2 of the applicant's plan set, Exhibit B4.

Subsection 4.620.00 (.01) Tree Replacement Requirement

E19. **Review Criterion:** "A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal."

Finding: This criterion is satisfied.

Explanation of Finding: The tree mitigation requirements will be more than exceeded by the planned street tree and trees in parks and linear greens.

Subsection 4.620.00 (.02) Basis for Determining Replacement

E20. **Review Criteria:** "The permit grantee shall replace removed trees on a basis of one (1) tree replanted for each tree removed. All replacement trees must measure two inches (2") or more in diameter."

Finding: These criteria are satisfied.

Explanation of Finding: More trees are planned to be planted that proposed to be removed. Each tree, including street trees and trees in parks and linear greens will meet the minimum diameter requirement.

Subsection 4.620.00 (.03) Replacement Tree Requirements

E21. **Review Criteria:** "A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.

A. Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better.

B. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date.

C. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced.

D. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat."

Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDE 6.

Explanation of Finding: The condition of approval will ensure the relevant requirements of this subsection are met.

Subsection 4.620.00 (.04) Replacement Tree Stock Requirements

E22. **Review Criteria:** "All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade."

Finding: These criteria will be satisfied by Condition of Approval PDE 6.

Explanation of Finding: Condition of Approval PDE 6 assures this is met.

Subsection 4.620.00 (.05) Replacement Trees Locations

E23. **Review Criteria:** "The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed."

Finding: These criteria are satisfied.

Explanation of Finding: The applicant proposes to mitigate for all removed trees on site and in the appropriate locations for the proposed development.

Section 4.620.10 Tree Protection During Construction

E24. **Review Criteria:** "Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:" Listed A. through D.

Finding: These criteria are satisfied or will be satisfied by Condition of Approvals PDE 7and PDE 8.

Explanation of Finding: The conditions of approval assure the applicable requirements of this Section will be met.

REQUEST F: DB14-0007 FINAL DEVELOPMENT PLAN FOR PARKS AND OPEN SPACE

The applicant's findings in Section VIA of their PDP notebook, Exhibit B3, respond to the majority of the applicable criteria.

Subsection 4.125 (.02) Permitted Uses in the Village Zone

F1. **Review Criteria:** This subsection lists the uses typically permitted in the Village Zone including "Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association."
Finding: These criteria are satisfied.
Explanation of Finding: The requested Final Development Plan is for parks and open space allowed within the Village Zone.

Subsection 4.125 (.08) A. Parks and Open Space in the Village Zone-Amount Required

F2. **Review Criteria:** "In all residential developments and in mixed-use developments where the majority of the developed square footage is to be in residential use, at least twenty-five percent (25%) of the area shall be open space, excluding street pavement and surface parking. In multi-phased developments, individual phases are not required to meet the 25% standard as long as an approved Specific Area Plan demonstrates that the overall development shall provide a minimum of 25% open space. Required yard areas shall not be counted towards the required open space area."
Finding: These criteria are satisfied.
Explanation of Finding: PDP 7S includes open space areas that are 24.06 acres in size, or approximately 56% of the total PDP area. This FDP application is included with the PDP 7S submittal. Therefore, the FDP is consistent with the open space area in PDP 7S with open space area in excess of the 25% minimum requirement.

Subsection 4.125 (.08) B. Parks and Open Space in the Village Zone-Ownership

F3. **Review Criteria:** "Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City of Wilsonville standards. The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage."
Finding: These criteria are satisfied.
Explanation of Finding: This discretion of the DRB is understood. Ownership will be according to agreements reached between the developer and the City.

Subsection 4.125 (.08) C. Parks and Open Space in the Village Zone-Protection and Maintenance

F4. **Review Criteria:** "The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or

maintenance are the responsibility of a private party or homeowners' association, the City Attorney shall review and approve any pertinent bylaws, covenants, or agreements prior to recordation."
Finding: These criteria are satisfied.
Explanation of Finding: Protection and maintenance of the open space and recreational areas are covered in the CCR's being reviewed by the City, and Operation and Maintenance Agreements between the developer and the City.

Subsection 4.125 (.09) Street and Access Improvement Standards

F5. **Review Criteria:** This section lists street and access improvement standards for the Village Zone including vision clearance standards.
Finding: These criteria are satisfied.
Explanation of Finding: This code section does not apply to the proposed parks and open space, except for vision clearance for vegetation which is met.

Subsection 4.125 (.10) Sidewalk and Pathway Improvement Standards

F6. **Review Criteria:** "The provisions of Section 4.178 shall apply within the Village zone."
Finding: These criteria are satisfied.
Explanation of Finding: Findings regarding Compliance with the standards of Section 4.178 can be found in Findings A88 and B20.

Subsection 4.125 (.11) Landscaping Screening and Buffering

F7. **Review Criteria:** "Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:" "Streets in the Village zone shall be developed with street trees as described in the Community Elements Book."
Finding: These criteria are satisfied.
Explanation of Finding: Findings F18 through F29 pertain to Section 4.176. Street trees are proposed consistent with the Community Elements Book as proposed with Request A.

Section 4.125 (.12) A. Signs Compliance with Master Sign and Wayfinding Plan for SAP

F8. **Review Criterion:** "All signage and wayfinding elements within the Village Zone shall be in compliance with the adopted Signage and wayfinding Master Plan for the appropriate SAP."
Finding: This criterion does not apply.
Explanation of Finding: The SAP South Signage & Wayfinding Plan indicates the provision of Secondary Site Identifier at the site entrance from Grahams Ferry Road. The FDP set, Exhibit B5, show provision of the 'Secondary Site Identifier' with the future construction of the site entrance.

Subsection 4.125 (.14) Design Standards Applying to the Village Zone

The following Design Standards implement the Design Principles found in Section 4.125(.13), above, and enumerate the architectural details and design requirements applicable to buildings and other features within the Village (V) zone. The Design Standards are based primarily on the features, types, and details of the residential traditions in the Northwest, but are not intended to mandate a particular style or fashion. All development within the Village zone shall incorporate the following:

Subsection 4.125 (.14) A. 2. b. Details to Match Architectural Pattern Book and Community Elements Book

F9. **Review Criteria:** "Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Architectural Standards."
Finding: These criteria are satisfied or will be satisfied by Conditions of Approval.
Explanation of Finding: The Architectural Pattern Book is not applicable to the parks except that any retaining walls within the public view shed must be consistent with the materials in the Architectural Pattern Book. Condition of Approval PDF 11 ensures park elements are consistent with the Community Elements Book including playground equipment, nature path directional bollards, benches, tables, and trash cans.

Subsection 4.125 (.14) A. 2. f. Protection of Significant Trees

F10. **Review Criterion:** "The protection of existing significant trees as identified in an approved Community Elements Book."
Finding: This criterion is satisfied.
Explanation of Finding: Significant trees are being protected. See Request E.

Subsection 4.125 (.14) A. 2. g. Landscape Plan

F11. **Review Criterion:** "A landscape plan in compliance with Sections 4.125(.07) and (.11), above."
Finding: This criterion is satisfied.
Explanation of Finding: Landscape plans have been provided in compliance with the referenced sections.

Subsection 4.125 (.14) C. Lighting and Site Furnishings

F12. **Review Criteria:** "Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards."
Finding: These criteria will be satisfied by a condition of approval.
Explanation of Finding: The condition of approval requires the lighting and site furnishings to be consistent with the Community Elements Book.

Subsection 4.125 (.18) L. Final Development Plan Approval Procedures

F13. **Review Criteria:** This subsection establishes the approval procedures for Final Development Plans.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has followed the applicable procedures set out in this subsection for approval of a FDP.

Subsection 4.125 (.18) M. Final Development Plan Submittal Requirements

F14. **Review Criteria:** "An application for approval of a FDP shall be subject to the provisions of Section 4.034."
Finding: These criteria are satisfied.
Explanation of Finding: The necessary materials have been submitted for review of the FDP.

Subsections 4.125 (.18) N. and P. 1. Final Development Plans Subject to Site Design Review Criteria

F15. **Review Criteria:** "An application for approval of a FDP shall be subject to the provisions of Section 4.421"
Finding: These criteria are satisfied.
Explanation of Finding: The provisions of Section 4.421 are being used as criteria in the review of the FDP. See Findings F30 through F37.

Subsection 4.125 (.18) O. Refinements to Preliminary Development Plan as part of Final Development Plan

F16. **Review Criteria:** This subsection identifies the process and requirements for refinements to a preliminary development plan as party of a final development plan.
Finding: These criteria are satisfied.
Explanation of Finding: No refinements are proposed as part of the requested FDP.

Subsection 4.125 (.18) P.2. Final Development Plan Compliance with Architectural Pattern Book, Community Elements Book, and PDP Conditions of Approval

F17. **Review Criteria:** "An application for an FDP shall demonstrate that the proposal conforms to the applicable Architectural Pattern Book, Community Elements Book, Village Center Architectural Standards and any conditions of a previously approved PDP."
Finding: These criteria are satisfied or will be satisfied by a Condition of Approval PDF 11.
Explanation of Finding: Overall, as demonstrated by Finding F9 above, the FDP demonstrates compliance with the SAP South Community Elements Book. The applicant has provided sufficient information to show that playground equipment meeting the Community Elements Book can be provided. However, Condition of Approval PDF 11 ensures the detailed requirements on page 15 of the Community Elements Book are met. There are no relevant portions of the Architectural Pattern Book, or Conditions of Approval for a previously approved PDP to which to demonstrate compliance.

Landscape Standards Section 4.176

Subsection 4.176 (.02) B. Landscape Standards and Compliance with Code

F18. **Review Criterion:** "All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length"

Finding: This criterion is satisfied.

Explanation of Finding: No waivers or variances to landscape standards have been requested. Thus all landscaping and screening must comply with standards of this section.

Subsection 4.176 (.03) Landscape Area and Locations

F19. **Review Criteria:** "Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to define, soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable."

Finding: These criteria are satisfied.

Explanation of Finding: The proposed parks are predominantly covered with vegetative plant materials other than areas for walkways, play structures, benches, tables, etc. The plantings are in a variety of areas.

Subsection 4.176 (.04) Buffering and Screening

F20. **Review Criteria:** "Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.

D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.

E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.

F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fenceline shall require Development Review Board approval."

Finding: These criteria are satisfied.

Explanation of Finding: No conditions requiring buffering and screening are within the area covered by the subject FDP request.

Subsection 4.176 (.06) A. Plant Materials-Shrubs and Groundcover

F21. **Review Criteria:** This subsection establishes plant material and planting requirements for shrubs and ground cover.
Finding: These criteria are satisfied.
Explanation of Finding: Applicant's Sheet L8 in their plan set, Exhibit B5, indicates the requirements established by this subsection will be met by the proposed plantings.

Subsection 4.176 (.06) B. Plant Materials-Trees

F22. **Review Criteria:** This subsection establishes plant material requirements for trees.
Finding: These criteria are satisfied.
Explanation of Finding: Applicant's Sheet L8 in their plan set, Exhibit B5, indicates the requirements established by this subsection will be met by the proposed plantings.

Subsection 4.176 (.06) D. Plant Materials-Street Trees

F23. **Review Criteria:** This subsection establishes plant material requirements for street trees.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDF 9.
Explanation of Finding: Applicant's Sheets L2 and L3 of their plan set, Exhibit B5, as shown modified in Exhibit B9, indicate the requirements established by this subsection as well as the Community Elements Book will be met by the proposed plantings except for Alta Court. A variety of tree listed for secondary residential streets in the Community Elements Book approved with Request A is required by a condition of approval to be placed along Alta Court rather than the Green Vase Zelkova.

Subsection 4.176 (.06) E. Types of Plant Species

F24. **Review Criteria:** This subsection discusses use of existing landscaping or native vegetation, selection of plant materials, and prohibited plant materials.
Finding: These criteria are satisfied.
Explanation of Finding: The allowed plant materials are governed by the Community Elements Book. All proposed plant materials will be consistent with the SAP South Community Elements Book.

Subsection 4.176 (.06) F. Tree Credit

F25. **Review Criteria:** "Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows: Existing trunk diameter Number of Tree Credits

18 to 24 inches in diameter	3 tree credits
25 to 31 inches in diameter	4 tree credits
32 inches or greater	5 tree credits:"

Maintenance requirements listed 1. through 2.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant is not requesting any of the preserved trees be counted as tree credits pursuant to this subsection.

Subsection 4.176 (.06) G. Exceeding Plant Material Standards

F26. **Review Criterion:** "Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met."
Finding: This criterion is satisfied.
Explanation of Finding: The selected landscape materials do not violate any height or visions clearance requirements.

Subsection 4.176 (.07) Installation and Maintenance of Landscaping

F27. **Review Criteria:** This subsection establishes installation and maintenance standards for landscaping.
Finding: These criteria are satisfied or will be satisfied by Condition of Approval PDF 2.
Explanation of Finding: The installation and maintenance standards are or will be met as follows:

- Plant materials are required to be installed to current industry standards and be properly staked to ensure survival
- Plants that die are required to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City.
- A note on the applicant's Sheet L8 in their plan set, Exhibit B5, indicates "coordinate landscape installation with installation of underground sprinkler and drainage systems."

Subsection 4.176 (.09) Landscape Plans

F28. **Review Criterion:** "Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated."
Finding: This criterion is satisfied.
Explanation of Finding: Landscape plans have been submitted with the required information. See Exhibit B5 and B9.

Subsection 4.176 (.10) Completion of Landscaping

F29. **Review Criterion:** "The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages. In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review."
Finding: This criterion is satisfied.
Explanation of Finding: As a condition of PDP approval the parks for the PDP or PDP phase must be completed prior to fifty percent (50%) of the house permits are issued unless

certain conditions exist, similar to what is described in this subsection, in which case a bond can be posted. See finding B57 and Condition of Approval PDB 3.

Site Design Review

Subsection 4.400 (.01) Excessive Uniformity, Inappropriateness of Design, Etc.

F30. **Review Criteria:** "Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor."

Finding: These criteria are satisfied.

Explanation of Finding:

Excessive Uniformity: A variety of parks with a variety of features and amenities are provided consistent with the diversity of park uses described in the Villebois Village Master Plan avoiding excessive uniformity in park and open space design. The unique setting of the proposed development will provide for a number of unique park and open space experiences.

Inappropriate or Poor Design of the Exterior Appearance of Structures: Park structures, including the shelter and play structures, are being required to conform to the Community Elements Book ensuring quality design appropriate for the Villebois context.

Inappropriate or Poor Design of Signs: Signs within parks and open spaces are required to be consistent with the Master Sign and Wayfinding program which is a comprehensive signage package that ensures signs in parks and open spaces, like elsewhere in Villebois, are of a quality design and appropriate for the Villebois context.

Lack of Proper Attention to Site Development: The appropriate professional services have been used to design the park and open spaces incorporating unique features of the site including natural features, demonstrating appropriate attention being given to site development.

Lack of Proper Attention to Landscaping: Landscaping has been professionally designed by a landscape architect, and includes a variety of plant materials, all demonstrating appropriate attention being given to landscaping.

Subsection 4.400 (.02) Purposes of Objectives of Site Design Review

F31. **Review Criterion:** "The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:" Listed A through J.

Finding: These criteria are satisfied.

Explanation of Finding: It is staff's professional opinion that the applicant has provided sufficient information demonstrating compliance with the purposes and objectives of site design review. This includes designing the site to keep more formal improvements focused on areas of the site that were previously impacted by development, and preserving and enhancing the abundant natural areas of the site. In addition, site structures and features are

consistent with the Community Element Book, which has previously been reviewed to ensure consistency with the Villebois Village Master Plan which has similar purposes and objectives as site design review.

Section 4.420 Site Design Review-Jurisdiction and Power of the Board

F32. **Review Criteria:** The section states the jurisdiction and power of the Development Review Board in relation to site design review including the application of the section, that development is required in accord with plans, and variance information.
Finding: These criteria will be satisfied by Condition of Approval PDF 3.
Explanation of Finding: A condition of approval has been included to ensure construction, site development, and landscaping are carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. No grading or other permits will be granted prior to development review board approval. No variances are requested from site development requirements.

Subsection 4.421 (.01) Site Design Review-Design Standards

F33. **Review Criteria:** "The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards." Listed A through G.
Finding: These criteria are satisfied.
Explanation of Finding: The scope of design standards refers only to the parks and open spaces, as the single-family homes are not subject to site design review. The parks and open space areas have minimized grading and preserved a large amount of natural area and significant native trees. More formal parks that include structures are focused on areas of the development that have been previously impacted by development. Surface water drainage has been thoroughly reviewed consistent with the Villebois Village Master Plan and the Rainwater Master Plan for SAP South.

Subsection 4.421 (.02) Applicability of Design Standards to Various Site Features

F34. **Review Criteria:** "The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures."
Finding: These criteria are satisfied.
Explanation of Finding: Design standards have been applied to all applicable site features, which does not include single-family homes.

Subsection 4.421 (.03) Objectives of Section 4.400 Serve as Additional Criteria and Standards

F35. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards."
Finding: These criteria are satisfied.

Explanation of Finding: The purposes and objectives in Section 4.400 are being used as additional criteria and standards. See Finding F31 above.

Subsection 4.421 (.05) Site Design Review-Conditions of Approval

F36. **Review Criterion:** "The Board may attach certain development or use conditions in granting an approval that are determined necessary to insure the proper and efficient functioning of the development, consistent with the intent of the Comprehensive Plan, allowed densities and the requirements of this Code."
Finding: This criterion is satisfied.
Explanation of Finding: No additional conditions of approval are recommended.

Subsection 4.421 (.06) Color or Materials Requirements

F37. **Review Criterion:** "The Board or Planning Director may require that certain paints or colors of materials be used in approving applications. Such requirements shall only be applied when site development or other land use applications are being reviewed by the City."
Finding: This criterion will be satisfied by Condition of Approvals PDF 4 and PDF 5.
Explanation of Finding: The Conditions of Approval requires specific materials for any retaining walls or hand rails to ensure a quality of design consistent with the Architectural Pattern Book.

Section 4.440 Site Design Review-Procedures

F38. **Review Criteria:** "A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:" Listed A through F.
Finding: These criteria are satisfied.
Explanation of Finding: The applicant has submitted the required additional materials, as applicable.

Section 4.442 Time Limit on Approval

F39. **Review Criterion:** "Site design review approval shall be void after two (2) years unless a building permit has been issued and substantial development pursuant thereto has taken place; or an extension is granted by motion of the Board.
Finding: This criterion is satisfied.
Explanation of Finding: It is understood that the approval will expire after 2 years if a building permit hasn't been issued unless an extension has been granted by the board.

Subsection 4.450 (.01) Landscape Installation or Bonding

F40. **Review Criterion:** "All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its

designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant."

Finding: This criterion is satisfied.

Explanation of Finding: As a condition of PDP approval the parks for the PDP or PDP phase must be completed prior to fifty percent (50%) of the house permits being issued. See Finding B57 in Request B and Condition of Approval PDB 3.

Subsection 4.450 (.02) Approved Landscape Plan Binding

F41. **Review Criterion:** "Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval shall provide ongoing assurance this criterion is met.

Subsection 4.450 (.03) Landscape Maintenance and Watering

F42. **Review Criterion:** "All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval will ensure landscaping is continually maintained in accordance with this subsection.

Subsection 4.450 (.04) Addition and Modifications of Landscaping

F43. **Review Criterion:** "If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that has been accepted or approved through the City's development review process, that removal or modification must first be approved through the procedures of Section 4.010."

Finding: This criterion will be satisfied by Condition of Approval PDF 6.

Explanation of Finding: The condition of approval shall provide ongoing assurance that this criterion is met by preventing modification or removal without the appropriate City review.

REQUEST G: SI14-0002 SROZ MAP REFINEMENT, SRIR REVIEW, SROZ MAP VERIFICATION

The applicant's findings in Section IIA of their SAP notebook, Exhibit B1, respond to the majority of the applicable criteria.

The following was prepared by Kerry Rappold, Natural Resources Program Manager

Findings of Fact:

1. The area designated Significant Resource Overlay Zone (SROZ) within SAP South Plan Area 2 is upland wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) and wetlands (Site ID Numbers 6.01d, 6.02d, and 6.03d). In addition, a previously unmapped wetland was identified in the southwest corner of the property. Of the four wetland areas, only wetland 6.03d is considered locally significant. The other wetlands are not considered locally-significant, but are regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

2. The upland wildlife habitat consists of a mixed coniferous/deciduous forest containing primarily Douglas fir, Oregon white oak, bigleaf maple, balsam poplar, and red alder. The forest understory contains a diversity of native shrubs and groundcovers, which include red osier dogwood, common snowberry, black hawthorn, and salal. Non-native invasive plant species include Himalayan blackberry, English ivy, and bull thistle. The forest provides habitat for a variety of wildlife, and connections to the 250-acre Graham Oaks Nature Park to the south and east of the property.

3. A wetland delineation was prepared by SWCA Environmental Consultants, and approved by the Oregon Department of State Lands, which identified and delineated the wetlands on the property.

4. The Significant Resource Overlay Zone ordinance prescribes regulations for development within the SROZ and its associated 25 foot Impact Area. Setbacks from significant natural resources implement the requirements of Metro Title 3 Water Quality Resource Areas, Metro Title 13 Nature in Neighborhoods, and Statewide Planning Goal 5. Wetlands, streams and riparian corridors shall have at least a minimum 50-foot buffer, but buffers may extend to the top of the slope for riparian corridors. All significant natural resources have a 25 foot Impact Area. Development or other alteration activities may be permitted within the SROZ and its associated 25 foot Impact Area through the review of a Significant Resource Impact Report (SRIR).

5. Pursuant to the city's SROZ ordinance, development is only allowed within the Area of Limited Conflicting Use (ALCU). The ALCU is located between the riparian corridor boundary, riparian impact area or the Metro Title 3 Water Quality Resource Area boundary, whichever is furthest from the wetland or stream, and the outside edge of the SROZ, or an isolated significant wildlife habitat (upland forest) resource site.

6. The applicant's Significant Resource Impact Report delineated specific resource boundaries and analyzed the impacts of development within the SROZ. The applicant's SRIR contained the required information, including a physical and ecological analysis, a justification of the proposed impacts, and a mitigation plan. **These code provisions are satisfied provided the conditions of approval are met.**

7. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resources Inventory (NRI). Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

8. The SROZ map will be amended, pursuant to Section 4.139.09.01 (D), as part of the land use approval for Villebois SAP South Plan Area 2.

Description of Request:
The applicant has requested approval of a Significant Resource Impact Report (SRIR) for non-exempt development that is located within the Significant Resource Overlay Zone and its associated 25 foot Impact Area, and a map refinement to the designated upland wildlife habitat in SAP South Plan Area 2.

Background:

Wetlands:

In May 2013, the applicant conducted a wetland delineation of the site. Four wetlands were delineated (A-D), which primarily correspond with the wetlands identified in the City's Natural Resources Inventory (Site ID Numbers 6.01d, 6.02d, and 6.03d). A new wetland area (Wetland D) was identified in southwest corner of the property. The wetland delineation was concurred by DSL on October 8, 2013.

To be deemed a locally significant wetland (and included in the SROZ), as specified in the City of Wilsonville Natural Resource Inventory, a wetland must satisfy the following functional criteria: diverse wildlife habitat, water quality, and hydrologic control. In addition, they shall be over one-half acre in size.

Wetland A (Site ID Number 6.02d) is located in the far northwest corner of the property. It is a small (0.05 acre) isolated forested wetland with a seasonally saturated/shallowly ponded hydrologic condition. Slough sedge, red osier dogwood and Oregon ash are the most common vegetation. The Natural Resource Inventory classified it as a non-locally significant wetland due to it being less than 0.5 acre in size.

Wetland B (Site ID Number 6.03d) is located in the north-central portion of the property. The wetland forms the headwaters of a tributary to Mill Creek and extends off-site (upstream) to the

north. The vegetation includes slough sedge, Pacific water-dropwort, red osier dogwood, rose, cascara, and Oregon ash.

The northern portion of Wetland B (0.89 acre) was identified in the Natural Resources Inventory, and determined to be a locally significant wetland. A southern, approximately 75-foot section of Wetland B, was not included in the NRI but was identified during the on-site wetland delineation. The southern portion is an emergent wetland community dominated by Pacific water-dropwort, Siberian springbeauty, and lamp rush. Lacking in tree and shrub layers, the southern portion is more sparsely vegetated and does not provide the diverse wildlife habitat that is provided in the northern portion of the wetland.

Because the southern portion of Wetland B is less than one-half acre in size and does not meet the criteria for adding a wetland, it is not considered locally significant. However, it is regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

Wetland C (Site ID Number 6.01d) is connected (i.e., by hydrology) to Wetland B through a stormwater pipe. It is located downstream in the south-central part of the property. The wetland is primarily situated in an old excavated channel and pond. Two invasive plant species, yellow flag iris and reed canarygrass, comprise a majority of the wetland vegetation. Native vegetation includes red alder, western arborvitae, and Pacific water-dropwort. Wetland C was identified in the NRI and determined to be a non-locally significant wetland because it is less than one-half acre in size.

Wetland D was not included in the NRI but was identified during the on-site wetland delineation. It is a small emergent wetland (0.48 acres) located in the southwest corner of the property. The dominant vegetation is lamp rush, taper-fruit short-scale sedge, thick-head sedge, dense sedge, fringed willowherb, and scattered Scouler's willow. Due to its size (i.e., less than one-half acre in size), Wetland D is a non-locally significant wetland.

	Type of Wetland	Size (acres)	Locally Significant
Wetland A	Forested	0.05	N
Wetland B - Northern	Forested	0.89	Y
Wetland B - Southern	Emergent	0.07	N
Wetland C	Forested/emergent	0.27	N
Wetland D	Emergent	0.48	N

Staff concurs with the applicant's wetland delineation and determination of local significance. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the wetland areas.

Upland Forested Wildlife Habitat:

The applicant has provided an assessment of the upland forested wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) located on the property. As part of the SRIR, they prepared a verification of the SROZ boundary. This boundary verification takes into account the current condition of the upland forested wildlife habitat and any deviation from the NRI mapping. In

verifying the boundary, the applicant documented two areas where the drip line of the mature forest canopy was different than the NRI map. This difference in boundaries was due to the scale of the mapping used for the NRI, which was not verified as accurately as the applicant's inventory and mapping.

The upland forested wildlife habitat is a mixed coniferous/deciduous forest, which includes both upland and wetland forest. The overstory is primarily Oregon white oak, Douglas fir, bigleaf maple, balsam poplar, and red alder. In the understory, red osier dogwood, beaked hazelnut, black hawthorn, common snowberry, salal, and Pacific poison oak are the dominant species.

In reassessing the upland forested wildlife habitat on the property, it is necessary to revisit the functional criteria used to originally determine local significance. Five functions were assessed for upland wildlife habitat in the NRI, which include: habitat diversity, water quality protection, ecological integrity, connectivity, and uniqueness. Each one of these criteria was assigned a high, medium or low rating. In regards to Site Numbers 6.02U and 6.03U, one of the criteria was rated as high, and four were rated as medium. In reassessing the upland forested wildlife habitat, the applicant has revisited these ratings.

For the upland forested wildlife habitat areas (0.58 acres in size) proposed to be removed from the SROZ (i.e., through a map refinement), none of the functional criteria are rated as "High" in the revised assessment. The areas were rated lower due to the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry. Staff concurs with the applicant's revised assessment. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the upland forested wildlife habitat.

Summary of Issues:
The proposed non-exempt development will encroach into the Significant Resource Overlay Zone and its associated 25 foot Impact Area. All non-exempt development will occur within the Area of Limited Conflicting Use of the isolated significant wildlife habitat (i.e., upland forest). The impacted area totals 34,730 square feet and is situated along the edge of the upland forest. The impact to the SROZ is necessary to accommodate street improvements, residential lots, and a trail connection.

Proposed exempt development in the SROZ and its associated 25 foot Impact Area includes the following:

1) A series of nature trails and nature trail activity areas within the upland forested wildlife habitat.

Section 4.139.04 Use and Activities Exempt from These Regulations

Proposed exempt development in the SROZ and its associated 25 foot Impact Area comply with the following exemptions:

(.08) The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as minimize and repair disturbance to existing vegetation and slope stability.

G1. The construction of the nature trails and nature trail activity areas will have minimal impacts to the resource area, and is consistent with the requirements of this exemption.

Section 4.139.06.03 SRIR Review Criteria:

In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.

A. Except as specifically authorized by this code, development shall be permitted only within the Area of Limited Conflicting Use (see definition) found within the SROZ;

G2. The proposed non-exempt development is located within the Area of Limited Conflicting Use found within the SROZ. The total area of all other encroachments within the SROZ or its associated Impact Area has been deemed exempt or proposed only within the Impact Area.

B. Except as specifically authorized by this code, no development is permitted within Metro's Urban Growth Management Functional Plan Title 3 Water Quality Resource Areas boundary;

G3. The proposed development for SAP-South Plan Area 2 will not be located within Metro's Title 3 Water Quality Resource Areas boundary.

C. No more than five (5) percent of the Area of Limited Conflicting Use (see definition) located on a property may be impacted by a development proposal. On properties that are large enough to include Areas of Limited Conflicting Use on both sides of a waterway, no more than five (5) percent of the Area of Limited Conflicting Use on each side of the riparian corridor may be impacted by a development proposal. This condition is cumulative to any successive development proposals on the subject property such that the total impact on the property shall not exceed five (5) percent;

G4. The applicant has identified the proposed development within the Area of Limited Conflicting Use, and calculated the percentage for this development. The following information has been provided on the Area of Limited Conflicting Use (ALCU):

Total ALCU	=	866,388 square feet
Allowed Impact (5%)	=	43,319 square feet
Proposed Impact	=	34,730 square feet (4%)

D. Mitigation of the area to be impacted shall be consistent with Section 4.139.06 of this code and shall occur in accordance with the provisions of this Section;

G5. The applicant has identified the mitigation area necessary to offset impacts to the SROZ, and has proposed to enhance 195,195 square feet. Based on the required mitigation ratio of 2.5:1, only 86,825 square feet is required. In addition, the applicant is proposing to create additional SROZ areas totaling 61,697 square feet. The SROZ creation areas were previously encumbered by development. Pavement will be removed in these areas, and native trees, shrubs, and groundcovers will be installed in accordance with the mitigation planting plan.

E. The impact on the Significant Resource is minimized by limiting the degree or magnitude of the action, by using appropriate technology or by taking affirmative steps to avoid, reduce or mitigate impacts;

G6. The impacts to the SROZ will be from the encroachment of street improvements, residential lots, and a trail connection. The applicant has minimized permanent impacts to very mature trees, and other native vegetation. The grading and erosion control plan will ensure areas within the SROZ are protected during construction activities. No stormwater runoff will discharge into the SROZ.

F. The impacts to the Significant Resources will be rectified by restoring, rehabilitating, or creating enhanced resource values within the "replacement area" (see definitions) on the site or, where mitigation is not practical on-site, mitigation may occur in another location approved by the City;

G7. Impacts to the SROZ will be mitigated for on-site and will satisfy the mitigation ratios and other requirements of Section 4.139.07.

G. Non-structural fill used within the SROZ area shall primarily consist of natural materials similar to the soil types found on the site;

G8. Any non-structural fill will primarily consist of natural materials similar to the soil types found on the site.

H. The amount of fill used shall be the minimum required to practically achieve the project purpose;

G9. Fill used within the SROZ area will be limited to the minimum amount necessary to achieve the intended purpose.

I. Other than measures taken to minimize turbidity during construction, stream turbidity shall not be significantly increased by any proposed development or alteration of the site;

G10. All proposed grading activities on-site will be managed pursuant to guidelines established and identified in the applicant's approved erosion control plan and a 1200-C Erosion Control Permit issued by the Oregon Department of Environmental Quality. Stream turbidity is regulated under the City's Grading and Erosion Control Permit and the DEQ's 1200-C Erosion Control Permit.

J. Appropriate federal and state permits shall be obtained prior to the initiation of any activities regulated by the U.S. Army Corps of Engineers and the Oregon Division [Department] of State Lands in any jurisdictional wetlands or water of the United States or State of Oregon, respectively.

G11. The applicant is proposing minor impacts (1,258 square feet) to the northern portion of Wetland C. A wetland removal/fill permit will be submitted to the Oregon Department of State Lands and the U.S. Army Corps of Engineers. The compensatory wetland mitigation will be addressed through the purchase of credits from the Mud Slough Mitigation Bank.

Section 4.139.07 Mitigation Standards

(.01) The applicant shall review the appropriate Goal 5 Inventory Summary Sheets for wildlife habitat (i.e. upland) contained in the *City of Wilsonville Natural Resource Inventory and Goal 5/Title 3/ESA Compliance and Protection Plan* ("Compliance and Protection Plan"- May 2000) to determine the resource function ratings at the time the inventory was conducted.

G12. The applicant has reviewed the appropriate Upland Summary Sheet (Site ID Numbers 6.02U, 6.03U, and 6.011U) to determine the resource function ratings at the time the inventory was conducted.

(.02) The applicant shall prepare a Mitigation Plan document containing the following elements:

A. The Mitigation Plan shall contain an assessment of the existing natural resource function ratings at the time of the proposed encroachment for the site compared to the function ratings recorded in the Compliance and Protection Plan.

G13. The applicant has addressed the resource function ratings for the impact area and also correctly documented the resource function ratings in the Compliance and Protection Plan. The impact area has a medium function rating due to non-native invasive plant species.

B. The Mitigation Plan shall contain an assessment of the anticipated adverse impacts to significant wildlife habitat resources. The impact assessment shall discuss impacts by resource functions (as listed in the Compliance and Protection Plan, May 2000) for each resource type, and shall map the area of impact (square feet or acres) for each function.

G14. The applicant has determined the impact to the significant resource area based on the resource functions. The applicant has calculated the square feet of the impact to the Significant Resource. The applicant's site plan in the SRIR depicts the area of impact.

C. The Mitigation Plan shall present a proposed mitigation action designed to replace the lost or impacted resource functions described in Subsection B, above. The mitigation plan shall be designed to replace lost or impacted functions by enhancement of existing resources on, or off the impact site, or creation of new resource areas.

G15. The applicant has submitted a mitigation plan consistent with the requirements in Section 4.139.07. The mitigation will occur on-site, and within close proximity to the areas of impact.

D. For mitigation projects based on resource function enhancement, the area ratios presented in Table NR - 2 shall be applied. These ratios are based on the resource function ratings at the time of the proposed action, as described in Subsection A, above. The mitigation action shall be conducted on the appropriate size area as determined by the ratios in Table NR - 2.

G16. The applicant has estimated the resource function ratings for the "existing rating at mitigation site" and "proposed rating at mitigation site."

(.03) Proposals for mitigation action where new natural resource functions and values are created (i.e. creating wetland or wildlife habitat where it does not presently exist) will be reviewed and may be approved by the Development Review Board or Planning Director if it is determined that the proposed action will create

natural resource functions and values that are equal to or greater than those lost by the proposed impact activity.

G17. The applicant proposes to create forested wildlife habitat where it does not presently exist, however, since it is not part of the required mitigation it is not subject to this requirement.

(.04) Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.

G18. A condition of approval requires the mitigation actions to be implemented prior to or at the same time as the impact activity is conducted.

(.05) Mitigation plans shall have clearly stated goals and measurable performance standards.

G19. The applicant has submitted a mitigation plan with goals and measurable performance standards.

(.06) All mitigation plans shall contain a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes, the new owners will have the continued responsibilities established by this section.

G20. The applicant has submitted information regarding monitoring and maintenance of the proposed mitigation. A condition of approval requires the applicant to submit a monitoring and maintenance report to be conducted for a period of five years following mitigation implementation.

(.07) The Mitigation Plan document shall be prepared by a natural resource professional.

G21. The applicant's team has the necessary credentials to implement a mitigation plan for the proposed impacts.

(.08) Prior to any site clearing, grading or construction, the SROZ area shall be staked, and fenced per approved plan. During construction, the SROZ area shall remain fenced and undisturbed except as allowed by an approved development permit.

G22. A condition of approval requires the SROZ to be fenced and undisturbed.

(.09) For any development which creates multiple parcels intended for separate ownership, the City shall require that the SROZ areas on the site be encumbered with a conservation easement or tract.

G23. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.10) The City may require a conservation easement over the SROZ that would prevent the owner from activities and uses inconsistent with the purpose of this Section and any easements therein. The purpose of the conservation easement is to conserve and protect resources as well as to prohibit certain activities that are inconsistent with the purposes of this section. Such conservation easements do not exclude the installation of utilities.

G24. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.11) At the Planning Directors discretion, mitigation requirements may be modified based on minimization of impacts at the impact activity site. Where such modifications are granted by the Planning Director, the Director shall clearly indicate the reasons for doing so in the record, citing the relevant information relied upon in reaching the decision.

G25. The applicant has not requested a modification of mitigation requirements.

(.12) The Director may study the possibility of a payment-in-lieu-of system for natural resource impact mitigation. This process would involve the public acquisition and management of natural resource properties partially funded by these payments.

G26. The applicant has not requested a payment-in-lieu.

Section 4.139.09(.01)(D) Map Refinement Process

D. Map Refinement process. The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are as follows:

1. **Any map refinement must be evaluated by considering the riparian corridor types contained in this ordinance.**

2. **Other supporting documents to be considered in evaluating a proposal to refine a map include, but are not limited to:**

   a. **Natural Resources Inventories (LWI/RCI);**
   b. **The Economic, Social, Environmental and Energy (ESEE) Analysis;**
   c. **Metro Functional Plans;**
   d. **Wilsonville Comprehensive Plan;**
   e. **State approved wetland delineations;**
   f. **Detailed slope analysis.**

3. **An SRIR must be prepared by the applicant in conformance with the provisions of this Section.**

4. **The Hearing Body (including City Council) may amend the Significant Resource Overlay Zone (in or out) upon making a determination that the land area in question is or is not a significant resource. The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resource Function Rating Matrices.**

Upland Forested Wildlife Habitat:

G27. Finding: The applicant proposes to amend the Significant Resource Overlay Zone (SROZ) boundary. A Significant Resource Impact Report (SRIR) has been submitted to justify the refinement. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The land area to be amended includes upland forested wildlife habitat (Site Numbers 6.02U, 6.03U and 6.01U), which were identified as part of the city's Natural Resources Inventory.

In regards to the upland forested wildlife habitat, the Natural Resources Inventory listed two of the criteria as high, and three were rated as medium. In reassessing the wildlife habitat on the property, SWCA rated none of the function criteria as "high" for the map refinement areas. The rationale for lowering the ratings was based primarily on the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry.

Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

EXHIBIT A
PLANNING DIVISION
STAFF REPORT

VILLEBOIS SAP SOUTH PDP 7 – GRANDE POINTE

DEVELOPMENT REVIEW BOARD PANEL '___'
QUASI JUDICIAL HEARING

Public Hearing Date:
Date of Report:
Application Numbers: **Request C: DB14-0003 South PDP-7 Preliminary Development Plan**
Request E: DB13-0017 Tentative Subdivision Plat

Property Owners/Applicants:

PD = Planning Division conditions
BD – Building Division Conditions
PF = Engineering Conditions.
NR = Natural Resources Conditions
TR = SMART/Transit Conditions
FD = Tualatin Valley Fire and Rescue Conditions

City of Wilsonville
EXHIBIT C1 DB14-0002 et seq

Standard Comments:

PFC 1. All construction or improvements to public works facilities shall be in conformance to the City of Wilsonville Public Works Standards.

PFC 2. Applicant shall submit insurance requirements to the City of Wilsonville in the following amounts:

Coverage (Aggregate, accept where noted)	*Limit*
Commercial General Liability	
General Aggregate (per project)	$ 2,000,000
Fire Damage (any one fire)	$ 50,000
Medical Expense (any one person)	$ 10,000
Business Automobile Liability Insurance	
Each Occurrence	$ 1,000,000
Aggregate	$ 2,000,000
Workers Compensation Insurance	$ 500,000

PFC 3. No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, right-of-way and easements have been obtained and Staff is notified a minimum of 24 hours in advance.

PFC 4. All public utility/improvement plans submitted for review shall be based upon a 22"x 34" format and shall be prepared in accordance with the City of Wilsonville Public Work's Standards.

PFC 5. Plans submitted for review shall meet the following general criteria:

a. Utility improvements that shall be maintained by the public and are not contained within a public right-of-way shall be provided a maintenance access acceptable to the City. The public utility improvements shall be centered in a minimum 15-ft. wide public easement for single utilities and a minimum 20-ft wide public easement for two parallel utilities and shall be conveyed to the City on its dedication forms.
b. Design of any public utility improvements shall be approved at the time of the issuance of a Public Works Permit. Private utility improvements are subject to review and approval by the City Building Department.
c. In the plan set for the Public Works Permit, existing utilities and features, and proposed new private utilities shall be shown in a lighter, grey print. Proposed public improvements shall be shown in bolder, black print.
d. All elevations on design plans and record drawings shall be based on NAVD 88 Datum.
e. All proposed on and off-site public/private utility improvements shall comply with the State of Oregon and the City of Wilsonville requirements and any other applicable codes.
f. Design plans shall identify locations for street lighting, gas service, power lines,

telephone poles, cable television, mailboxes and any other public or private utility within the general construction area.

g. As per City of Wilsonville Ordinance No. 615, all new gas, telephone, cable, fiber-optic and electric improvements etc. shall be installed underground. Existing overhead utilities shall be undergrounded wherever reasonably possible.
h. Any final site landscaping and signing shall not impede any proposed or existing driveway or interior maneuvering sight distance.
i. Erosion Control Plan that conforms to City of Wilsonville Ordinance No. 482.
j. Existing/proposed right-of-way, easements and adjacent driveways shall be identified.
k. All engineering plans shall be stamped by a Professional Engineer registered in the State of Oregon.

PFC 6. Submit plans in the following general format and order for all public works construction to be maintained by the City:

a. Cover sheet
b. City of Wilsonville construction note sheet
c. General construction note sheet
d. Existing conditions plan.
e. Erosion control and tree protection plan.
f. Site plan. Include property line boundaries, water quality pond boundaries, sidewalk improvements, right-of-way (existing/proposed), easements (existing/proposed), and sidewalk and road connections to adjoining properties.
g. Grading plan, with 1-foot contours.
h. Composite utility plan; identify storm, sanitary, and water lines; identify storm and sanitary manholes.
i. Detailed plans; show plan view and either profile view or provide i.e.'s at all utility crossings; include laterals in profile view or provide table with i.e.'s at crossings; vertical scale 1"= 5', horizontal scale 1"= 20' or 1"= 30'.
j. Street plans.
k. Storm sewer/drainage plans; number all lines, manholes, catch basins, and cleanouts for easier reference
l. Water and sanitary sewer plans; plan; number all lines, manholes, and cleanouts for easier reference.
m. Detailed plan for storm water detention facility (both plan and profile views), including water quality orifice diameter and manhole rim elevations. Provide detail of inlet structure and energy dissipation device. Provide details of drain inlets, structures, and piping for outfall structure. Note that although storm water detention facilities are typically privately maintained they will be inspected by engineering, and the plans must be part of the Public Works Permit set.
n. Detailed plan for water quality facility (both plan and profile views). Note that although storm water quality facilities are typically privately maintained they will be inspected by Natural Resources, and the plans must be part of the Public Works Permit set.
o. Composite franchise utility plan.
p. City of Wilsonville detail drawings.
q. Illumination plan.
r. Striping and signage plan.
s. Landscape plan.

PFC 7. Prior to manhole and sewer line testing, design engineer shall coordinate with the City and update the sanitary and stormwater sewer systems to reflect the City's numbering system. Video testing and sanitary manhole testing will refer to the updated numbering system. Design engineer shall also show the updated numbering system on As-Built drawings submitted to the City.

PFC 8.	The applicant shall install, operate and maintain adequate erosion control measures in conformance with the standards adopted by the City of Wilsonville Ordinance No. 482 during the construction of any public/private utility and building improvements until such time as approved permanent vegetative materials have been installed.
PFC 9.	Applicant shall work with City's Natural Resources office before disturbing any soil on the respective site. If 5 or more acres of the site will be disturbed applicant shall obtain a 1200-C permit from the Oregon Department of Environmental Quality. If 1 to less than 5 acres of the site will be disturbed a 1200-CN permit from the City of Wilsonville is required.
PFC 10.	To lessen the impact of the proposed project on the downstream storm drain system, and adjacent properties, project run-off from the site shall be detained and limited to the difference between a developed 25-year storm and an undeveloped 25-year storm. The detention and outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PFC 11.	A storm water analysis prepared by a Professional Engineer registered in the State of Oregon shall be submitted for review and approval by the City to address appropriate pipe and detention facility sizing.
PFC 12.	The applicant shall be in conformance with all water quality requirements for the proposed development per the Public Works Standards. If a mechanical water quality system is used, prior to City acceptance of the project the applicant shall provide a letter from the system manufacturer stating that the system was installed per specifications and is functioning as designed.
PFC 13.	Storm water quality facilities shall have approved landscape planted and/or some other erosion control method installed and approved by the City of Wilsonville prior to streets and/or alleys being paved.
PFC 14.	The applicant shall provide the City with a Stormwater Maintenance and Access Easement (on City approved forms) for City inspection of those portions of the storm system to be privately maintained. Applicant shall maintain all LID storm water components and private conventional storm water facilities located within medians and from the back of curb onto and including the project site.
PFC 15.	Fire hydrants shall be located in compliance with TVF&R fire prevention ordinance and approval of TVF&R.
PFC 16.	The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly

	abandoned in conformance with State standards.
PFC 17.	All survey monuments on the subject site, or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
PFC 18.	Sidewalks, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.
PFC 19.	No surcharging of sanitary or storm water manholes is allowed.
PFC 20.	The project shall connect to an existing manhole or install a manhole at each connection point to the public storm system and sanitary sewer system.
PFC 21.	A City approved energy dissipation device shall be installed at all proposed storm system outfalls. Storm outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
PFC 22.	The applicant shall provide a 'stamped' engineering plan and supporting information that shows the proposed street light locations meet the appropriate AASHTO lighting standards for all proposed streets and pedestrian alleyways.
PFC 23.	All required pavement markings, in conformance with the Transportation Systems Plan and the Bike and Pedestrian Master Plan, shall be completed in conjunction with any conditioned street improvements.
PFC 24.	Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.
PFC 25.	The applicant shall provide adequate sight distance at all project driveways by driveway placement or vegetation control. Specific designs to be submitted and approved by the City Engineer. Coordinate and align proposed driveways with driveways on the opposite side of the proposed project site.
PFC 26.	Access requirements, including sight distance, shall conform to the City's Transportation Systems Plan (TSP) or as approved by the City Engineer. Landscaping plantings shall be low enough to provide adequate sight distance at all street intersections and alley/street intersections.
PFC 27.	Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and Allied Waste Management (United Disposal) for access and use of their vehicles.
PFC 28.	Applicant shall prepare an Ownership and Maintenance agreement

	between the City and the Owner. Stormwater or rainwater facilities may be located within the public right-of-way upon approval of the City Engineer. The Ownership and Maintenance agreement shall specify that the rainwater and stormwater facilities shall be privately maintained by the Applicant; maintenance shall transfer to the respective homeowners association when it is formed.
PFC 29.	The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
PFC 30.	All water lines that are to be temporary dead-end lines due to the phasing of construction shall have a valved tee with fire-hydrant assembly installed at the end of the line.
PFC 31.	Applicant shall provide a minimum 6-foot Public Utility Easement on lot frontages to all public right-of-ways. An 8-foot PUE shall be provided along Minor and Major Collectors. A 10-ft PUE shall be provided along Minor and Major Arterials.
PFC 32.	Mylar Record Drawings: At the completion of the installation of any required public improvements, and before a 'punch list' inspection is scheduled, the Engineer shall perform a record survey. Said survey shall be the basis for the preparation of 'record drawings' which will serve as the physical record of those changes made to the plans and/or specifications, originally approved by Staff, that occurred during construction. Using the record survey as a guide, the appropriate changes will be made to the construction plans and/or specifications and a complete revised 'set' shall be submitted. The 'set' shall consist of drawings on 3 mil. Mylar and an electronic copy in AutoCAD, current version, and a digitally signed PDF.
Specific Comments:	
PFC 33.	At the request of Staff, DKS Associates completed a Transportation Impact Analysis (TIA) dated October 21, 2013. The study was completed anticipating 113 residential units in the development; the proposed development has 100 units resulting in a reduced impact to City streets and intersections from what is reported in the TIA. The project is hereby limited to no more than the following impacts.

	100 Units	(113 Units)
Estimated New PM Peak Hour Trips	101	(114)
Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area	36	(40)

PFC 34.	The TIA indicates the intersection of Grahams Ferry Road and Tooze Road

	would operate at LOS F with these and other approved Villebois subdivisions. Improvements to this intersection are planned and funded by the City and construction work is anticipated to be completed by spring 2016.
PFC 35.	All construction traffic shall access the site via Grahams Ferry Road. No construction traffic will be allowed on internal Villebois streets, except where water and sanitary work will occur on the south end of Villebois Drive.
PFC 36.	In the 2013 Transportation Systems Plan Grahams Ferry Road is identified as a Minor Arterial. Applicant shall dedicate sufficient right-of-way to accommodate Grahams Ferry Road as a Minor Arterial; this will require an additional 8.5 feet of right-of-way dedication to the City to accommodate a half-street width of 38.5-ft (total right-of-way width of 77 feet).
PFC 37.	Applicant shall reconstruct Grahams Ferry Road with a modified street cross-section. North of Athens Lane, west to east: storm swale, 2-ft gravel shoulder, 6-ft bike lane (southbound), two 11-ft travel lanes, curb and gutter, landscaping and a 10-ft multi-use pathway. The center turn lane/median will not be constructed at this time. Face of curb shall be 17 feet from street centerline. This will require a 6-foot shift of lane striping to the east and a transitions zones to accommodate the existing road layout adjacent to Villebois SAP South PDP 4 and the roadway south of the project. South of Athens Lane the 10-ft pathway shall become a 5-ft sidewalk. Locate the pathway and sidewalk to minimize impacts to existing trees. Applicant will be eligible for Street SDC credits for all roadwork beyond 24 feet from face of curb and for 5 feet of the 10-foot wide multi-use path.
PFC 38.	On Grahams Ferry Road, stormwater presently is released into a roadside swale at the north end. A complete storm system will need to be designed for the east side of Grahams Ferry Road, including tying in and conveying the stormwater released from Villebois Pond M, and detention and water quality requirements for impervious surfaces created with the reconstruction of Grahams Ferry Road.
PFC 39.	On Grahams Ferry Road adjacent to the Villebois Village development the standard street light is a 35-ft black fiberglass direct bury pole (30-ft mounting height) with 6-ft black arm and black full-cutoff cobra head luminaire.
PFC 40.	South of Villebois SAP South PDP 4, Grahams Ferry Road runs through a forested corridor. It is both the desire and direction of the City to allow a lower lighting standard on this section of roadway adjacent to the proposed development, with the exception of the intersection of Athens Lane and Grahams Ferry Road which shall be lighted per national guidelines.

	Applicant's lighting engineer shall work with City staff to determine an acceptable lighting level on Grahams Ferry Road.
PFC 41.	With the improvements to Grahams Ferry Road applicant shall cause to have all overhead utilities along the east side of the road installed underground along the entire property frontage.
PFC 42.	Internal street lighting: the proposed subdivision is located in what was referred to as the Future Study Area. While the Villebois street lighting master plan does not cover this area specifically, all internal streets shall be lighted with approved Westbrooke style street lights to maintain consistency with the other recently approved or constructed Villebois subdivisions.
PFC 43.	Applicant has indicated this will be a two-phase project, with the first phase applicant shall complete full street design and construction through the far right-of-way and corner radii of all planned streets within the development. Streets shall be designed in conformance to the applicable street types as shown in the Villebois Village Master Plan.
PFC 44.	Pedestrian Linkage - to provide school and pedestrian connectivity applicant shall provide a rocked, paved or bark-mulch pathway from the Phase 1 area to Villebois Drive.
PFC 45.	The applicant shall provide 'stamped' engineering details with dimensions for intersection sight distance verification and AutoTURN layouts for all proposed intersections, including alley/street connections. Adequate clearance shall be provided at all intersections and alleyways. The sight distance point for exiting vehicles shall be located 14.4 feet from the edge of the traveled way. At a minimum, the applicant shall provide 'stamped' engineering AutoTURN layouts for fire trucks and buses (WB-60) that show the overhang and/or mirrors of the vehicle as opposed to the wheel paths. Turning vehicles may use the width of the minor street to start the appropriate turn. The vehicle must however, stay within the appropriate receiving (inside) lane of the major street. Additionally, the turning vehicle must not intrude onto the wheel chair ramp on the inside of the turning movement.
PFC 46.	Alleys that are identified by Tualatin Valley Fire and Rescue (TVF&R) as possible routes for medical and/or fire emergencies shall meet TVF&R's design requirements.
PFC 47.	At the time of plan submittal for a Public Works Permit, the applicant shall provide to the City a copy of correspondence showing that the plans have also been distributed to the franchise utilities. Prior to issuance of a Public Works Permit, the applicant shall have coordinated the proposed locations and associated infrastructure design for the franchise utilities. Should permanent/construction easements or right-of-way be required to

	construct the public improvements or to relocate a franchised utility, the applicant shall provide a copy of the recorded documents. Should the construction of public improvements impact existing utilities within the general area, the applicant shall obtain written approval from the appropriate utility prior to commencing any construction.
PFC 48.	Applicant shall provide sufficient mail box units for the proposed phasing plan; applicant shall construct mail kiosk at locations coordinated with City staff and the Wilsonville U.S. Postmaster.
PFC 49.	Rainwater management components will be allowed to be located in the public right-of-way, however such components shall be maintained by the Applicant, or subsequent HOA, and this shall be included in the Ownership and Maintenance agreement as required in PFC 28.
PFC 50.	Applicant shall connect sanitary sewer to the existing line at Villebois Drive & Amalfi Lane.
PFC 51.	Applicant shall plug the abandoned existing force main and grout interior of sewer manhole at the corner of Villebois Drive and Normandy.
PFC 52.	Most of the proposed development will require service from a wastewater pump station to be constructed by the Applicant, then owned and maintained by the City. Wastewater pump station shall be designed and constructed in compliance with the City standards in Attachment X.
PFC 53.	Applicant shall construct a "looped" water system per PFC 29 with phase 1 of the development with connections at Villebois Drive and Grahams Ferry Road. On Grahams Ferry Road this can be done by tying onto the south end of the existing 12" water line and extending an 8" water line down Grahams Ferry Road and into the proposed subdivision and tying into the 8" water line shown at Sicily Street and Como Drive.
PFC 54.	With construction of the Villebois SAP South PDP 3 development there was a water vault and meter installed at the northwest corner of Villebois Drive and Amalfi Lane. Applicant shall remove this vault, piping and meter; water meter shall be returned to the City.
PFC 55.	Existing abandoned water, sanitary, and storm water lines shall either be completely removed, grouted in place, or abandoned per a City approved recommendation from a Registered Geotechnical Engineer.
PFC 56.	SAP South PDP 7 consists of 100 lots, 56 lots in the first phase and 44 lots in the second phase. All construction work in association with the Public Works Permit and Project Corrections List shall be completed prior to the City Building Division issuing a certificate of occupancy, or a building permit for the housing unit(s) in excess of 50% of total (29th lot for first phase and 23rd lot for the second phase).

Engineering Division Conditions:	
PFE 1.	Subdivision or Partition Plats: Paper copies of all proposed subdivision/partition plats shall be provided to the City for review. Once the subdivision/partition plat is approved, applicant shall have the documents recorded at the appropriate County office. Once recording is completed by the County, the applicant shall be required to provide the City with a 3 mil Mylar copy of the recorded subdivision/partition plat.
PFE 2.	Subdivision or Partition Plats: All newly created easements shown on a subdivision or partition plat shall also be accompanied by the City's appropriate Easement document (on City approved forms) with accompanying survey exhibits that shall be recorded immediately after the subdivision or partition plat.
PFE 3.	Street names may need to be modified to meet Clackamas County GIS requirements. The street name "Estonia Way" cannot be used as there is an existing street by that name in Villebois SAP East PDP 1.

Development Review Template

DATE: 3/31/14
TO: DAN PAULY, AICP, Associate Planner
FROM: DON WALTERS
SUBJECT: DEVELOPMENT REVIEW # DB14-0002 through DB14-0007

WORK DESCRIPTION: GRAND POINT A 100-LOT NEW SUBDIVISION

****

Building Division Conditions:
BD 1. NO COMMENTS.

City of Wilsonville
EXHIBIT C2 DB14-0002 et seq

Villebois SAP - South Plan Area 2 – SRIR Review

Findings of Fact:

1. The area designated Significant Resource Overlay Zone (SROZ) within SAP - South Plan Area 2 is upland wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) and wetlands (Site ID Numbers 6.01d, 6.02d, and 6.03d). In addition, a previously unmapped wetland was identified in the southwest corner of the property. Of the four wetland areas, only wetland 6.03d is considered locally significant. The other wetlands are not considered locally-significant, but are regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

2. The upland wildlife habitat consists of a mixed coniferous/deciduous forest containing primarily Douglas fir, Oregon white oak, bigleaf maple, balsam poplar, and red alder. The forest understory contains a diversity of native shrubs and groundcovers, which include red osier dogwood, common snowberry, black hawthorn, and salal. Non-native invasive plant species include Himalayan blackberry, English ivy, and bull thistle. The forest provides habitat for a variety of wildlife, and connections to the 250-acre Graham Oaks Nature Park to the south and east of the property.

3. A wetland delineation was prepared by SWCA Environmental Consultants, and approved by the Oregon Department of State Lands, which identified and delineated the wetlands on the property.

4. The Significant Resource Overlay Zone ordinance prescribes regulations for development within the SROZ and its associated 25 foot Impact Area. Setbacks from significant natural resources implement the requirements of Metro Title 3 Water Quality Resource Areas, Metro Title 13 Nature in Neighborhoods, and Statewide Planning Goal 5. Wetlands, streams and riparian corridors shall have at least a minimum 50-foot buffer, but buffers may extend to the top of the slope for riparian corridors. All significant natural resources have a 25 foot Impact Area. Development or other alteration activities may be permitted within the SROZ and its associated 25 foot Impact Area through the review of a Significant Resource Impact Report (SRIR).

5. Pursuant to the city's SROZ ordinance, development is only allowed within the Area of Limited Conflicting Use (ALCU). The ALCU is located between the riparian corridor boundary, riparian impact area or the Metro Title 3 Water Quality Resource Area boundary, whichever is furthest from the wetland or stream, and the outside edge of the SROZ, or an isolated significant wildlife habitat (upland forest) resource site.

6. The applicant's Significant Resource Impact Report delineated specific resource boundaries and analyzed the impacts of development within the SROZ. The

City of Wilsonville
EXHIBIT C3 DB14-0002 et seq

applicant's SRIR contained the required information, including a physical and ecological analysis, a justification of the proposed impacts, and a mitigation plan. **These code provisions are satisfied provided the conditions of approval are met.**

7. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resources Inventory (NRI). Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

8. The SROZ map will be amended, pursuant to Section 4.139.09.01 (D), as part of the land use approval for Villebois SAP – South Plan Area 2.

Description of Request:
The applicant has requested approval of a Significant Resource Impact Report (SRIR) for non-exempt development that is located within the Significant Resource Overlay Zone and its associated 25 foot Impact Area, and a map refinement to the designated upland wildlife habitat in SAP – South Plan Area 2.

Background:

Wetlands:

In May 2013, the applicant conducted a wetland delineation of the site. Four wetlands were delineated (A-D), which primarily correspond with the wetlands identified in the City's Natural Resources Inventory (Site ID Numbers 6.01d, 6.02d, and 6.03d). A new wetland area (Wetland D) was identified in southwest corner of the property. The wetland delineation was concurred by DSL on October 8, 2013.

To be deemed a locally significant wetland (and included in the SROZ), as specified in the City of Wilsonville Natural Resource Inventory, a wetland must satisfy the following functional criteria: diverse wildlife habitat, water quality, and hydrologic control. In addition, they shall be over one-half acre in size.

Wetland A (Site ID Number 6.02d) is located in the far northwest corner of the property. It is a small (0.05 acre) isolated forested wetland with a seasonally saturated/shallowly ponded hydrologic condition. Slough sedge, red osier dogwood and Oregon ash are the most common vegetation. The Natural Resource Inventory classified it as a non-locally significant wetland due to it being less than 0.5 acre in size.

Wetland B (Site ID Number 6.03d) is located in the north-central portion of the property. The wetland forms the headwaters of a tributary to Mill Creek and extends off-site

(upstream) to the north. The vegetation includes slough sedge, Pacific water-dropwort, red osier dogwood, rose, cascara, and Oregon ash.

The northern portion of Wetland B (0.89 acre) was identified in the Natural Resources Inventory, and determined to be a locally significant wetland. A southern, approximately 75-foot section of Wetland B, was not included in the NRI but was identified during the on-site wetland delineation. The southern portion is an emergent wetland community dominated by Pacific water-dropwort, Siberian springbeauty, and lamp rush. Lacking in tree and shrub layers, the southern portion is more sparsely vegetated and does not provide the diverse wildlife habitat that is provided in the northern portion of the wetland.

Because the southern portion of Wetland B is less than one-half acre in size and does not meet the criteria for adding a wetland, it is not considered locally significant. However, it is regulated by the Oregon Department of State Lands and the Army Corps of Engineers.

Wetland C (Site ID Number 6.01d) is connected (i.e., by hydrology) to Wetland B through a stormwater pipe. It is located downstream in the south-central part of the property. The wetland is primarily situated in an old excavated channel and pond. Two invasive plant species, yellow flag iris and reed canarygrass, comprise a majority of the wetland vegetation. Native vegetation includes red alder, western arborvitae, and Pacific water-dropwort. Wetland C was identified in the NRI and determined to be a non-locally significant wetland because it is less than one-half acre in size.

Wetland D was not included in the NRI but was identified during the on-site wetland delineation. It is a small emergent wetland (0.48 acres) located in the southwest corner of the property. The dominant vegetation is lamp rush, taper-fruit short-scale sedge, thick-head sedge, dense sedge, fringed willowherb, and scattered Scouler's willow. Due to its size (i.e., less than one-half acre in size), Wetland D is a non-locally significant wetland.

	Type of Wetland	Size (acres)	Locally Significant
Wetland A	Forested	0.05	N
Wetland B - Northern	Forested	0.89	Y
Wetland B - Southern	Emergent	0.07	N
Wetland C	Forested/emergent	0.27	N
Wetland D	Emergent	0.48	N

Staff concurs with the applicant's wetland delineation and determination of local significance. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the wetland areas.

Upland Forested Wildlife Habitat:

The applicant has provided an assessment of the upland forested wildlife habitat (Site ID Numbers 6.02U, 6.03U, and 6.011U) located on the property. As part of the SRIR, they prepared a verification of the SROZ boundary. This boundary verification takes into

account the current condition of the upland forested wildlife habitat and any deviation from the NRI mapping. In verifying the boundary, the applicant documented two areas where the drip line of the mature forest canopy was different than the NRI map. This difference in boundaries was due to the scale of the mapping used for the NRI, which was not verified as accurately as the applicant's inventory and mapping.

The upland forested wildlife habitat is a mixed coniferous/deciduous forest, which includes both upland and wetland forest. The overstory is primarily Oregon white oak, Douglas fir, bigleaf maple, balsam poplar, and red alder. In the understory, red osier dogwood, beaked hazelnut, black hawthorn, common snowberry, salal, and Pacific poison oak are the dominant species.

In reassessing the upland forested wildlife habitat on the property, it is necessary to revisit the functional criteria used to originally determine local significance. Five functions were assessed for upland wildlife habitat in the NRI, which include: habitat diversity, water quality protection, ecological integrity, connectivity, and uniqueness. Each one of these criteria was assigned a high, medium or low rating. In regards to Site Numbers 6.02U and 6.03U, one of the criteria was rated as high, and four were rated as medium. In reassessing the upland forested wildlife habitat, the applicant has revisited these ratings.

For the upland forested wildlife habitat areas (0.58 acres in size) proposed to be removed from the SROZ (i.e., through a map refinement), none of the functional criteria are rated as "High" in the revised assessment. The areas were rated lower due to the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry. Staff concurs with the applicant's revised assessment. Pursuant to Section 4.139.09(.01)(D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the upland forested wildlife habitat.

Summary of Issues:
The proposed non-exempt development will encroach into the Significant Resource Overlay Zone and its associated 25 foot Impact Area. All non-exempt development will occur within the Area of Limited Conflicting Use of the isolated significant wildlife habitat (i.e., upland forest). The impacted area totals 34,730 square feet and is situated along the edge of the upland forest. The impact to the SROZ is necessary to accommodate street improvements, residential lots, and a trail connection.

Proposed exempt development in the SROZ and its associated 25 foot Impact Area includes the following:

1) A series of nature trails and nature trail activity areas within the upland forested wildlife habitat.

Section 4.139.04 Use and Activities Exempt from These Regulations

Proposed exempt development in the SROZ and its associated 25 foot Impact Area comply with the following exemptions:

(.08) The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as minimize and repair disturbance to existing vegetation and slope stability.

1. The construction of the nature trails and nature trail activity areas will have minimal impacts to the resource area, and is consistent with the requirements of this exemption.

Section 4.139.06.03 SRIR Review Criteria:

In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.

A. Except as specifically authorized by this code, development shall be permitted only within the Area of Limited Conflicting Use (see definition) found within the SROZ;

2. The proposed non-exempt development is located within the Area of Limited Conflicting Use found within the SROZ. The total area of all other encroachments within the SROZ or its associated Impact Area has been deemed exempt or proposed only within the Impact Area.

B. Except as specifically authorized by this code, no development is permitted within Metro's Urban Growth Management Functional Plan Title 3 Water Quality Resource Areas boundary;

3. The proposed development for SAP-South Plan Area 2 will not be located within Metro's Title 3 Water Quality Resource Areas boundary.

C. No more than five (5) percent of the Area of Limited Conflicting Use (see definition) located on a property may be impacted by a development proposal. On properties that are large enough to include Areas of Limited Conflicting Use on both sides of a waterway, no more than five (5) percent of the Area of Limited Conflicting Use on each side of the riparian corridor may be impacted by a development proposal. This condition is cumulative to any successive development proposals on the subject property such that the total impact on the property shall not exceed five (5) percent;

4. The applicant has identified the proposed development within the Area of Limited Conflicting Use, and calculated the percentage for this development. The following information has been provided on the Area of Limited Conflicting Use (ALCU):

Total ALCU	=	866,388 square feet
Allowed Impact (5%)	=	43,319 square feet
Proposed Impact	=	34,730 square feet (4%)

D. Mitigation of the area to be impacted shall be consistent with Section 4.139.06 of this code and shall occur in accordance with the provisions of this Section;

5. The applicant has identified the mitigation area necessary to offset impacts to the SROZ, and has proposed to enhance 195,195 square feet. Based on the required mitigation ratio of 2.5:1, only 86,825 square feet is required. In addition, the applicant is proposing to create additional SROZ areas totaling 61,697 square feet. The SROZ creation areas were previously encumbered by development. Pavement will be removed in these areas, and native trees, shrubs, and groundcovers will be installed in accordance with the mitigation planting plan.

E. The impact on the Significant Resource is minimized by limiting the degree or magnitude of the action, by using appropriate technology or by taking affirmative steps to avoid, reduce or mitigate impacts;

6. The impacts to the SROZ will be from the encroachment of street improvements, residential lots, and a trail connection. The applicant has minimized permanent impacts to very mature trees, and other native vegetation. The grading and erosion control plan will ensure areas within the SROZ are protected during construction activities. No stormwater runoff will discharge into the SROZ.

F. The impacts to the Significant Resources will be rectified by restoring, rehabilitating, or creating enhanced resource values within the "replacement area" (see definitions) on the site or, where mitigation is not practical on-site, mitigation may occur in another location approved by the City;

7. Impacts to the SROZ will be mitigated for on-site and will satisfy the mitigation ratios and other requirements of Section 4.139.07.

G. Non-structural fill used within the SROZ area shall primarily consist of natural materials similar to the soil types found on the site;

8. Any non-structural fill will primarily consist of natural materials similar to the soil types found on the site.

H. The amount of fill used shall be the minimum required to practically achieve the project purpose;

9. Fill used within the SROZ area will be limited to the minimum amount necessary to achieve the intended purpose.

I. Other than measures taken to minimize turbidity during construction, stream turbidity shall not be significantly increased by any proposed development or alteration of the site;

10. All proposed grading activities on-site will be managed pursuant to guidelines established and identified in the applicant's approved erosion control plan and a 1200-C Erosion Control Permit issued by the Oregon Department of Environmental Quality. Stream turbidity is regulated under the City's Grading and Erosion Control Permit and the DEQ's 1200-C Erosion Control Permit.

J. Appropriate federal and state permits shall be obtained prior to the initiation of any activities regulated by the U.S. Army Corps of Engineers and the Oregon Division [Department] of State Lands in any jurisdictional wetlands or water of the United States or State of Oregon, respectively.

11. The applicant is proposing minor impacts (1,258 square feet) to the northern portion of Wetland C. A wetland removal/fill permit will be submitted to the Oregon Department of State Lands and the U.S. Army Corps of Engineers. The compensatory wetland mitigation will be addressed through the purchase of credits from the Mud Slough Mitigation Bank.

Section 4.139.07 Mitigation Standards

(.01) The applicant shall review the appropriate Goal 5 Inventory Summary Sheets for wildlife habitat (i.e. upland) contained in the *City of Wilsonville Natural Resource Inventory and Goal 5/Title 3/ESA Compliance and Protection Plan* ("Compliance and Protection Plan"- May 2000) to determine the resource function ratings at the time the inventory was conducted.

12. The applicant has reviewed the appropriate Upland Summary Sheet (Site ID Numbers 6.02U, 6.03U, and 6.011U) to determine the resource function ratings at the time the inventory was conducted.

(.02) The applicant shall prepare a Mitigation Plan document containing the following elements:

A. The Mitigation Plan shall contain an assessment of the existing natural resource function ratings at the time of the proposed encroachment for the site compared to the function ratings recorded in the Compliance and Protection Plan.

13. The applicant has addressed the resource function ratings for the impact area and also correctly documented the resource function ratings in the Compliance and Protection Plan. The impact area has a medium function rating due to non-native invasive plant species.

B. The Mitigation Plan shall contain an assessment of the anticipated adverse impacts to significant wildlife habitat resources. The impact assessment shall discuss impacts by resource functions (as listed in the Compliance and Protection Plan, May 2000) for each resource type, and shall map the area of impact (square feet or acres) for each function.

14. The applicant has determined the impact to the significant resource area based on the resource functions. The applicant has calculated the square feet of the impact to the Significant Resource. The applicant's site plan in the SRIR depicts the area of impact.

C. The Mitigation Plan shall present a proposed mitigation action designed to replace the lost or impacted resource functions described in Subsection B, above. The mitigation plan shall be designed to replace lost or impacted functions by enhancement of existing resources on, or off the impact site, or creation of new resource areas.

15. The applicant has submitted a mitigation plan consistent with the requirements in Section 4.139.07. The mitigation will occur on-site, and within close proximity to the areas of impact.

D. For mitigation projects based on resource function enhancement, the area ratios presented in Table NR - 2 shall be applied. These ratios are based on the resource function ratings at the time of the proposed action, as described in Subsection A, above. The mitigation action shall be conducted on the appropriate size area as determined by the ratios in Table NR - 2.

16. The applicant has estimated the resource function ratings for the "existing rating at mitigation site" and "proposed rating at mitigation site."

(.03) Proposals for mitigation action where new natural resource functions and values are created (i.e. creating wetland or wildlife habitat where it does not presently exist) will be reviewed and may be approved by the Development Review Board or Planning Director if it is determined that the proposed action will create natural resource functions and values that are equal to or greater than those lost by the proposed impact activity.

17. The applicant proposes to create forested wildlife habitat where it does not presently exist, however, since it is not part of the required mitigation it is not subject to this requirement.

(.04) Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.

18. A condition of approval requires the mitigation actions to be implemented prior to or at the same time as the impact activity is conducted.

(.05) Mitigation plans shall have clearly stated goals and measurable performance standards.

19. The applicant has submitted a mitigation plan with goals and measurable performance standards.

(.06) All mitigation plans shall contain a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes, the new owners will have the continued responsibilities established by this section.

20. The applicant has submitted information regarding monitoring and maintenance of the proposed mitigation. A condition of approval requires the applicant to submit a monitoring and maintenance report to be conducted for a period of five years following mitigation implementation.

(.07) The Mitigation Plan document shall be prepared by a natural resource professional.

21. The applicant's team has the necessary credentials to implement a mitigation plan for the proposed impacts.

(.08) Prior to any site clearing, grading or construction, the SROZ area shall be staked, and fenced per approved plan. During construction, the SROZ area shall remain fenced and undisturbed except as allowed by an approved development permit.

22. A condition of approval requires the SROZ to be fenced and undisturbed.

(.09) For any development which creates multiple parcels intended for separate ownership, the City shall require that the SROZ areas on the site be encumbered with a conservation easement or tract.

23. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.10) The City may require a conservation easement over the SROZ that would prevent the owner from activities and uses inconsistent with the purpose of this Section and any easements therein. The purpose of the conservation easement is to conserve and protect resources as well as to prohibit certain activities that are inconsistent with the purposes of this section. Such conservation easements do not exclude the installation of utilities.

24. A conservation easement is required for the SROZ areas on the site. A condition of approval requires a conservation easement to be recorded.

(.11) At the Planning Directors discretion, mitigation requirements may be modified based on minimization of impacts at the impact activity site. Where such modifications are granted by the Planning Director, the Director shall clearly indicate the reasons for doing so in the record, citing the relevant information relied upon in reaching the decision.

25. The applicant has not requested a modification of mitigation requirements.

(.12) The Director may study the possibility of a payment-in-lieu-of system for natural resource impact mitigation. This process would involve the public acquisition and management of natural resource properties partially funded by these payments.

26. The applicant has not requested a payment-in-lieu.

Section 4.139.09(.01)(D) Map Refinement Process

D. Map Refinement process. The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are as follows:

1. Any map refinement must be evaluated by considering the riparian corridor types contained in this ordinance.

2. **Other supporting documents to be considered in evaluating a proposal to refine a map include, but are not limited to:**

   a. **Natural Resources Inventories (LWI/RCI);**
   b. **The Economic, Social, Environmental and Energy (ESEE) Analysis;**
   c. **Metro Functional Plans;**
   d. **Wilsonville Comprehensive Plan;**
   e. **State approved wetland delineations;**
   f. **Detailed slope analysis.**

3. **An SRIR must be prepared by the applicant in conformance with the provisions of this Section.**

4. **The Hearing Body (including City Council) may amend the Significant Resource Overlay Zone (in or out) upon making a determination that the land**
   area in question is or is not a significant resource. The criteria for determining
   that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resource Function Rating Matrices.

Upland Forested Wildlife Habitat:

Finding: The applicant proposes to amend the Significant Resource Overlay Zone (SROZ) boundary. A Significant Resource Impact Report (SRIR) has been submitted to justify the refinement. To amend the SROZ boundary, the Development Review Board shall make a "determination that the land area in question is or is not significant". The land area to be amended includes upland forested wildlife habitat (Site Numbers 6.02U, 6.03U and 6.01U), which were identified as part of the city's Natural Resources Inventory.

In regards to the upland forested wildlife habitat, the Natural Resources Inventory listed two of the criteria as high, and three were rated as medium. In reassessing the wildlife habitat on the property, SWCA rated none of the function criteria as "high" for the map refinement areas. The rationale for lowering the ratings was based primarily on the presence of row planted trees and a minimal native understory with a substantial amount of non-native species, such as Himalayan blackberry.

Staff concurs with the applicant that the SROZ areas to be amended do not have any "high" function ratings, and should not be included in the SROZ boundary. **This code provision is satisfied provided the condition of approval is met.**

COMMUNITY DEVELOPMENT MEMORANDUM

To: Daniel Pauly, Associate Planner

From: Kerry Rappold, Natural Resources Program Manager

Date: April 1, 2014

RE: Villebois Village SAP South, Plan Area 2 (DB14-0003/0007 and SI14-0002)

This memorandum includes staff conditions of approval. The conditions are based on the preliminary and final development plans for Plan Area 2, and the SRIR review. The conditions of approval apply to the applicant's submittal of construction plans (i.e. engineering drawings).

Significant Resource Overlay Zone

NR1. The applicant shall submit the SROZ refinement mapping, including the removed impact areas, as ARCGIS shape files or a compatible format.

NR2. All landscaping, including herbicides used to eradicate invasive plant species and existing vegetation, in the SROZ shall be reviewed and approved by the Natural Resources Program Manager. Native plants are required for landscaping in the SROZ.

NR3. Prior to any site grading or ground disturbance, the applicant is required to delineate the boundary of the SROZ. Six-foot (6') tall cyclone fences with metal posts pounded into the ground at 6'-8' centers shall be used to protect the significant natural resource area where development encroaches into the 25-foot Impact Area.

NR4. Pursuant to Section 4.139.03 (.05) of the Wilsonville Code, the applicant is required to use habitat-friendly development practices (Table NR-2) to the extent practicable for any encroachment into the Significant Resource Overlay Zone and the 25-foot Impact Area. The applicant shall reduce the light spill-off into the SROZ from the proposed street lighting.

NR5. Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.

NR6. The applicant shall submit a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report

shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes ownership, the new owners will have the continued responsibilities established by this section.

NR7. The Significant Resource Overlay Zone (SROZ) and mitigation area depicted on the SRIR mapping for the site shall be identified in a conservation easement. The applicant shall record the conservation easement with Clackamas Court Clerk's office. The conservation easement shall include language prohibiting any disturbance of natural vegetation without first obtaining approval from the City Planning Division and the Natural Resources Program Manager. The conservation easement shall be reviewed by the City Attorney prior to recording.

Rainwater Management Plan:

NR8. The Rainwater Management Plan does not match the proposed utility plan. Submit an updated Rainwater Management Plan, which reflects the current plan.

NR9. The applicant shall submit a detailed operations and maintenance manual for the rainwater management components that has been reviewed and approved by city staff before 50% of the units are occupied in **Plan Area 2, SAP South**.

NR10. Pursuant to the City of Wilsonville Public Works Standards, access should be provided for the entire perimeter of the rainwater management components. At a minimum, at least one access shall be provided for maintenance and inspection.

NR11. All Rainwater Management Components and associated infrastructure located in public areas shall be designed to the Public Works Standards. Rainwater Management Components in private areas shall comply with the plumbing code.

NR12. Plantings in Rainwater Management Components located in public areas shall comply with the Public Works Standards. Plantings in Rainwater Management Components located in private areas shall comply with the Plant List in the Rainwater Management Program or Community Elements Plan.

NR13. The rainwater management components shall comply with the requirements of the Oregon DEQ UIC (Underground Injection Control) Program.

Stormwater Management:

NR14. Provide profiles, plan views and specifications for the proposed water quality treatment facilities consistent with the requirements of the City of Wilsonville's Public Works Standards.

NR15. Pursuant to the Public Works Standards, the applicant shall submit a maintenance plan (including the City's stormwater maintenance covenant) for the proposed stormwater facilities, inclusive of the rainwater management components, prior to approval for occupancy of the associated development.

NR16. Pursuant to the City of Wilsonville's Public Works Standards, access shall be provided to all areas of the proposed water quality treatment facilities. At a minimum, at least one access shall be provided for maintenance and inspection.

Other:

NR17. The applicant shall comply with all applicable state and federal requirements for the proposed construction activities and proposed facilities (e.g. DEQ NPDES #1200–C permit).

Pauly, Daniel

From: Arn, Jason S. <Jason.Arn@tvfr.com>
Sent: Wednesday, March 19, 2014 11:26 AM
To: Pauly, Daniel
Cc: Walters, Don
Subject: Grande Pointe at Villebois DB14-0002

Daniel,
After reviewing the on the proposed plan for Grande Pointe, Tualatin Valley Fire and Rescue has no comments on the proposed 100-lot single family subdivision. If you have questions or need further information, please feel free to contact me.
Thanks,

Jason Arn | Deputy Fire Marshal
Tualatin Valley Fire & Rescue
Direct: 503-259-1510
www.tvfr.com

City of Wilsonville
EXHIBIT C4 DB14-0002 et seq

Public Works Plan Review Comment Form

Plans for Review: Grande Point at Villebois
Return All Comments To: Dan Pauly
Due Date: April 1, 2014

Name	Page No.	Comments	Engineering's Response
Randy Watson		No Comments	
Matt Baker			
Steve Munsterman		No Comments	
Arnie Gray		No turn around on the north end of Altact Ct. Is this street private or going to be extended someday?	
Jason Labrie			
House/Gering			
Folz/Havens			

City of Wilsonville
EXHIBIT C5 DB14-0002 et seq

Exhibit C6

401.3.00 WASTEWATER PUMP STATION DESIGN STANDARDS

401.3.01 General Provisions

a. **Applicability**

These standards are applicable to construction, installation, or modification of any wastewater pump station system requiring a City of Wilsonville Public Works Permit.

b. **Scope**

Pursuant to City of Wilsonville Development Code Section (July 2013) 4.262.04 Sanitary Sewers:

In order to accomplish the orderly and desirable development of land within the corporate limits of the City and to limit the costs associated with the operation and maintenance of wastewater pump stations borne by the City, the City Engineer deems it reasonable and necessary to restrict the installation of the wastewater pump stations. Therefore, wastewater pump stations will not be allowed in areas: where gravity sewer service is programmed for construction in an applicable capital improvement plan, where improvements are recommended in the City of Wilsonville Wastewater Collection System Master Plan, or where sewers are available within three thousand (3,000) feet.

Temporary pump stations will be allowed in areas where future development will require extension of gravity sewers and the City's authorized representative determines that the temporary station is economically justified. Design life must be less than ten (10) years, as determined in the preliminary design report, and have a capacity requirement of less than four hundred (400) gallons per minute (gpm).

Permanent pump stations will be allowed in areas where future development does not require extending gravity sewers, as determined in the design report and the applicable master plan for the area.

c. **Reviewing Authority**

The Oregon Department of Environmental Quality is the final reviewing authority. All plans and specifications for a wastewater pump station shall be reviewed and approved by the Oregon Department of Environmental Quality (DEQ). The basis for review by DEQ review engineers is Oregon Administrative Rule 340 Division 52 (OAR 340-52), Review of Plans and Specifications. To that extent, all plans and specifications shall follow the

guidelines and criteria set forth in *the Oregon Standards for Design and Construction of Wastewater Pump Stations*, Oregon Department of Environmental Quality, May 2001 (DEQ Standards). (The DEQ Standards may be found at: http://www.deq.state.or.us/wq/rules/div052/guidelines/designwwps.pdf)

The standards in this Wastewater Pump Station Design Standards chapter (City Standards) of the Public Works Standards are developed as supplemental standards to address local needs, preferences, and existing equipment. Conflicts between the City Standards and the DEQ Standards shall be resolved by first following that standard which is more stringent and/or specific; second, by the determination by the City's authorized representative as to which standard or guideline is advantageous to or in the best interests of the City.

d. **Variance**

When engineering justification satisfactory to the City's authorized representative is provided that substantially demonstrates that variation from the DEQ Standards or City Standards will result in either: at least equivalent effectiveness while significantly reducing costs, or improved effectiveness, such a variation from the DEQ Standards or City Standards may be accepted as determined by the City's authorized representative.

401.3.02 General Requirements

a. **Administration**

The design engineer in charge must be a Professional Engineer registered in the State of Oregon and have had previous experience designing similar facilities, including but not limited to; mechanical piping and appurtenances, pumps, buildings, site improvements, odor control, plumbing, HVAC, electrical, telemetry, and control systems. The engineer's qualifications shall be submitted prior to initiation of the preliminary design report and shall be acceptable to the City's authorized representative. An authorized representative of the City may be available for construction observation during construction of the project. The design engineer's responsibilities for construction management, inspections, testing, start-up and project closeout are outlined in the DEQ Standards. The availability of the City's on-site representative does not relieve the design engineer of any responsibilities as required in the DEQ standards.

b. **Flood Protection**

The pump station building finish floor elevation and electrical and mechanical equipment shall be located at an elevation that is at least two feet above the FEMA one-hundred (100) year flood elevation and shall be located above the

FEMA five-hundred (500) year flood elevation. In addition, the rim elevation of the wet well and any vault or structure that drains back to the wet well shall also meet the requirements listed above. The station shall be designed to remain operational and accessible during the one-hundred (100) year flood. In the absence of official FEMA maps to establish the one-hundred (100) year and five-hundred (500) year flood elevations, the best available local information should be used.

c. **Siting**

Pump stations shall be located as far as practical from present or proposed built-up residential areas and off the traffic way of streets and alleys. Noise control, odor control, station architectural design and other aesthetic items shall be taken into consideration and reviewed by the Design Review Board. Sites for stations shall be of sufficient size for future expansion or addition, if applicable.

d. **Safety**

It is the design engineer's responsibility to ensure that the Occupational Safety and Health Administration (OSHA), the National Electric Code (NEC), and all other applicable building and construction codes and requirements are met during construction. Adequate provision shall be made to protect construction and, subsequently, maintenance and operation personnel from hazard. Equipment and training for confined space entry in accordance with OSHA and regulatory agency requirements shall be provided for all wastewater pumping stations.

401.3.03 Preliminary Design Report

A preliminary design report prepared and stamped by the design engineer as a basis for design for the wastewater pumping station shall be submitted to the City's authorized representative and DEQ for review and approval. The report shall follow the design report guidelines listed in section IV of the DEQ Standards. Additional requirements are listed below:

a. **Site Selection**

1. The City of Wilsonville's comprehensive plan designation shall be considered during pump station site selection, in addition to guidelines in the DEQ and City Standards.

2. If the selected location is not currently owned by the City, the City's acquisition process must be started as soon as the parcel is selected and approved by City. In the case of a pump station being planned/designed as a condition of a private development, it shall be the developer's obligation

to see that the appropriate site needs are acquired and conveyed to the City. If the pump station is a City-led project, the City will pursue all necessary property acquisition.

b. **Preliminary Design Report Contents**

1. Population: Present and future population and/or industrial/commercial usage projections for present, design and ultimate buildout of all areas that could be served by the pump station.

2. Average and, peak flow, daily and peak instantaneous calculations, unit for present, design and ultimate flows. Average residential per capita flows and, peaking factors and infiltration/inflow allowances for present and future design conditions shall follow the recommendations of the City's current Wastewater Collection System Master Plan and/or subsequent sewer basin studies.

3. Wet well configuration and size.

4. Number, type, capacity, motor horsepower and Net Positive Suction Head (NPSH) requirement of proposed pumping units.

5. System head curve and head computations for design conditions of pumping system. System head calculations shall include the size and length of force main, static head, and all dynamic losses. System curves shall be developed using the Hazen-Williams equation, and for assumed "c" factors of 100, 120, and 150.

6. Description of primary and back-up power sources.

7. Other hydraulic computations to include, but not be limited to, pump cycling time, wet well capacity, flushing velocity, force main detention time and surge analysis.

8. Downstream collection system analysis as described herein.

c. **Preliminary Plans**

Shall be in conformance with Section 401.1.03, "Sanitary Plans", and, in addition, shall show the following:

1. A contour map of the proposed site, service area, and force main with elevations referenced in accordance with Section 101.7.07.a, "NAVD 88 Datum."

2. Proposed pump station, including structure, site layout and piping, landscaping, street connection, and provisions for future pumps, if necessary.

3. Demolition or modifications to existing pump station, if applicable.

4. The 100-year and 500-year flood plain elevation at the site.

5. Location and elevation of sewage overflow point in the collection system and the location of the receiving stream for sewage overflow.

6. Process and Instrumentation diagrams for electrical and control systems. Electrical site plan and one line diagrams.

7. Force main in both plan and profile views to the connection at the receiving location.

d. **Final Design Report**

Final design report and final construction plans shall be prepared and stamped by the design engineer, reviewed and approved by the City prior to submittal to DEQ for review and approval. Final design shall be in conformance with preliminary design report as approved by the City and DEQ, and shall conform to applicable land use decisions.

401.3.04 Construction Plans

Construction drawings shall be in conformance with Section 401.1.03, "Sanitary Plans," and include, but not be limited to, the following as applicable by the design engineer unless otherwise directed by the City's authorized representative:

a. General sheets - Cover sheet, Symbols & Legend, Location and Vicinity Map, General Notes and Abbreviations.

b. Civil Sheets - Demolition plan, Site Layout, Grading, Drainage, Paving, Site Piping Plans and Profiles, and Details.

c. Landscaping Sheets - Landscaping, Planting, and Irrigation.

d. Architectural Sheets - Architectural Plans, Roof Plans, Door and Window Schedules, Elevations, Sections and Details.

e. Structural Sheets – Structural Plans, Foundation Plans, Sections, and Details.

f. Mechanical Sheets – Mechanical Pump and Piping Plans, Pump Station Design Data, Temporary Pumping Plan, Piping Schematics, HVAC and Plumbing, Sections, and Details.

g. Electrical Sheets – Electrical Symbols and Legend, Electrical Site Plan and Power Plan, One-Line Diagrams, Lighting Plans, Motor Control Center Elevations, Miscellaneous Devices/Panels One-Line Diagrams, Panel Schedules and Layout, Circuit Schedule.

h. Instrumentation Sheets - Instrumentation Symbols and Legend, Instrumentation Plan, Process and Instrumentation Diagram.

i. Other construction drawings as may be required.

401.3.05 Pump Station Design Criteria

The design criteria shall follow the guidelines in Section III of the DEQ Standards, except as additionally required or modified below:

a. **General**

1. All sewage pump stations shall be designed as submersible pump style pump stations with an above grade control building to house electrical equipment, instrumentation and control equipment, odor control equipment, backup power equipment, and other applicable equipment, unless otherwise approved by the City.

2. The electrical and mechanical equipment systems, including but not limited to pumps, motors, valves, electrical and instrumentation equipment shall be designed and specified for a minimum 25-year design life. Structures and piping shall be designed for a minimum 75-year service life.

3. The pump station shall be designed with a firm capacity to continuously pump the peak instantaneous flow associated with the 10-year, 24-hour storm intensity (see **Table 3.2.** Rainfall Distribution) of its service area, without overflow from the station or the contributing collection system. Firm capacity is defined as the ability to continuously discharge the design flow with the largest pump unit out of service. The design flows shall be based on projected development of the service area associated with the 25-year design life of the pumping equipment.

4. Future pumping capacity requirements and potential changes to the force main configuration required for ultimate buildout of the pump station service area shall be considered in sizing the wet well and pumping equipment. The pump station facility shall be capable of accommodating future components that may be needed for projected growth in the service area beyond the identified design period. The wet well shall be sized for ultimate buildout, with space available for installation of additional pumps or larger pumps as needed to meet ultimate buildout flows.

5. Design shall be consistent with EPA Class I reliability standards for mechanical and electrical components and alarms.

6. A paved access road for maintenance vehicles shall be provided. The access road shall be at least 12 feet wide. Access roads longer than 50 feet shall be provided with an additional paved area for turning around maintenance vehicles. The maximum access road grade shall be 12 percent and the maximum turning area grade shall be 2 percent. Pavement section shall be approved by City's authorized representative.

7. The site shall be fenced with a minimum six (6) foot high chain link fence. A minimum of one locking access gate shall be provided, consisting of rolling gates 16 feet in width or as required by site constraints and approved by the City's authorized representative. Fence shall be galvanized steel fabric with bonded vinyl coating. Vinyl coating shall be a color designed to blend with the surrounding area (green, brown, or black), as approved by the City. All fence posts, cross bars and gates shall be painted or coated same color as the fence. The access gate shall be provided with an intrusion alarm that is tied into the City's SCADA notification system.

8. Landscaping shall be provided around the pump station building and associated site improvements and shall be compatible with the character of the surrounding properties. The landscaping shall be designed by a registered landscape architect and include low maintenance and low irrigation type trees and shrubs. Permanent automatic irrigation shall be provided to all planted areas, unless otherwise approved by the City. Landscaping shall meet all applicable City Codes and Standards.

9. The existing downstream sanitary sewer collection system shall be evaluated by the design engineer to determine the impact of the increase in flow (i.e. peak pumping capacity) from the proposed pump station. Evaluation shall be performed under the design flow condition for all

pumped and gravity connections to the receiving system. Sanitary sewer system shall be evaluated downstream to a point where no surcharging (caused by the increase in flow from the pump station) above the top of the pipe occurs. Hydraulic profile and downstream collection system analysis shall be provided in the design report. The City reserves the right to require upgrades to the downstream receiving system to mitigate the impact of the increased flow.

10. Adequate piping, valves, and appurtenances for isolation and removal of equipment shall be provided. A bypass pumping port on the force main shall be provided to allow for temporary bypass pumping operations. The bypass connection shall be located downstream of the common force main isolation valve, and be provided with an independent isolation valve.

11. Capability for pig launching and retrieval shall be included at all pump stations for cleaning of the force main. The system shall utilize the station's sewage pumps to propel the pig, unless otherwise approved by the City.

12. Federal and State OSHA regulations and guidelines, and any other relevant state, federal and local safety regulations and guidelines shall be followed and adhered to.

13. An emergency overflow path shall be provided as necessary to prevent property damage and sewer backups, or as required by the City and DEQ. The overflow point shall be reviewed and approved by the City and DEQ. A dedicated overflow alarm shall be provided in the wet well or collection system and tied to the City's SCADA notification system.

14. All wastewater pump stations shall be supplied with a back-up standby generator or alternate power source.

b. **Submersible Pumps and Wet Well**

1. Submersible pumps and motors shall be designed specifically for raw wastewater use, including totally submerged operation during a portion of the pump cycle.

2. Pumps shall be sized to pump the required flow when the force main is in a degraded condition, with a Hazen-Williams 'C' value of 120 for force mains with no sags in its profile, or 110 for force mains with a sag in the profile. The pumps shall be selected so as to operate within the

manufacturer's recommended operating range under the full range of normal operating conditions anticipated during the service life of the pump.

3. Submersible pumps shall be readily removed and replaced on two stainless steel guide rails without de-watering the wet well or disconnecting any piping in the wet well. Guide rails shall be secured to the wet well lid. Guide rail supports shall be as recommended by pump manufacturer and shall not interfere with pump removal or re-installation.

4. Each pump assembly shall be provided with a stainless steel lifting chain and stainless steel lifting knuckles of adequate strength to support 150% of the entire assembly weight. Chain links shall be minimum 5/16-inch inside diameter and lifting knuckles shall be provided every 3 feet.

5. Wet well and vault access shall be provided through a minimum double door with 3-foot square opening. The door shall be aluminum, diamond plated, H20 rated, and spring assisted. The door shall be provided with a recessed padlock hasp for locking with a standard padlock.

6. An on-site hoist and crane shall be provided for pump assembly and removal. The crane shall be load rated for 150% of the maximum weight of the pump assembly.

7. Check valves and isolation valves for submersible pumps shall be located in a separate valve vault chamber. The check valve shall be located between the pump and the shutoff valve. Check valves shall be suitable for the material being handled, and shall be placed on the discharge line in a horizontal position. Swing check valves shall have outside levers.

8. Vaults shall be no deeper than five feet from the rim to the vault floor, unless otherwise approved by the City's authorized representative. Vaults shall be large enough to allow for a worker to enter and perform routine maintenance. Accumulated water shall drain to the wet well with a minimum 2-inch diameter drain line and shall be primed and trapped as required plumbing codes. Wastewater and gases from the wet well shall be prevented from entering the valve vault.

9. Valves shall not be located in the wet well.

10. The wet well shall have sufficient operating volume to maintain individual pump cycle times that comply with NEMA and pump manufacturer

requirements for motor starts per hour. In addition, additional wet well space shall be provided for future pumps, as applicable. The floor shall be sloped for proper installation and function of the pumps inlets. Influent flow shall enter the wet well above the pump operating level.

11. Wet well shall be provided with a corrosion resistant cementitious coating, Strong Seal or approved equal. Corrosion resistant coating shall be reviewed and approved by the City's authorized representative.

12. Motors shall be protected from over-current, over-temperature and voltage imbalance. Minimum number of pumps shall be two, unless otherwise approved by the City.

c. **Control Building Features**

1. The control building shall consist of a control room that houses all electrical and control equipment, and the generator. As applicable, an additional space may be required for odor control chemical feed or air compressor equipment.

2. Building shall be a low-maintenance above-grade structure that is architecturally compatible with the surrounding area and constructed using materials meeting City Code and approved by the City's authorized representative. The building shall be of adequate size with equipment clearances provided that meet applicable code requirements and for operation and maintenance of all systems. Building structure and site layout shall be designed in accordance with the current International Building Code (IBC) and applicable energy codes and noise codes.

3. Pump station building shall generally consist of reinforced-concrete floor slab and foundation and be constructed of durable materials that accommodate the intended uses of the building. Doors shall be metal and any glazing shall be safety glass. The structure shall be secure and provided with intrusion alarms on all doors and shall otherwise be resistant to vandalism. All exterior building materials and colors shall be approved by the City's authorized representative.

4. Doors shall be sized, as applicable based on equipment sizes, for removal of all equipment located within the control building. Where required, overhead doors shall be of heavy-duty construction, roll-up style, with insulated panels, and shall provide a minimum of 9-feet of vertical

clearance. Adequate clearances, sufficient anchorage, and hoists must be provided to remove, replace and maintain all major and minor equipment.

5. Pump station noise sources that may create noise problems include, but are not limited to, electrical equipment, engine-generator sets, fans and air compressors. Design engineer shall provide at minimum acoustic style louvers and sound dampeners at all wall and/or roof penetrations. Noise suppression mufflers shall be provided for the generator. The design engineer shall incorporate all applicable and reasonable control measures to and comply with all applicable noise regulations.

d. **Electrical and Instrumentation**

1. Permanent back-up standby power shall be provided for each pump station and shall be approved by the City's authorized representative. Alternatively a secondary power source may be acceptable, as approved by the City's authorized representative. Generator systems shall be as required by the DEQ Standards.

   For pump stations located in residentially zoned areas the generator shall be housed inside the pump station control building, unless otherwise approved by the City's authorized representative. In commercial or industrial zoned areas, the generator may be allowed outside based on City Code requirements and approval by the City's authorized representative.

   Where required by the City, the generator shall be located in a separate room from the control and electrical equipment. The generator room shall be provided with a louver sized for removal of the generator from the building. The room shall be sized adequately for maintenance access to the generator.

2. Electrical supply, power, control, alarm circuits, and lines shall be designed to provide strain relief and to allow for disconnection and de-energizing outside the wet well. Terminals and connectors shall be protected from corrosion by location outside the wet well. All penetrations of the wet well shall be watertight. Provisions shall be made to prevent wet well gases from entering cabinets and equipment located in the control building. The design shall provide a method to allow for disconnection of the pump from the motor control center without destroying conduit seals.

3. A remote telemetry unit shall be installed and integrated with the City's programmable logic controller/SCADA system. The telemetry panel shall be designed and programmed by the City's systems integrator, unless otherwise approved by the City, and furnished and installed by the pump

station electrical contractor. Local control shall be provided in case of telemetry failure.

At a minimum, the following alarm signals shall be made available from the pump station control panel to the telemetry/SCADA system: pump #1 on, pump #2 on, pump #1 fail, pump #2 fail, motor #1 high temperature, motor #2 high temperature, phase fail, low water alarm, high water/pumps call (float), overflow alarm, intrusion and smoke detection. For stations with more than two pumps, alarm signals shall be expanded to include all pumps. All appropriate alarms shall be wired and tested for accuracy before they are accepted.

4. Pump station level sensing and control shall be provided by an integrated controller and level sensor in addition to back-up control system. All pump station control systems must be listed as intrinsically safe by a nationally recognized testing laboratory.

   (a) Primary controls shall include a pulse radar level sensor to measure wet well levels. The radar level sensor shall be a Vegapuls 65, unless otherwise approved by City's authorized representative. Sensor shall be rated for explosive environments and an accuracy of +/- 8mm.

   (b) Controller for primary controls shall be designed to operate integrally with the level sensor. Controller shall have a minimum of 5 relay contacts assignable as alarms and pump controls. Controller shall be provided with an LCD display.

   (c) Backup level control shall be provided with floats for high level wet well and low level wet well for use in the event of primary level control system failure. High level float shall signal high water alarm and a call for both pumps; low level float shall signal low water alarm and turn both pumps off. Alternatively, a timed relay can be provided in lieu of the low level float. Intrinsically safe relays shall be supplied in a separate enclosure.

5. Pump stations shall be provided with a red alarm lamp mounted to and visible from the nearest public roadway. Red alarm lamp shall be energized in conjunction with any pump station alarm. No local audible alarms shall be installed. A red light test switch shall also be installed.

6. Control panel construction, electrical wiring, and equipment shall be in strict conformance with the National Electric Code, State and Local Codes, and in conformance with applicable specifications of NEMA,

ANSI, UL, and ICEA. Inside panels shall be NEMA 12; outside panels shall be NEMA 4X.

7. All electrical equipment shall be mounted inside an electrical panel that is placed at safe operating levels and shall not be subject to flooding. Panels shall be located so they are out of the way of maintenance operations for equipment. Control panel shall include the following monitoring devices: phase monitor (with switch to allow for checking all three phases); elapsed time meter; pump start counter; voltmeter and ammeter. Uninterruptible Power Supply (UPS) – Install a UPS in the control panel to prevent control system failure in the event of a voltage dip (up to 35%) at generator startup. The UPS must be compatible with the generator operations.

401.3.06 Operation and Maintenance Manual

a. The design engineer shall prepare an Operations and Maintenance (O&M) Manual for the completed project. All required information shall be provided in both hard-copy and electronic format. Three copies of the O&M is required to provided, reviewed and accepted by the City's authorized representative and DEQ prior to initial station startup. The City project number and the name/address of the pump station shall be noted on each manual. Binding of each hard-copy shall be by locking three-ring binder. System operation and equipment literature shall be in separate volumes. A table of contents shall be included.

b. The design engineer shall shall include, but not be limited to, the following information that is to be provided in the O&M:

   1. Sequence of operations including description of the operation and interaction of systems and subsystems during startup, operation in automatic mode, operation in manual mode, and operation with backup power. This includes, but is not limited to, equipment, pumps, piping, valves, HVAC, generator, electrical, controls, and instrumentation. Provide both simplified and detailed system schematics, as required.

   2. List of contacts including, but not be limited to, design engineer, contractors and subcontractors, utility companies, pump equipment supplier, instrumentation equipment supplier.

   3. Station operation and controls, including updated information on the actual pumps installed.

4. On-site utilities.

5. A consolidated summary of required routine maintenance and scheduled preventative and predictive maintenance for all station equipment along with references to the location within the manual where detailed information may be found.

6. Safety procedures.

7. Emergency plans and procedures.

8. Design engineer's certification of construction.

c. The Contractor shall be required by the project specifications to include, at a minimum, the following information in the equipment literature section of the O&M:

1. Disassembly and reassembly instructions.

2. Parts list including part numbers.

3. Name, location, and telephone number of nearest supplier and spare parts warehouse.

4. Manufacturer's certifications, including calibration data sheets and specified calibration procedures and/or methods for installed equipment.

5. Warranty forms and information for all installed equipment as provided by the contractor.

6. Test results of all equipment installed and tested.

Table 3.2. RAINFALL DISTRIBUTION

Recurrence Interval (years)	Total Precipitation Depth (inches)
2	2.50
5	3.00
10	3.45
25	3.90
50	4.25
100	4.50

PFC 37 Applicant shall reconstruct Grahams Ferry Road with a modified street cross-section. North of Athens Lane, west to east: storm swale, 1-ft gravel shoulder, 3-ft asphalt shoulder, two 11-ft travel lanes, 3-ft asphalt shoulder, 1-ft gravel shoulder, swale, landscaping and a 10-ft multi-use pathway. The center turn lane/median will not be constructed at this time. The centerline of street will match the existing centerlines north and south of the proposed project.

South of Athens Lane the 10-ft pathway shall become a 5-ft sidewalk. Locate the pathway and sidewalk to minimize impacts to existing trees.

Applicant will be eligible for Street SDC credits for all roadwork beyond 24 feet from edge of asphalt and for 5 feet of the 10-foot wide multi-use path.

PFC 38 On Grahams Ferry Road, stormwater will continue to be collected in storm swales; however the Applicant shall be required to provide detention and water quality requirements for impervious surfaces created with the reconstruction of Grahams Ferry Road.

City of Wilsonville
EXHIBIT C7 DB14-0002 et seq

From: GT <gt97504@gmail.com>
Sent: Thursday, March 27, 2014 10:53 AM
To: Pauly, Daniel
Subject: Grande Pointe at Villebois (DB14-0002 et al)
Attachments: Grande Pointe Final Letter to DRB 3-27-14.pdf

Hello Mr. Pauly,

I have attached a PDF file with a 2 page comment letter for inclusion in the Public Hearing for the April 14, 2014 DRB Panel A meeting and May 5, 2014 City Council hearing for the Grande Pointe at Villebois application.

If you have any problem opening the file and including my comment letter for the hearings please email me.

Thank you,

Gary Templer

City of Wilsonville
EXHIBIT D1 DB14-0002 et seq

March 27, 2014

To: City of Wilsonville Development Review Board Members/City Council

Re: Polygon NW - Grande Pointe at Villebois (DB14-0002 et al)

My name is Gary Templer. I am a resident of the Villebois Arbor area and a homeowner at 11667 SW Grenoble St., Wilsonville, Oregon. I live close to the proposed development and Villebois Dr. South.

The Grande Pointe development contains an unrestricted new public intersection near the south end of Villebois Dr. South, which is a Villebois neighborhood residential street.

The private driveway into the former LEC property is now being transformed into a public street, and Villebois Dr. South is being converted into a collector type through street from an adjoining subdivision.

My comments address the 2003 Villebois Master Plan, public records released by the City, and the Master Plan as amended in 2013.

During the Planning Commission process in 2013 I expressed concern over the City's approach to the planned street of Villebois Dr. South dating back to 2003.

The designers of Villebois planned the street system of Villebois to be unique to Wilsonville. Neighborhood residential streets were not to be used as through streets.

That is why in 2003, The City of Wilsonville Community Development Director, now retired, Eldon Johansen, made the following statement in a review letter to the Planning Commission. "The overall concept for the streets within each of the three separate villages is particularly strong and we need to keep our through traffic off of those streets for the concept to work".

The three separate villages that Mr. Johansen refers to are the three neighborhoods of Villebois as depicted in the Master Plan.

Mr. Pauly, in the 2013 Amendment, has pointed out that Grande Pointe is not in the Villebois neighborhoods, and that it is a separate subdivision.

Also in 2003, Mr. Johansen recommended that "the street from the LEC to the Loop Road would need to be upgraded from a residential standard classification". That planned street is Villebois Dr. South.

For various reasons the City Of Wilsonville wanted to avoid an open public discussion about the LEC access. So the City ignored Mr. Johansen's recommendations, did no study, and simply increased the width of the planned street by 2 feet and labeled it "LEC Access".

During the most critical phase of Villebois project planning in 2003, the City in over 40 pages of DKS memos made no mention of the planned street with "LEC Access" despite plenty of information on LEC activities, the City granting the right for application for Villebois Residential zoning to any LEC property owner, and Mr. Johansen's recommendations.

Now the City in a DKS memo calls Villebois Dr. South an important "key" street.

My contacts with the City indicate that Villebois Dr. South meets traffic standards, but no traffic study has been done. As I understand it, those standards allow up to 1600 per day vehicle trips by vehicles as large as semi trucks.

I am concerned about our family's safety by the use of Arbor neighborhood residential streets as through traffic streets from this new subdivision.

I am requesting a change in street design in the new subdivision to direct traffic to Grahams Ferry Road and away from Villebois Dr. South. This would be in the spirit of the Villebois designers.

I hope the DRB will take a serious look at the history of how Villebois Drive South was designed or not redesigned, and how other Villebois streets depicted in the Master Plan will be used in the future.

Signed,

Gary Templer

From: John Danahy <danahy.john@gmail.com>
Sent: Thursday, March 27, 2014 11:27 AM
To: Pauly, Daniel
Subject: Grande Pointe at Villebois Application

To: Development Review Board Members/City Council

Re: Grande Pointe at Villebois Application

Hello,

My name is John Danahy and I live in Villebois at 11806 SW Palermo St. I can be reached by email at danahy.john@gmail.com or by phone at 208-596-1064. I wish to bring to your attention two concerns regarding this proposed new development.

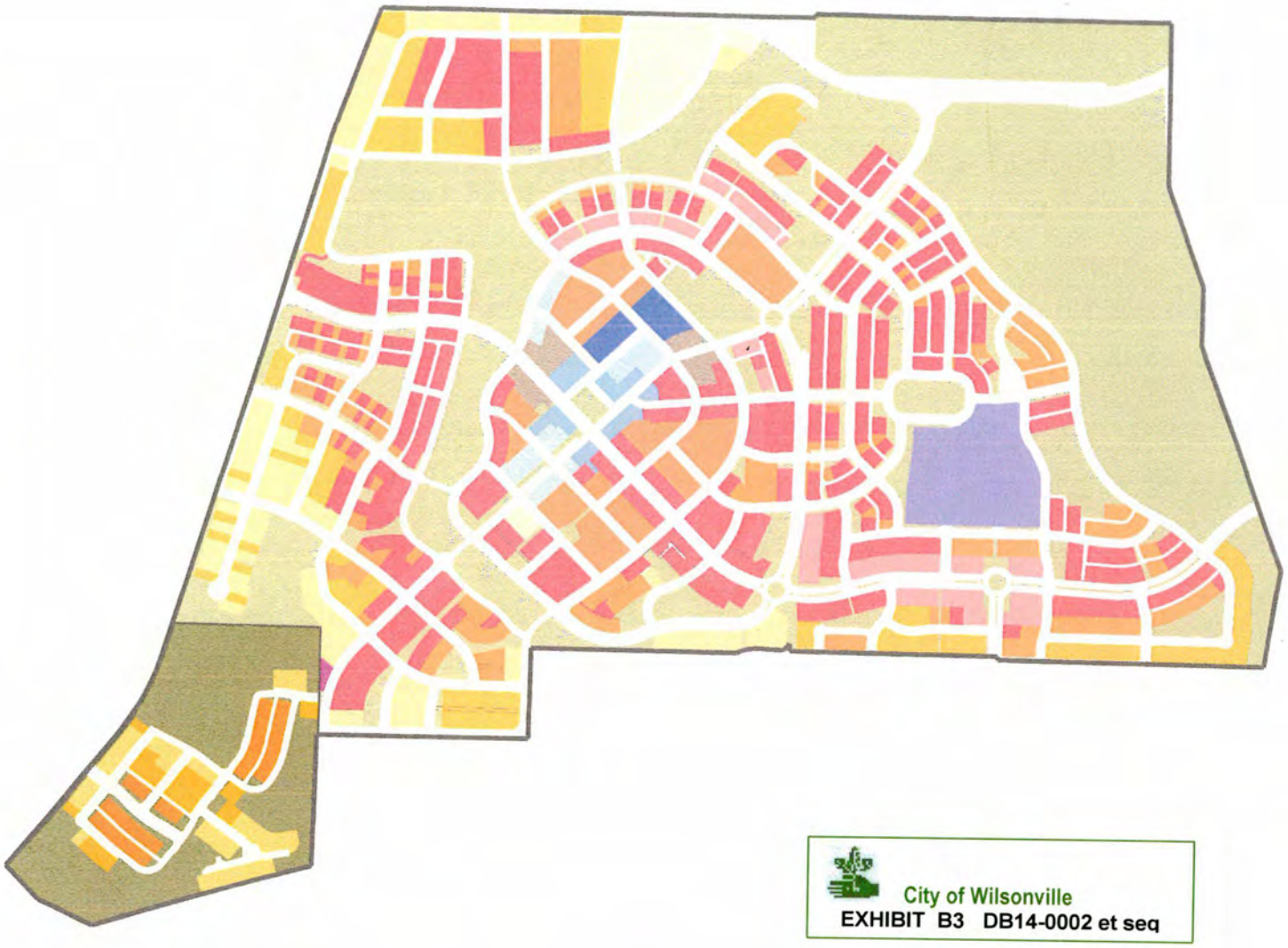
First is the storm water facility located on SW Grenoble ST between SW San Remo CT and SW Lausanne ST. This facility drains toward the new development. Originally, it was planned to have it drain into the trees at the edge of the facility. Now it drains between the trees and the wood chip walking path, filling in low spots with water and eventually draining into the trees at the boundary of the new development. The water is not really free flowing nor is there a channel. I encourage you to walk the area now, when it is wet, and see how the new development will match up at the boundary.

The second concern I have is a traffic concern. There appears to be an exit from the new development onto SW Villebois DR. Traffic exiting the new development must turn right or left at this intersection. A left turn will take traffic down SW Villebois DR, a street with parking on both sides. This street was designed to be narrow, and now when two cars pass, they must do so very carefully. Villebois is a very pedestrian friendly community. SW Villebois DR passes between Sophia and Palermo Parks where children and adults can be found playing and walking. I do not know if anyone has done a traffic study of his area, but I am concerned that the inevitable increase in traffic will result in an increase in accidents. A right turn at this intersection leads traffic to SW Normandy Lane. SW Normandy Lane is a wide straight street that goes for several blocks before a sharp left turn onto SW ST. Tropez Ave. SW San Tropez Ave is another very narrow street, especially where it intersects with SW Costa Circle. There is parking on one side of San Tropez, and cars must pass carefully here. The long straight Normandy Lane will encourage higher speeds, speeds that will resume on San Tropez. The approach to Costa Circle is slightly uphill and curved to the right. Traffic making a turn onto San Tropez from Costa Circle cannot be readily seen. San Tropez passes by Palermo Park where children play and a basket ball court was built. There is an exit from the planned development onto SW Grahams Ferry Rd. The exit appears to be at a place where SW Grahams Ferry Rd is trending down hill to the left, narrow, and curvy. I feel most residents of the planned development will use the exit onto SW Villebois DR rather than tempt fate on Grahams Ferry. I encourage you to come drive this area.

I thank you for your attention.

John Danahy

City of Wilsonville
EXHIBIT D2 DB14-0002 et seq



City of Wilsonville
EXHIBIT B3 DB14-0002 et seq

PDP 7 South

"Grande Point at Villebois"

Preliminary Development Plan, Tentative Plat,
Zone Change, Tree Removal Plan,& Final Development Plan

Submitted to City of Wilsonville, Oregon **January 17, 2014**

POLYGON NORTHWEST COMPANY

Pacific Community Design

RECEIVED
FEB 27 2014
BY:----------

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for
PDP 7 - South

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SECTION I) GENERAL INFORMATION

Introductory Narrative
PDP 7S

Including: Preliminary Development Plan, Tentative Plat, Zone Change, Tree Removal Plan, and Final Development Plan

Section IA

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II. Planning Context 3
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IV. Description of PDP 7 South 4
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VII. Conclusion 7

I. GENERAL INFORMATION

Applicant:	**Polygon Northwest Company** 109 E. 13th Avenue Vancouver, WA 98660 Tel: 503.221.1920 Fax: 360.693.4442 **Contact: Fred Gast**
Property Owner:	**Northwest Wilsonville Properties, LLC** PO Box 230819 Tigard, Oregon 97281-0819
Design Team:	
Primary Contact:	**Stacy Connery** **Pacific Community Design, Inc.** Tel: 503.941.9484 Fax: 503.941.9485 Email: stacy@pacific-community.com
Process Planner/Civil Engineer/Surveyor:	**Pacific Community Design, Inc.** 12564 SW Main Street Tigard, Oregon 97223 Tel: 503.941.9484 Fax: 503.941.9485 **Contact: Stacy Connery, AICP** **Jim Lange, PE** **Patrick Espinosa, PE** **Travis Jansen, PLS/PE**
Landscape Architect:	**Otten Landscape Architects, Inc.** 3933 SW Kelly Ave., Suite B Portland, Oregon 97239 Tel: 503.972.0311 **Contact: Janet Otten, ASLA** **Kristina Durant**
Arborist:	**Morgan Holen & Associates, LLC** 3 Monroe Parkway, Suite P 220 Lake Oswego, Oregon 97035 Tel: 971.409.9354 **Contact: Morgan Holen**

Site and Proposal Information:

Site:	3S1W15, TL 2800 & 2809
Size:	42.8 acres
Comprehensive Plan Designation:	Residential - Village (R-V)
Existing Zoning:	Public Facility (City)
Specific Area Plan:	SAP - South Plan Area 2
Proposed Zoning:	Village (V)
Proposal:	Preliminary Development Plan
	Tentative Plat
	Zone Change to Village (V)
	Tree Removal Plan
	Final Development Plan
Unit Count:	100 dwelling units
Net Residential Density:	8.6 units/net acre
Project Name:	Villebois PDP 7 - South "Grande Pointe at Villebois"

II. PLANNING CONTEXT

The subject site is the location of the former Living Enrichment Center (LEC). The original *Villebois Village Master Plan* identified the subject site as the Future Study Area and anticipated that its future development would be addressed through a site-specific SAP. The *Villebois Village Master Plan* was amended in October 2013 with Ordinance 724 to replace the Future Study Area with a proposed land use plan and direct further review stages by including the subject area as Plan Area 2 within SAP - South. An application for Specific Area Plan - South amendment to add Plan Area 2 has been submitted concurrently with this PDP. SAP - South Plan Area 2 includes minor refinements to the *Master Plan*. PDP 7 South is consistent with Specific Area Plan - South Plan Area 2. The concurrent application for SAP - South Plan Area 2 included a SROZ Map Refinement, SRIR Review, and SROZ Boundary Verification.

III. PROPOSAL SUMMARY

This application is a request for approval of a Preliminary Development Plan for Phase 7 of SAP - South, i.e. SAP - South Plan Area 2. This request includes five (5) applications as follows:

- Preliminary Development Plan (PDP 7S) - Notebook Section II
- Tentative Plat (PDP 7S) - Notebook Section III
- Zone Change to Village (V) for PDP 7S area - Notebook Section IV
- Tree Removal Plan for PDP 7S area - Notebook Section V
- Final Development Plan for PDP 7S area - Notebook Section VI

The applications are arranged in the order that approval should be granted based upon provisions in the development code. Each application is placed in a separate section within the Notebook, labeled Sections II through VI respectively, with required supporting documentation attached in the appropriate subsection.

The attached Supporting Compliance Reports (see Sections IIA, IIIA, IVA, VA, and VIA), in conjunction with the attached plan sheets and other exhibits, demonstrate compliance with the applicable review criteria.

IV. DESCRIPTION OF PDP 7 SOUTH

PDP 7 South proposes 100 lots for detached single-family residential dwellings, consisting of 40 mediums, 25 standards, and 35 larges. PDP 7 South includes 24.06 acres of park/open space areas, including tracts for open space, a pocket park, linear greens, and landscaping. The site is unique, given the presence of a large amount of forested SROZ area around the edges of the site (approximately half the site), encircling the development footprint remaining from the LEC. To minimize the impacts to natural features on the site, the proposed development footprint is predominantly located within the remaining development footprint of the LEC. Open Space 3 (OS-3) is 21.48 acres in size and retains on-site SROZ areas. In addition, OS-3 includes soft surface trail system, benches, and nature trail activity areas. Pocket Park 16 (PP-16) is 0.89 acres in size and serves as a neighborhood gathering spot. PP-16 provides a shelter, hardscape plaza area, areas for interaction and creative play, benches, trails, and picnic table(s). Linear greens, which total 1.14 acres in size, along SW Naples Street and SW Athens Lane provide physical and visual linkages to parks and open spaces. Linear Greens along SW Athens Lane in between the street and residential dwellings with courtyards provide aesthetic appeal of open space, a sense of place, and a safer walking environment. Landscape tracts, totaling 0.55 acres in size, are provided throughout the site in areas between residential lots and the adjacent street or water quality facility.

As demonstrated in the attached plans (see Notebook Section IIB), storm, sanitary, and water utilities will be provided to adequately serve the site. A pump station and force main will be provided to convey sewage flows from the site to the existing sewer connection located on SW Villebois Drive at the northeastern corner to the site, while ensuring the 153 gpm capacity of the Barber Main sewer line. The Public Sanitary Sewer Lift Station will be built consistent with Technical Appendix I. Additional design details for the Public Sanitary Sewer Lift Station will be provided

to the City for review with subsequent construction plans for the first phase of this development.

Sheet 11 - Phasing Plan (see Notebook Section IIB) shows that PDP 7 South will be developed in two phases. Phase I includes residential lots, linear greens, landscaping tracts, portions of OS-3, and PP-16. Phase II includes residential lots, landscape tracts, linear greens, and the remainder of OS-3. The table below shows a unit count by residential lot type and per phase.

Unit Count by Development Phase		
Lot Type	**Phase I**	**Phase II**
Medium	18	22
Standard	6	19
Large	20	15
TOTAL	44	56

PDP 7 South is consistent with Specific Area Plan - South as an SAP Amendment to add Plan Area 2, which has been submitted concurrently. No SAP refinements are proposed with this application.

V. DESCRIPTION OF TREE REMOVAL PLAN

A Type C Tree Removal Plan for PDP 7 South is included in Notebook Section V. Compliance with WC 4.610, 4.620, and 4.640 is addressed in the Tree Removal Plan Supporting Compliance Report (see Notebook Section VA), as applicable to the request.

A Tree Report (see Notebook Section VB), prepared by Morgan Holen of Morgan Holen & Associates LLC, includes a tree inventory of existing trees within the proposed development footprint, which indicates the tree common and species names, DBH, condition, and recommended treatment. Trees inventoried are those located within the proposed development footprint. Outside of the proposed development footprint, trees not included in the inventory will be retained in park and open space tracts.

The preservation of on-site trees was an important factor in the design of PDP 7 South. The proposed development matches the existing development footprint of the former LEC as much as possible. The *Tree Preservation Plan* in Section VC shows tree ranking and indicates whether they will be retained, removed, or likely removed. The intent of the plan is to retain and incorporate the maximum quantity of trees rated "Important" and "Good," per *Villebois Village Master Plan* Chapter 3 Implementation Measure 9. As described in the Tree Report, the determination to remove trees was based upon an assessment of which trees are necessary to remove due to the poor or hazardous health of the tree, whether or not they interfere with the health of other trees, and whether removal is necessary for utility work or the construction of residential dwellings. Where tree removal is "necessary for construction," tree removal is needed for site grading in areas where public utilities, street and sidewalk improvements, or residential lots are planned. Only four (4)

trees with a condition rating of "Important" are proposed to be removed; these trees comprise only 1% of the total number of trees to be removed. There are 101 trees rated in "Good" condition proposed for removal, which comprise 12% of the total number of trees to be removed. "Important" trees planned for removal is located in areas where tree removal is necessary for the construction of residential lots. The majority of trees with a condition rating of "Good" that are proposed for removal are located in areas where lots or ROW improvements are proposed. An additional 20 trees are identified as "likely to be removed," of which only four (4) trees are rated in "Good" condition and no trees are rated in "Important" condition.

In summary, trees outside of the proposed development footprint, which is approximately half of the subject site, are retained in open space tracts. Furthermore, of trees inventoried within the proposed development footprint, 32% of the trees in "Good" condition and 83% of the trees in "Important" condition are retained.

VI. DESCRIPTION OF FDP

A Final Development Plan (FDP) for parks and open spaces is included in Notebook Section VI. A concurrent application for SAP - South Plan Area 2 included a *Park /Open Space Pathways Plan*, which added detail and minor refinements to the parks and open space areas approved with the *Villebois Village Master Plan* for the subject site. FDP drawings are provided in Notebook Section VIB. Given concurrent submittal, the FDP matches the concept for and size of parks and open space areas in SAP - South Plan Area 2.

SAP - South Plan Area 2 shows OS-3 located in the northern, eastern, and southern edges of the subject site and including soft surface nature trails, benches located along nature trails, and a series of nature trail activity areas. OS-3 is intended to preserve existing functional wetlands and wildlife habitat within SROZ areas. The attached FDP drawings show the location of benches and nature trail activity areas with OS-3. Nature trail activity areas have been designed with soft surfaces and of natural materials with no grading or tree removal to minimize impacts to the SROZ. Additionally, this FDP provides a Nature Trail Activity Plan (see Notebook Section VIB) with a conceptual image for each of the nature trail activity areas.

SAP - South Plan Area 2 planned for PP-16 as a neighborhood focal point and gathering spot, with connections to the nature trail system and opportunities for creative play through interaction with a non-locally significant wetland and the provision of active lawn area. PP-16 includes structures for children of older and younger age groups, a sheltered area with seating, hardscaped paths, and benches. As shown on the attached FDP drawings, landscaping for PP-16 includes a native plant mix, existing trees, conifers, shade trees, medium ornamental shrubs, and lawn area. A conceptual image of the shelter area is provided on Sheet 7 of the Landscape Plans. Additionally, FDP plans show the play structures, bench, trash receptacle, and a bike rack.

Miscellaneous Linear Greens planned for with SAP - South Plan Area 2 along SW Naples Street and SW Athens Avenue serve as visual and physical linkages to adjacent open spaces. Linear greens along SW Naples Street provide greenway

linkages from the southern portion of OS-3 to Pocket Park 16 and the northern portion of OS-3. Linear greens include lawn areas, benches, and trails. Linear greens along SW Athens Lane provide an open space feel, a sense of place, and safer walking environment. The FDP shows landscaping for linear greens include a native plant mix, medium ornamental shrubs, conifers, large flowering deciduous shrubs, small columnar or ornamental trees, shade trees, lawn area, benches, creative play (frog climber), and a nature trail activity area.

Finally, SAP - South Plan Area 2 shows landscape tracts throughout the site in locations between residential lots and the adjacent street and locations providing pedestrian connections. FDP plans show landscaping within these landscape tracts. Landscape tracts throughout the site include ground cover, shrubs, lawn area, small columnar or ornamental trees, and street trees, with variation between landscape tracts.

VII. CONCLUSION

This Introductory Narrative, in conjunction with the referenced sections, describes the proposed Preliminary Development Plan, Tentative Plat, Zone Change, Tree Removal Plan, and Final Development Plan. The Supporting Compliance Reports located in Sections II through VI, respectively, support these requests for approval of the subject applications and demonstrate compliance with the applicable standards of the Wilsonville Planning and Land Development Ordinance.

This electronic fill-in form cannot be submitted electronically. Please sign a printed copy and submit to the Wilsonville Planning Division. Please call 503-682-4960 if you have any questions.

CITY OF WILSONVILLE

29799 SW Town Center Loop East
Wilsonville, OR 97070
Phone: 503.682.4960
Fax: 503.682.7025
Web: www.ci.wilsonville.or.us

Planning Division

Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

Pre-Application meeting date: 5/2/13

TO BE COMPLETED BY APPLICANT:
Please PRINT legibly

Legal Property Owner's Name:	Authorized Representative:
Northwest Wilsonville Properties, LLC	Applicant: Polygon Northwest Company (Fred Gast)
Address: PO Box 230819 Tigard, Oregon 97281-0819	Address: 109 E. 13th Street Vancouver, WA 98660
Phone:	Phone: 503-314-0807
Fax:	Fax: 360-693-4442
E-mail:	E-mail: fred.gast@polygonhomes.com

Property Owner or Authorized Signature: Bo Oswald Printed Name Bo Oswald

Title: Member/Manager Date 8/2/13

Site Location and Description:

Project Address if Available: 29500 SW Grahams Ferry Road Suite/Unit

Project Location: SW portion of Villebois

Tax Map #(s): Tax Map 3S 1W 15 Tax Lot #(s): Tax Lots 2800 & 2890 County: Clackamas

Request: Preliminary Development Plan (PDP 7S), Tentative Plat, Zone Change to Village Zone, Tree Removal Plan, and Final Development Plan

Project Type: **Class I** **Class II** **Class III**

- [x] Residential
- [ ] Commercial
- [ ] Industrial
- [x] Other (describe below)

Application Type:

- [ ] Annexation
- [ ] Final Plat
- [ ] Plan Amendment
- [ ] Request for Special Meeting
- [ ] SROZ/SRIR Review
- [x] Type C Tree Removal Plan
- [ ] Villebois SAP
- [x] Zone Map Amendment
- [ ] Appeal
- [ ] Major Partition
- [ ] Planned Development
- [ ] Request for Time Extension
- [ ] Staff Interpretation
- [ ] Tree Removal Permit (B or C)
- [x] Villebois PDP
- [ ] Other
- [ ] Comp Plan Map Amendment
- [ ] Minor Partition
- [x] Preliminary Plat
- [ ] Signs
- [ ] Stage I Master Plan
- [ ] Temporary Use
- [x] Villebois FDP
- [ ] Conditional Use
- [ ] Parks Plan Review
- [ ] Request to Modify Condition
- [ ] Site Design Review
- [ ] Stage II Final Plan
- [ ] Variance
- [ ] Waiver

FOR STAFF USE ONLY:

Application Rec'd: _____ Fee: _____ Check #: _____ Application Complete: _____ By: _____

File No (s) _____

This electronic fill-in form cannot be submitted electronically. Please sign a printed copy and submit to the Wilsonville Planning Division. Please call 503-682-4960 if you have any questions.

CITY OF WILSONVILLE

29799 SW Town Center Loop East
Wilsonville, OR 97070
Phone: 503.682.4960
Fax: 503.682.7025
Web: www.ci.wilsonville.or.us

Pre-Application meeting date: 5/2/13

TO BE COMPLETED BY APPLICANT:
Please PRINT legibly

Planning Division
Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

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Legal Property Owner's Name:	Authorized Representative:
Northwest Wilsonville Properties, LLC	Applicant: Polygon Northwest Company (Fred Gast)
Address: PO Box 230819 Tigard, Oregon 97281-0819	Address: 109 E. 13th Street Vancouver, WA 98660
Phone:	Phone: 503-314-0807
Fax:	Fax: 360-693-4442
E-mail:	E-mail: fred.gast@polygonhomes.com

Property Owner or Authorized Signature: Fred Gast Printed Name Fred Gast

Title: President Date 6/7/13

Site Location and Description:

Project Address if Available: 29500 SW Grahams Ferry Road Suite/Unit

Project Location: SW portion of Villebois

Tax Map #(s): Tax Map 3S 1W 15 Tax Lot #(s): Tax Lots 2800 & 2890 County: Clackamas

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[ ] SROZ/SRIR Review	[ ] Staff Interpretation	[ ] Stage I Master Plan	[ ] Stage II Final Plan
[x] Type C Tree Removal Plan	[ ] Tree Removal Permit (B or C)	[ ] Temporary Use	[ ] Variance
[ ] Villebois SAP	[x] Villebois PDP	[x] Villebois FDP	[ ] Waiver
[x] Zone Map Amendment	[ ] Other		

FOR STAFF USE ONLY:

Application Rec'd: Fee: Check #: Application Complete: By:

File No (s)

3P
20NS
Comm
472510478179
CHICAGO TITLE INSURANCE COMPANY

WHEN RECORDED MAIL TO:

Northwest Wilsonville Properties, LLC
PO Box 230819
Tigard, OR 97281-0819

Clackamas County Official Records
Sherry Hall, County Clerk
2010-039778
$177.00
01414094201000397780230231
07/02/2010 01:09:57 PM
D-D Cnt=1 Stn=4 KANNA
$115.00 $10.00 $16.00 $16.00 $20.00

UNTIL A CHANGE IS REQUESTED
ALL TAX STATEMENTS SHALL BE
SENT TO THE FOLLOWING ADDRESS:

Northwest Wilsonville Properties, LLC
PO Box 230819
Tigard, OR 97281-0819

SPECIAL WARRANTY DEED

STAYTON SW ASSISTED LIVING, L.L.C., an Oregon limited liability company (the Consolidated Sunwest Related Entities), on behalf of GRAHAM'S FERRY ROAD PROPERTY, LLC, an Oregon limited liability company, HENRIKSEN'S GRAHAM FERRY, LLC, an Oregon limited liability company, R EPLER'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, N EPLER'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, S FRIESEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, W LAWRENCE'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, S LAWRENCE'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, D FRIESEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, J.KNUDSEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, M KNUDSEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, ALTMAN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, F MORENO'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, R MORENO'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, LAKE POINT'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, MILLIGAN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, SWEZEY'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, TANACEA'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, and PROBST'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, as authorized by the Order Approving Sale of Property Free and Clear of Liens, Claims, Encumbrances, and Interests; Approving Disbursement of Sale Proceeds; and Approving Employment and Compensation of Broker (Grahams Ferry Road) entered on June 1, 2010, in U.S. District Court, District of Oregon, Case No. 09-cv-06082-HO attached hereto as Exhibit "A" ("**Grantor**"), conveys and specially warrants to NORTHWEST WILSONVILLE PROPERTIES, LLC, an Oregon limited liability company ("**Grantee**"), the following described real property free of encumbrances created or suffered by the Grantor except as specifically set forth herein:

See Exhibit "B" attached hereto.

ENCUMBRANCES:

Covenants, conditions, restrictions and/or easements, if any, affecting title, which may appear in the public record, including those shown on any recorded plat or survey.

Property taxes in an undetermined amount, which are a lien but not yet payable, including any assessments collected with taxes to be levied for the fiscal year 2010-2011.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195-336 AND SECTIONS 5 TO 11, OF CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930 AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195-336 AND SECTIONS 5 TO 11, OF CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009.

The true consideration for this conveyance is $1,050,000.00.

Dated this 2nd day of July, 2010.

[Signatures on following pages]

GRANTOR:

STAYTON SW ASSISTED LIVING, L.L.C., an Oregon limited liability company

as authorized by the Order Approving Sale Property Free and Clear of Liens, Claims, Encumbrances, and Interests; Approving Disbursement of Sale Proceeds; and Approving Employment and Compensation of Broker (Grahams Ferry Road) entered on June 1, 2010, in the U.S. District Court, District of Oregon, Case No. 09-cv-06082-HO

By: _____

Shirley Dunn for Clyde Hamstreet,
Chief Restructuring Officer, as authorized
by the Order Confirming Signature Authority
for Shirley Dunn entered on June 22, 2010,
in the U.S. District Court, District of Oregon,
Case No. 09-cv-06082-HO attached hereto
as Exhibit "C"

GRAHAM'S FERRY ROAD PROPERTY, LLC, an Oregon limited liability company

By: STAYTON SW ASSISTED LIVING, L.L.C., an Oregon limited liability company (the Consolidated Sunwest Related Entities), as authorized by the Order Approving Sale Property Free and Clear of Liens, Claims, Encumbrances, and Interests; Approving Disbursement of Sale Proceeds; and Approving Employment and Compensation of Broker (Grahams Ferry Road) entered on June 1, 2010, in the U.S. District Court, District of Oregon, Case No. 09-cv-06082-HO

By: _____

Shirley Dunn for Clyde Hamstreet,
Chief Restructuring Officer, as authorized
by the Order Confirming Signature Authority
for Shirley Dunn entered on June 22, 2010,
in the U.S. District Court, District of Oregon,
Case No. 09-cv-06082-HO attached hereto
as Exhibit "C"

HENRIKSEN'S GRAHAM FERRY, LLC, an Oregon limited liability company, R EPLER'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, N EPLER'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, S FRIESEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, W LAWRENCE'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, S LAWRENCE'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, D FRIESEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, J KNUDSEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, M KNUDSEN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, ALTMAN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, F MORENO'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, R MORENO'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, LAKE POINT'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, MILLIGAN'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, SWEZEY'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, TANACEA'S GRAHAM'S FERRY, LLC, an Oregon limited liability company, and PROBST'S GRAHAM'S FERRY, LLC, an Oregon limited liability company

By: STAYTON SW ASSISTED LIVING, L.L.C., an Oregon limited liability company (the Consolidated Sunwest Related Entities), as authorized by the Order Approving Sale Property Free and Clear of Liens, Claims, Encumbrances, and Interests; Approving Disbursement of Sale Proceeds; and Approving Employment and Compensation of Broker (Grahams Ferry Road) entered on June 1, 2010, in the U.S. District Court, District of Oregon, Case No. 09-cv-06082-HO

By: _____

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STATE OF OREGON §
§
COUNTY OF Marion §

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OFFICIAL SEAL
KRISTINE BERNARD
NOTARY PUBLIC - OREGON
COMMISSION NO. 449637
MY COMMISSION EXPIRES JUNE 12, 2014

Kristine Bernard
Notary Public in and for the State of Oregon
Name: Kristine Bernard
Commission Expires: 6-12-2014

STATE OF OREGON §
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COUNTY OF Marion §

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Kristine Bernard
Notary Public in and for the State of Oregon
Name: Kristine Bernard
Commission Expires: 6-12-2014

OFFICIAL SEAL
KRISTINE BERNARD
NOTARY PUBLIC - OREGON
COMMISSION NO. 449637
MY COMMISSION EXPIRES JUNE 12, 2014

Exhibit A

Court Order

[See attached]

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Timothy J. Conway, OSB No. 851752
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TONKON TORP LLP
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Portland, OR 97204

Attorneys for Debtor

FILED 10 JUN 01 14:57 USDC-ORE

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

In re

STAYTON SW ASSISTED LIVING, L.L.C.,
(the Consolidated Sunwest Related Entities),

Debtor.

USDC Case No. 09-cv-6082-HO

Bankruptcy Court
Case No. 08-36637-tmb11
(Reference Withdrawn)

ORDER APPROVING SALE OF PROPERTY FREE AND CLEAR OF LIENS, CLAIMS, ENCUMBRANCES, AND INTERESTS; APPROVING DISBURSEMENT OF SALE PROCEEDS; AND APPROVING EMPLOYMENT AND COMPENSATION OF BROKER (Grahams Ferry Road)

THIS MATTER came before the Court on *Debtor's Motion for Order Authorizing the Sale of Property Free And Clear of Liens, Claims, Encumbrances, and Interests; Approving Disbursement of Sale Proceeds; and Application to Employ and Compensate Broker (Grahams*

8

Ferry Road) (the "Motion"). The Court having reviewed the Motion and finding that good cause exists therefor, and the Court otherwise being fully advised; NOW, THEREFORE, IT IS HEREBY FOUND AND DETERMINED THAT:

A. This Court has jurisdiction to hear and determine the Motion pursuant to 11 U.S.C. §§ 105(a) and 365, and 28 U.S.C. § 157(d) and 1334.

B. Venue is proper pursuant to 28 U.S.C. §§ 1408 and 1409.

C. Proper, timely, adequate, and sufficient notice of the Motion, the sale hearing, and objection procedures have been provided in accordance with the Bankruptcy Code, the Bankruptcy Rules, the Court's earlier *Order Limiting Notice and Approving Form And Manner of Notice and Objection Procedures for Motions to Sell Certain Properties Free and Clear of Liens, Claims, Encumbrances, and Interests* ("Procedures Order"), and no other or further notice is required.

D. The transactions contemplated by the Motion, the purchase and sale agreement attached thereto ("Sale Agreement"), and related documentation have been negotiated at arms-length, in good faith and are in the best interests of Debtor's estate, its creditors, and the residents of Debtor's facilities. Debtor has demonstrated that it is an exercise of sound business judgment to enter into the transactions contemplated by the Sale Agreement and related documentation, and have appropriately exercised their fiduciary duties in maximizing the sale price for the property described in the Sale Agreement ("Property").

E. [No over bids for the purchase of the Property were submitted to Debtor other than the buyer's offer as reflected in the Sale Agreement ("Buyer"). Buyer is the only Qualified Bidder for the Property and therefore no Auction for the Property is necessary.]

F. Buyer has acted in good faith and is therefore a purchaser in good faith of the Property entitled to the protections of Bankruptcy Code Section 363(m), and no evidence has been presented that would support avoidance of the transaction pursuant to Bankruptcy Code Section 363(n).

G. The bidding procedures, notice thereof, and Debtor's compliance therewith have afforded a full, fair, and reasonable opportunity for any entity to make a higher or better offer to purchase the Property.

H. The consideration being paid by Buyer is fair and adequate consideration for the Property and represents the highest and best offer and will achieve the highest and best value to Debtor and its estate and creditors.

I. A reasonable opportunity to object or to be heard regarding the relief requested in the Motion has been afforded to all interested persons and entities.

J. Approval of the Sale Agreement and related documentation is in the best interests of Debtor and its estates and creditors.

K. Buyer is not an insider, as that term is defined in the Bankruptcy Code, of Debtor. Furthermore, no insiders of Debtor are receiving or retaining any benefit, property or payments in connection with the sale of the Property or other transactions contemplated by the Sale Agreement and related documentation except to the extent such insiders have allowed claims against or equity interests in Debtor and, as a result, may participate in a distribution of sale proceeds.

L. Buyer, and its affiliates, successors, and assigns, are not, as a result of the transactions contemplated hereby or by consummating such transactions, successors to Debtor generally because, among other things: (i) other than as explicitly set forth in the Sale

Agreement, Buyer is not expressly or impliedly agreeing to assume any of Debtor's debts; (ii) the transactions contemplated by the Sale Agreement do not amount to a consolidation, merger or de facto merger of Debtor with Buyer or any affiliates, successors, or assigns of Buyer; (iii) Buyer and its affiliates, successors, and assigns are not merely a continuation or extension of Debtor or any enterprise or product line of Debtor; and (iv) the transactions are not being entered into fraudulently or in order to escape liability from Debtor's debts.

M. Sale of the Property is permitted pursuant to one or more provisions of Section 363(f)(1)–(5) of the Bankruptcy Code. Those non-debtor parties with liens, claims, encumbrances and interests of any kind or nature whatsoever in the Property, including without limitation, any tenant-in-common, co-owners, or other investors related to the Property who did not object to the Motion and the relief requested therein, or who withdrew their objections, are deemed to have consented pursuant to section 363(f)(2) of the Bankruptcy Code.

N. Debtor has obtained the authority under 11 U.S.C. § 363(h) to sell the interests of all co-owners in the Property.

O. The contemplated transactions will result in a benefit to the estate and Purchaser.

IT IS HEREBY ORDERED THAT:

1. The Motion is GRANTED.

2. The Sale Agreement attached to the Motion is hereby approved and incorporated herein by this reference.

3. Debtor is authorized to employ and compensate David Saul of Real Estate Executives ("Broker") pursuant to the terms of the Listing Agreement attached to the Motion.

4. Debtor is authorized to pay Broker a commission of 3.00% of the Purchase Price ($31,500) ("Commission") upon the closing of the sale of the Property to Buyer.

5. Buyer is the only Qualified Bidder for the Property, and therefore no auction for the Property is necessary.

6. All objections to the Motion or the relief requested therein that were not withdrawn, if any, are overruled and rejected in their entirety.

7. Buyer is a good faith purchaser entitled to the protections afforded a purchaser pursuant to section 363(m) of the Bankruptcy Code. The sale of the Property to Buyer under the Sale Agreement will constitute a transfer for reasonably equivalent value and fair consideration under the Bankruptcy Code and the laws of every state, territory, and possession of the United States and the District of Columbia.

8. Clyde Hamstreet, as Chief Restructuring Officer ("CRO"), on behalf of Debtor and Grahams Ferry Road Property, LLC, is authorized and directed to execute, deliver, fully perform under, consummate, and implement the Sale Agreement together with all additional instruments and documents that may be reasonably necessary or desirable to implement the transactions contemplated by the Sale Agreement.

9. Pursuant to Sections 105(a) and 363(b) and (f) of the Bankruptcy Code, on and as of the Closing Date, and except as expressly provided in the Sale Agreement, Buyer (or its assignee) shall acquire all of Debtor's, Grahams Ferry Road Property, LLC's, the bankruptcy estate's, and all other co-owners of the Property's right, title and interest in and to the Property, free and clear of: (a) all mortgages, security interests, conditional sale or other title retention agreements, pledges, liens, judgments, demands, encumbrances, restrictions, constructive or resulting trusts, rights of first refusal, or charges of any kind or nature, if any, including, but not

limited to, any restrictions on the use, voting, transfer, receipt of income or other exercise of any attributes of ownership (collectively, "Interests"); and (b) all debts, claims (as that term is defined in the Bankruptcy Code), obligations, demands, guaranties, options, rights, contractual commitments, restrictions, interests and matters of any kind and nature, and whether imposed by agreement, understanding, law, equity, or otherwise, arising in any way in connection with any acts, or failure to act, of Debtor, including, without limitation, any claims or liabilities arising out of or in connection with any employee benefit plan or any warranty or tort claims (collectively, "Claims"), whether arising before or after the commencement of the above-captioned Chapter 11 cases, with all such Interests and Claims released, terminated, and discharged as to the Property. All such Interests and Claims, if any, shall attach to the proceeds of sale of the Property paid to Debtor by Buyer to the same extent and with the same priority, validity, force, and effect as such Interests and Claims had against the Property immediately prior to the Closing, except: (i) that such Interests and Claims shall not so attach to the proceeds paid to Debtor by Buyer if and to the extent otherwise agreed by the holder of any such Interests and Claims, (ii) as necessary to effect the terms of the Sale Agreement, (iii) subject to any rights, claims, and defenses Debtor may possess as to such holder, and (iv) as may otherwise be provided in the Distribution Plan approved by the Court in *SEC v. Sunwest Management, Inc., et al.*, U.S. District Court Case No. 09-cv-6056-HO ("Distribution Plan").

10. Upon Closing of the sale of the Property, Washington Trust Bank, the secured lienholder, will (a) release its lien against the Property, (b) limit its deficiency claim to the $2,999,000 principal amount owing on the Property less the net proceeds that Washington Trust Bank receives from the sale, (c) pay Debtor $50,000 for its effort to facilitate the sale of the Property free and clear of all interests, and (d) if the Property is sold to a party other than Brian

H. Smith Northwest Demolition and Excavating Inc., DBA, Northwest Demolition & Dismantling ("NW Demolition"), to pay to NW Demolition, upon the closing of the sale of the Property, the breakup fee of $25,000 provided for in the Sale Agreement.

11. Neither the purchase of the Property by Buyer, nor the subsequent use by Buyer of any of the Property previously operated by Debtor, will cause Buyer to be deemed successor in any respect to Debtor's business within the meaning of any federal, state or local revenue, pension, ERISA, tax, labor, or environmental law, rule, or regulation (including, without limitation, filing requirements under any such laws, rules, or regulations) or under any products liability law or doctrine with respect to Debtor's liability under such law, rules, regulations, or doctrines. Buyer will have no liability or obligation under the WARN Act (29 U.S.C. §§ 2101 et seq.) or the Comprehensive Environmental Response Compensation and Liability Act, or any other federal, state, or local environmental law by virtue of Buyer's consummation of the transactions contemplated by the Sale Agreement.

12. On the Closing, each of Debtor's creditors and holders of Interests or Claims is authorized and directed to execute such documents and take all other actions as may be necessary to release its Interests in or Claims against the Property, if any, as such Interests or Claims may have been recorded or may otherwise exist. If any person or entity that has filed financing statements or other documents or agreements evidencing interests in or claims against the Property shall not have delivered to Debtor prior to the Closing, in proper form for filing and executed by the appropriate parties, termination statements, instruments of satisfaction and releases of all Interests or Claims which the person or entity has with respect to the Property, (a) Debtor is hereby authorized to execute and file such statements, instruments, releases, and other documents on behalf of the person or entity with respect to the Property, and (b) Buyer is

hereby authorized to file, register, or otherwise record a certified copy of this Order, which once filed, registered, or otherwise recorded, shall constitute conclusive evidence of the release of all Interests or Claims of any kind or nature whatsoever in or against the Property. The foregoing notwithstanding, the provision of this Order authorizing the sale of the Property free and clear of liens, claims, encumbrances, and interests shall be self-executing, and notwithstanding the failure of Debtor, Buyer, or any other party to execute, file, or obtain releases, termination statements, assignments, consents, or other instruments to effectuate, consummate, and/or implement the provisions hereof or in the Sale Agreement with respect to the sale of the Property, all interests in or Claims against the Property shall be deemed unconditionally released, discharged, and divested. This Order is and shall be binding upon and govern the acts of all entities including, without limitation, all filing agents, filing officers, title agents, title companies, recorders of mortgages, recorders of deeds, registrars of deeds, registrars of patents, trademarks or other intellectual property, administrative agencies, governmental departments, secretaries of state, federal, state, and local officials, and all other persons and entities who may be required by operation of law, the duties of their office, or contract, to accept, file, register, or otherwise record or release any documents or instruments, or who may be required to report or insure any title or state of title in or to any of the Property.

13. Each and every federal, state, and local governmental agency or department is hereby directed to accept any and all documents and instruments necessary and appropriate to consummate the transactions contemplated by the Sale Agreement.

14. At Closing, Debtor is authorized and directed to distribute the proceeds from the sale as proposed in the Motion. Any previous co-owner in the Property shall receive, in exchange for its property interest, distribution rights as determined by the Distribution Plan. The

automatic stay is hereby modified as necessary to permit the disbursements from escrow at Closing set forth above.

15. Except as expressly provided in the Sale Agreement, Buyer is not assuming nor shall it in any way whatsoever be liable or responsible, as successor or otherwise, for any claims, liabilities, debts, or obligations of Debtor or its estate of any kind or character in any way whatsoever relating to or arising from the Property or Debtor's operations or use of the Property prior to the Closing, whether known or unknown as of the Closing, now existing or hereafter arising, whether fixed or contingent, under the laws of the United States, any state, territory, or possession of the United States or the District of Columbia or any other country or foreign jurisdiction.

16. From and after entry of this Order, neither Debtor, its estate, any creditor, director, officer, employee or shareholder of Debtor, nor any other person or entity shall take or cause to be taken any action that would interfere with the transfer of the Property to Buyer in accordance with the terms of this Order and the Sale Agreement.

17. After the Closing, no person or entity, including, without limitation, any federal, state, or local governmental agency, department, or instrumentality, shall assert by suit or otherwise against Buyer or its successors in interest any Interests or Claims that such person or entity had, have, or may have against Debtor or the estates or any liability, debt, or obligation relating to or arising from the Property, or the use of the Property before or as of the Closing, and all persons and entities are hereby enjoined from asserting, prosecuting, or otherwise asserting against Buyer in any way whatsoever any such Claims or Interests, except insofar as such Claims or Interests have been expressly assumed by Buyer in writing pursuant to the Sale Agreement.

18. No bulk sales law or any similar law of any state or other jurisdiction shall apply in any way to the transactions authorized herein.

19. This Court shall retain jurisdiction to (a) interpret, enforce and implement the terms and provisions of the Sale Agreement, all exhibits and amendments thereto, and any releases, waivers, and consents thereunder, and any agreements, transaction documents, or other instruments executed in connection therewith, (b) resolve any disputes arising under or related to the Sale Agreement and the closing requirements, except as otherwise provided therein, (c) compel delivery of the Property to Buyer, and (d) interpret, implement, and enforce the provisions of this Order.

20. The provisions of the Sale Agreement and this Order, any actions taken pursuant thereto, and authorization for all payments made hereunder shall survive entry of any order which may be entered confirming any plan of reorganization or liquidation for Debtor, converting Debtor's case from chapter 11 to chapter 7 of the Bankruptcy Code, or dismissing Debtor's case. Nothing contained in any such plan or order shall conflict with, or derogate from, the provisions of the Sale Agreement or this Order (as applicable).

21. The Sale Agreement and any related agreements, documents or other instruments may be modified, amended, or supplemented by the parties thereto, in a writing signed by both parties, and in accordance with the terms thereof without further order of the Court, provided that any such modification, amendment, or supplement is not material.

22. The failure to specifically include any particular provision of the Sale Agreement in this Order shall not diminish or impair the effectiveness of such provision, it being the intent of the Court that the Sale Agreement be authorized and approved in its entirety.

23. Notwithstanding the provisions of Bankruptcy Rules 6004(h), 6006(d), and 7062, this Order shall be effective and enforceable immediately upon entry.

24. This Order shall bind Grahams Ferry Road Property, LLC, an Oregon limited liability company, Debtor, its estate, its creditors and interest holders, all of their respective officers, directors, and employees, all claimed co-owners of the Property, any official or unofficial committee that has been or may be appointed in these cases, and any successor, trustee, or other responsible person, including any trustee appointed under Chapter 7 of the Bankruptcy Code.

DATED this 1st day of June, 2010.

Michael R. Hogan

Michael R. Hogan, U.S. District Court Judge

Presented by:

TONKON TORP LLP

By _____
Albert N. Kennedy, OSB No. 821429
Timothy J. Conway, OSB No. 851752
Attorneys for Debtor

034618/00002/2100370v4

Exhibit B

Legal Description of Property

PARCEL I:

A tract of land located in the Southeast one-quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at the Southwest corner of said Southeast one-quarter; thence Northerly along the West line of said Southeast one quarter 1300 feet, more or less, to the South line of the tract described in contract to Tiano recorded June 28, 1977, under Recorder's Fee No. 77-025265; thence Easterly along the South line of said Tiano Tract a distance of 640 feet to the true point of beginning; thence continuing along the South line of said Tiano Tract, the South line of the Conway lands (Parcels I and II) described in contract recorded May 12, 1977, under Recorder's Fee No. 77-017984, the South line of the Conway Tract described in Deed recorded May 18, 1977 under Recorder's Fee No. 77-018969 and the South line of the Nickerson Lands (Parcels A and B) described in Deed recorded July 8, 1968 under Recorder's Fee No. 68-012714 to the East line of said Section 16; thence Southerly along the East line of said Section 16 to its intersection with the centerline of Graham's Ferry Road (County Road No. 13); thence Southwesterly along the centerline of said Graham's Ferry Road to its intersection with the South line of Section 16; thence Westerly along the South line of said Section 16 to the Southwest corner of that certain tract of land conveyed to James E. Norton, et ux by Deed recorded February 6, 1974 under Recorder's Fee No. 74-003048; thence Northerly along the West line of said Norton Tract to its Northwest corner; thence Northwesterly a distance of 1089 feet, more or less, to the true point of beginning.

EXCEPTING the tract conveyed to James E. Norton, et ux by Deed recorded February 6, 1974 under Recorder's Fee No. 74-003048, described as follows:

A parcel of land in the Southwest one-quarter of the Southeast one-quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the South line of said Section 16, which point is South 89°37'25" East 798.01 feet from the South one quarter corner of said Section 16; thence North 07°48'05" East 239.24 feet; thence North 57°21'05" East 175.51 feet; thence South 60°34'35" East 115.63 feet; thence South 09°32' East 210.71 feet; thence South 69.22 feet to the South line of said Section 16; thence North 89°37'25" West 315.71 feet to the point of beginning.

ALSO EXCEPTING a 30 foot strip along the East line conveyed to Marie M. Coleman by Deed recorded July 29, 1890 in Book 38, Page 423, Deed Records, described as follows:

Beginning at a point on the East line of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, at the Southeast corner of the Northeast one quarter of the Southeast one

quarter of Section 16; thence South along section line of said section to a point where the County Road leading from Portland, Oregon to Graham's Ferry on the Willamette River crosses said section line; thence West 30 feet; thence North to the line between the Northeast one-quarter of the Southeast one-quarter and the Southeast one-quarter of the Southeast one-quarter of said Section 16, thence East 30 feet to the East line of said section and to the place of beginning.

PARCEL II:

A tract of land in the Southwest quarter of Section 15 and the Southeast quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point which is North 54°11'40" East 85.02 feet from the section corner common to Sections 15, 16, 21 and 22, Township 3 South, Range 1 West of the Willamette Meridian; thence North 66°40'15" West 322.66 feet; thence North 46°47'23" West 256.51 feet to a point in the East line of Graham Ferry Road (Bell Road); thence along said East line on the arc of a curve left, having a radius of 2,894.79 feet and a central angle of 7°02'29", the long chord bears North 40°06'46" East 355.55 feet, an arc distance of 355.76 feet; thence North 36°35'31" East 678.81 feet, more or less, to the beginning of a curve to the left; thence on the arc of a curve left, having a radius of 1,175.92 feet and a central angle of 20°47'40", the long chord bears North 26°11'41" East 424.44 feet, an arc length of 426.77 feet; thence North 15°47'51" East 199.43 feet; thence leaving said road East 804.75 feet; thence South 0°26'38" East 603.74 feet; thence South 1°09'10" West 743.76 feet; thence South 74°03'51" West 266.67 feet; thence South 73°40'12" West 969.32 feet to the point of beginning.

Exhibit C

Court Order

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TONKON TORP LLP
1600 Pioneer Tower
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Attorneys for Debtor

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

EUGENE DIVISION

In re

USDC Case No. 09-cv-6082-HO

STAYTON SW ASSISTED LIVING, L.L.C. (the Consolidated Sunwest Related Entities),

Debtor.

Bankruptcy Court
Case No. 08-36637-tmb11
(Reference Withdrawn)

ORDER CONFIRMING SIGNATURE AUTHORITY FOR SHIRLEY DUNN

This matter came before the Court on Debtor's Motion to Confirm Signature Authority for Shirley Dunn. The Court, having reviewed the motion and finding that it is supported by good cause, hereby GRANTS the motion and further ORDERS that Shirley Dunn is authorized to execute any and all documents on behalf of Debtor (including without limitation

///

///

22

loan modification agreements, term sheets, deeds, and settlement agreements) as agent of, on behalf of, and in the place of Clyde A. Hamstreet, Debtor's Chief Restructuring Officer.

DATED: June 22, 2010.

Michael R. Hogan
U.S. District Court Judge

Presented by:

TONKON TORP LLP

By: */s/ James K. Hein*
James K. Hein, OSB No. 054621
Attorneys for Debtor

Clackamas County Official Records
Sherry Hall, County Clerk

2013-005755

01/25/2013 02:04:38 PM

D-OPT Cnt=1 Stn=6 KARLYNWUN
$25.00 $16 00 $10.00 $17.00

$68.00

Recorded at the Request of
and after Recording Return to:

Barbara W. Radler
Radler White Parks & Alexander LLP
111 SW Columbia Street, Suite 1100
Portland, OR 97201

UNTIL A CHANGE IS REQUESTED,
SEND ALL TAX STATEMENTS TO:
NO CHANGE

Recorded by TICOR TITLE 362005011 LOCDW-50

MEMORANDUM OF OPTION

THIS MEMORANDUM (this "Memorandum") is executed this 23rd day of January, 2013, by Northwest Wilsonville Properties, LLC, an Oregon limited liability company (together, "Seller"), as a memorandum of an unrecorded Purchase and Sale Agreement (the "Agreement") dated January 23, 2013 between Seller and Polygon Northwest Company, L.L.C., a Washington limited liability company, and/or assigns ("Buyer"), concerning the real property described in **Attachment A** attached to this Memorandum (the "Property").

1. **Sale.** For good and valuable consideration, Seller has agreed to sell and Buyer has the right to purchase the Property upon all the terms, conditions and provisions set forth in the Agreement, which provisions are incorporated in this Memorandum by reference.

2. **Miscellaneous.** This Memorandum is not a complete summary of the Agreement. Provisions in this Memorandum shall not be used in interpreting the Agreement provisions. In the event of a conflict between this Memorandum and the unrecorded Agreement, the unrecorded Agreement shall control.

IN WITNESS WHEREOF, this instrument was executed by the parties as of the date first above written.

SELLER:

NORTHWEST WILSONVILLE PROPERTIES, LLC, an Oregon limited liability company

By: _____
Printed Name: Bo Oswald
Title: Member / Mgr

BUYER: POLYGON NORTHWEST COMPANY, L.L.C., a Washington limited liability company

By: Brentview, Inc., a Washington corporation
Its: Manager

By:_____
Fred Gast
Its: Assistant Vice President

STATE OF OREGON)
) ss.
COUNTY OF CLACKAMAS)

I certify that I know or have satisfactory evidence that BO OSWALD is the person who appeared before me, and said person acknowledged that he or she signed this instrument, on oath stated that he or she was authorized to execute the instrument and acknowledged it, as the MEMBER MANAGER of Northwest Wilsonville Properties, LLC, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 01/23/2013.

James Crane
Signature of Notary Public)
JAMES CRANE
(Printed Name of Notary Public)
My Appointment expires 06/13/2015

OFFICIAL SEAL
JAMES A CRANE
NOTARY PUBLIC - OREGON
COMMISSION NO. 459249
MY COMMISSION EXPIRES JUNE 13, 2015

BUYER: POLYGON NORTHWEST COMPANY, L.L.C., a Washington limited liability company

By: Brentview, Inc., a Washington corporation
Its: Manager

By: _____
Fred Gast
Its: Assistant Vice President

STATE OF _____)
) ss.
COUNTY OF _____)

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he or she signed this instrument, on oath stated that he or she was authorized to execute the instrument and acknowledged it, as the _____ of Northwest Wilsonville Properties, LLC, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: _____.

_____
Signature of Notary Public)

_____
(Printed Name of Notary Public)
My Appointment expires _____

STATE OF Washington)
) ss.
COUNTY OF Clark)

I certify that I know or have satisfactory evidence that Fred Gast is the person who appeared before me, and said person acknowledged that he or she signed this instrument, on oath stated that he or she was authorized to execute the instrument and acknowledged it, as the Assistant Vice President of Brentview, Inc., the Manager of Polygon Northwest Company, L.L.C., to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: January 23, 2013.

Latasha R Nix
Signature of Notary Public)
Latasha R Nix
(Printed Name of Notary Public)
My Appointment expires July 6, 2015

ATTACHMENT A
(to Memorandum of Option)

Property Legal Description

A tract of land in the Southwest quarter of Section 15 and the Southeast quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the City of Wilsonville, County of Clackamas and State of Oregon, described as follows:

Beginning at a point which is North 54°11'40" East, 85.02 feet from the section corner common to Sections 15, 16, 21 and 22, Township 3 South, Range 1 West of the Willamette Meridian; thence North 66°40'15" West, 322.66 feet; thence North 46°47'23" West, 256.51 feet to a point in the East line of Graham Ferry Road (Bell Road); thence along said East line on the arc of a curve left, having a radius of 2,894.79 feet and a central angle of 7°02'29", the long chord bears North 40°06'46" East, 355.55 feet, an arc distance of 355.76 feet; thence North 36°35'31" East, 678.81 feet, more or less, to the beginning of a curve to the left; thence on the arc of a curve left, having a radius of 1,175.92 feet and a central angle of 20°47'40", the long chord bears North 26°11'41" East, 424.44 feet, an arc length of 426.77 feet; thence North 15°47'51" East, 199.43 feet; thence leaving said road, East 804.75 feet; thence South 0°26'38" East, 603.74 feet; thence South 1°09'10" West, 743.76 feet; thence South 74°03'51" West, 266.67 feet; thence South 73°40'12" West, 969.32 feet to the point of beginning.

Fee Calculation for PDP 7 South Application
(12/19/13)

Application	Calculations	Fee
Villebois PDP	base fee - $1920.00	$1,920.00
	plus $240/net acre ($240 x 11.9 net acres)	$2,856.00
	plus $16/lot ($16 x 104 lots)	$1,664.00
	subtotal	$6,440.00
Zone Change (Quasi-judicial Map)	n/a	$1,280.00
Tentative Plat (Residential Subdivision)	base fee - $1280	$1,280.00
	plus $240/net acre ($240 x 11.9 net acres)	$2,856.00
	plus $16/lot ($16 x 104 lots)	$1,664.00
	subtotal	$5,800.00
Type C Tree Removal Plan (DRB Review)	n/a	$560.00
Villebois Final Development Plan (parks & open spaces only)	n/a	$1,280.00
	TOTAL FEES DUE	**$15,360.00**

THIS WARNING BAR MUST HAVE A GRAY BACKGROUND WHICH FADES TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION. ADDITIONAL SECURITY FEATURES ARE LISTED ON THE BACK.

POLYGON PAYMASTER, LLC
PERMIT ACCOUNT
P.O. BOX 1349
BELLEVUE, WA 98009

WELLS FARGO Wells Fargo Bank, N.A.

013315

11-24/1210

DATE 12/19/13

PAY TO THE ORDER OF City of Wilsonville

REGISTERED [illegible] 15360 DOLS 00 CTS DOLLARS

$ **15,360.00**

⑈013315⑈ ⑆121000248⑆ 4121161871⑈

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

POLYGON PAYMASTER, LLC
PERMIT ACCOUNT

013315

DATE	DESCRIPTION	AMOUNT
12/19/13	PNW Home Builders, LLC	
	Application fee for PDP 7 South, zone change, tentative plat, tree removal Plan, and FDP (LEC)	$15,360.00

31W22 02200
Metro
600 NE Grand Ave
Portland, OR 97232

31W15 02000
Clifford & Eveline Chapman
Po Box 1607
Wilsonville, OR 97070

31W15 02001
James & Jeanette McLaughlin
29229 SW Grahams Ferry Rd
Wilsonville, OR 97070

31W15 02100
Oral & Eva Gibson
29559 SW Grahams Ferry Rd
Wilsonville, OR 97070

31W15 02800
Northwest Wilsonville Properties LLC
Po Box 230819
Tigard, OR 97281

31W16 01101
Dale Nickerson
29393 SW Grahams Ferry Rd
Wilsonville, OR 97070

31W16 01290
Lawrence & Barbara Nickerson
23973 SW Grahams Ferry Rd
Wilsonville, OR 97070

31W16 02600
Northwest Wilsonville Properties LLC
Po Box 230819
Tigard, OR 97281

31W15 02902
Metro
600 NE Grand Ave
Portland, OR 97232

31W22 02201
Metro
600 NE Grand Ave
Portland, OR 97232

31W16 02800
Oral Gibson
29559 SW Grahams Ferry Rd
Wilsonville, OR 97070

31W15CA11700
Frank & Laura Forgione
5396 Via Ramon Rd
Yorba Linda, CA 92887

31W15CA11800
Julie Dailey
29479 SW Milano Ln
Wilsonville, OR 97070

31W15CA11900
Eugene Bouton
29485 SW Milano Ln
Wilsonville, OR 97070

31W15CA12000
Ying Zhou
3-2-12e Guan Cheng 10008
, 00000

31W15CA12100
Rory Herrera
29497 SW Milano Ln
Wilsonville, OR 97070

31W15CA12200
Gail Smith
29555 SW Milano Ln
Wilsonville, OR 97070

31W15CA12300
Janet Jablonowski
11955 SW Normandy Ln
Wilsonville, OR 97070

31W15CA12400
Guy & Sonimar Poppe
11969 SW Normandy Ln
Wilsonville, OR 97070

31W15CA12500
John & Nancy Miller
11975 SW Normandy Ln
Wilsonville, OR 97070

31W15CA12600
James Bonham
29582 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA12700
Jeffrey & Mojgon Friedhoff
22835 SW Eno Pl
Tualatin, OR 97062

31W15CA12800
Brian Daniel Glock
29562 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA12900
Steven Ward
29550 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13000
Cynthia Pawlicki
29542 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13100
Seong Hee Hyun
29530 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13200
Asghar Sarparast
29522 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13300
Deborah Cosier
29510 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13400
Christine Lewis
29492 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA13500
Shellie Ramazzotti
115 Parkwoods Ct
Healdsburg, CA 95448

31W15CA13600
Northwest Mental Health Mgmt Service
2316 SE Willard St
Milwaukie, OR 97222

31W15CA13700
Justin Emory
29523 SW Villebois Dr S
Wilsonville, OR 97070

31W15CA14000
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15CA14100
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15CA14200
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15CB00100
David & Dianna Schroeder
11960 SW Lausanne St
Wilsonville, OR 97070

31W15CB00200
John Gurnick
11964 SW Lausanne St
Wilsonville, OR 97070

31W15CB00300
Buu Lam Huynh
11968 SW Lausanne St
Wilsonville, OR 97070

31W15CB00400
Mary Pettenger
11972 SW Lausanne St
Wilsonville, OR 97070

31W15CB00500
Jhuma Chaudhuri
11976 SW Lausanne St
Wilsonville, OR 97070

31W15CB00600
Jeanie Williams
11980 SW Lausanne St
Wilsonville, OR 97070

31W15CB00700
Gina Nikkel
11984 SW Lausanne St
Wilsonville, OR 97070

31W15CB00900
Sylvia Rvcbl Agrmnt Ward
29371 SW Villebois Dr S
Wilsonville, OR 97070

31W15CB01500
Kraig Sproles
11965 SW Lausanne St
Wilsonville, OR 97070

31W15CB01600
Wei Zou
11969 SW Lausanne St
Wilsonville, OR 97070

31W15CB01700
Nathan Knight
11973 SW Lausanne St
Wilsonville, OR 97070

31W15CB01800
Tami Teichert-Balin
11977 SW Lausanne St
Wilsonville, OR 97070

31W15CB05400
Melinda Hiday
29755 SW Camelot St
Wilsonville, OR 97070

31W15CB05500
Theodore & Nicole Case
29264 SW San Remo Ct
Wilsonville, OR 97070

31W15CB05600
John Paolazzi
29286 SW San Remo Ct
Wilsonville, OR 97070

31W15CB05700
Adam & Kellena Collier
29298 SW San Remo Ct
Wilsonville, OR 97070

31W15CB05800
Juliet & Bradley Tate
29243 SW San Remo Ct
Wilsonville, OR 97070

31W15CB16100
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15CB16900
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15CB17500
Arbor Villebois Homeowners Assn
PO Box 23099
Tigard, OR 97281

31W15 02890
Northwest Wilsonville Properties LLC
Po Box 230819
Tigard, OR 97281

Fidelity National Financial, Inc.
Customer Service
900 SW 5th Ave, Mezzanine
Portland, OR 97204
tel: 503-796-6663 fax: 503-796-6631
csrequest@fnf.com

Monday, December 16, 2013

The enclosed radius search was created using data purchased from Core Logic and Metro. This data is derived from county tax records and is accurate to the best of our knowledge. The information provided herein is deemed reliable, but is not guaranteed. Fidelity National Title cannot be held liable for any additions, deletions or discrepancies in this search.

This research was completed on the date stated above.

Thank you.

Enclosures:

- Data summary of parcels of notification
- Map of subject parcel, radius, and parcels of notification
- County assessor maps for parcels of notification
- Labels

 # 1 ----------: **Fidelity National Title Company Of Oregon / Clackamas (OR)** :----------

Parcel #	: 00812687	Ref Parcel#	: 31W15 02800
Owner	: **Northwest Wilsonville Properties LLC**	Document #	:
Site	: 29500 SW Grahams Ferry Rd Wilsonville 97070	Sale Date	:
Mail	: PO Box 230819 Tigard Or 97281	Price	:
Use	: 401 Tract,Tract Land,Improved	Market Total	: $174,745
Improvement	: 600 Churches	Market Land	: $174,745
Legal	: Township 3S Range 1W Section 15 Tax	Market Imps	:
	: LOT 02800 SEE SPLIT CODE ACCT 02890	12-13 Taxes	: $3,160.84
	:	M-5 Rate	: 18.8318
	:	Bldg # Of	
Map Grid	: 715 A7	Phone #	:

Bedrooms: Baths: Year Built: 1986 BldgSF: LotSqFt: 961,805 Acres: 22.08

 # 2 ----------: **Fidelity National Title Company Of Oregon / Clackamas (OR)** :----------

Parcel #	: 05022333	Ref Parcel#	: 31W15 02890
Owner	: **Northwest Wilsonville Properties LLC**	Document #	:
Site	: 29500 SW Grahams Ferry Rd Wilsonville 97070	Sale Date	:
Mail	: PO Box 230819 Tigard Or 97281	Price	:
Use	: 401 Tract,Tract Land,Improved	Market Total	: $873,724
Improvement	: *unknown Improvement Code*	Market Land	: $873,724
Legal	: Township 3S Range 1W Section 15 Tax	Market Imps	:
	: LOT 02890 SEE SPLIT CODE ACCT 02800	12-13 Taxes	: $15,804.18
	:	M-5 Rate	: 18.8318
	:	Bldg # Of	
Map Grid	: 715 A7	Phone #	:

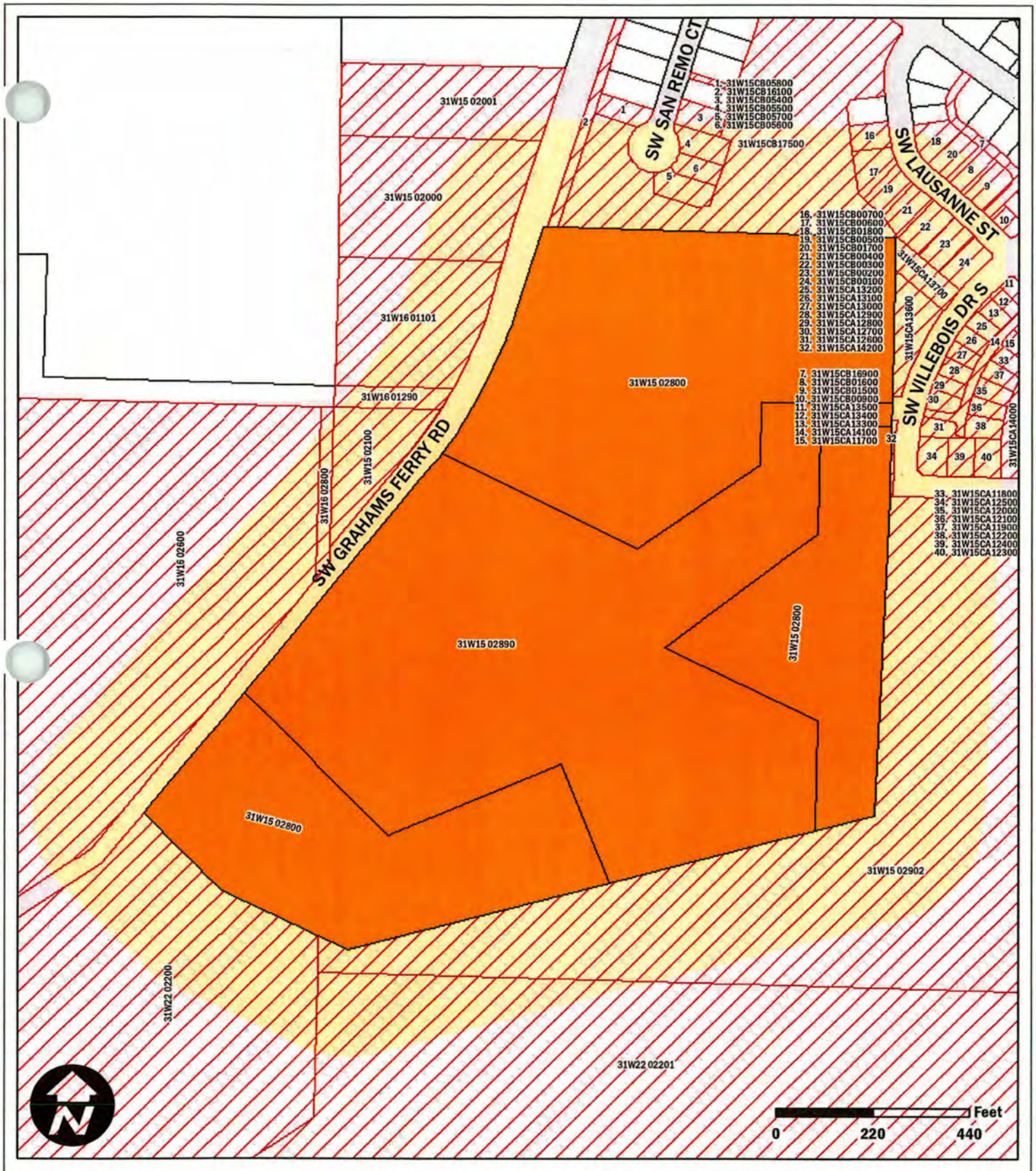
Bedrooms: Baths: Year Built: BldgSF: LotSqFt: 900,385 Acres: 20.67

Information is deemed reliable but not guaranteed..

Fidelity National Title Company Of Oregon / Clackamas (OR)

Ref Parcel #	Owner Name	Site Address	Phone #
31W22 02200	Metro	30000 SW Grahams Ferry Rd Wilsonville	503-797-1700
31W15 02000	Chapman Clifford A & Eveline P	29331 SW Grahams Ferry Rd Wilsonville	
31W15 02001	McLaughlin James B & Jeanette H	29229 SW Grahams Ferry Rd Wilsonville	
31W15 02100	Gibson Oral D & Eva J	29559 SW Grahams Ferry Rd Wilsonville	
31W15 02800	Northwest Wilsonville Properties LLC	29500 SW Grahams Ferry Rd Wilsonville	
31W16 01101	Nickerson Dale L	29393 SW Grahams Ferry Rd Wilsonville	
31W16 01290	Nickerson Lawrence N & Barbara J	*no Site Address*	
31W16 02600	Northwest Wilsonville Properties LLC	*no Site Address*	
31W15 02902	Metro	*no Site Address*	503-797-1700
31W22 02201	Metro	11825 SW Wilsonville Rd Wilsonville 9707	503-797-1700
31W16 02800	Gibson Oral D	*no Site Address*	
31W15CA11700	Forgione Frank & Laura	29473 SW Milano Ln Wilsonville 97070	
31W15CA11800	Dailey Julie A	29479 SW Milano Ln Wilsonville 97070	
31W15CA11900	Bouton Eugene M	29485 SW Milano Ln Wilsonville 97070	
31W15CA12000	Zhou Ying	29491 SW Milano Ln Wilsonville 97070	
31W15CA12100	Herrera Rory	29497 SW Milano Ln Wilsonville 97070	
31W15CA12200	Smith Gail P	29555 SW Milano Ln Wilsonville 97070	
31W15CA12300	Jablonowski Janet L Trustee	11955 SW Normandy Ln Wilsonville 9707	
31W15CA12400	Poppe Guy & Sonimar	11969 SW Normandy Ln Wilsonville 9707	
31W15CA12500	Miller John P & Nancy K	11975 SW Normandy Ln Wilsonville 9707	
31W15CA12600	Bonham James E	29582 SW Villebois Dr S Wilsonville 9707	
31W15CA12700	Friedhoff Jeffrey & Mojgon	29570 SW Villebois Dr S Wilsonville 9707	
31W15CA12800	Glock Brian Daniel	29562 SW Villebois Dr S Wilsonville 9707	
31W15CA12900	Ward Steven P	29550 SW Villebois Dr S Wilsonville 9707	
31W15CA13000	Pawlicki Cynthia L	29542 SW Villebois Dr S Wilsonville 9707	
31W15CA13100	Hyun Seong Hee	29530 SW Villebois Dr S Wilsonville 9707	
31W15CA13200	Sarparast Asghar	29522 SW Villebois Dr S Wilsonville 9707	
31W15CA13300	Cosier Deborah E	29510 SW Villebois Dr S Wilsonville 9707	
31W15CA13400	Lewis Christine L	29492 SW Villebois Dr S Wilsonville 9707	503-482-5499
31W15CA13500	Ramazzotti Shellie A	29480 SW Villebois Dr S Wilsonville 9707	
31W15CA13600	Northwest Mental Health Mgmt Service	29549 SW Villebois Dr S Wilsonville 9707	
31W15CA13700	Emory Justin O	29523 SW Villebois Dr S Wilsonville 9707	
31W15CA14000	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15CA14100	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15CA14200	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15CB00100	Schroeder David D & Dianna Y	11960 SW Lausanne St Wilsonville 97070	
31W15CB00200	Gurnick John D & Janell S Beals	11964 SW Lausanne St Wilsonville 97070	
31W15CB00300	Huynh Buu Lam & Lucile Huynh-Gener	11968 SW Lausanne St (No Mail) Wilson	
31W15CB00400	Pettenger Mary E	11972 SW Lausanne St (No Mail) Wilson	
31W15CB00500	Chaudhuri Jhuma	11976 SW Lausanne St Wilsonville 97070	
31W15CB00600	Williams Jeanie	11980 SW Lausanne St Wilsonville 97070	
31W15CB00700	Nikkel Gina	11984 SW Lausanne St Wilsonville 97070	
31W15CB00900	Ward Sylvia G Rvcbl Living Trust Agrm	29371 SW Villebois Dr S Wilsonville 9707	
31W15CB01500	Sproles Kraig K	11965 SW Lausanne St Wilsonville 97070	
31W15CB01600	Zou Wei	11969 SW Lausanne St Wilsonville 97070	
31W15CB01700	Knight Nathan E	11973 SW Lausanne St Wilsonville 97070	
31W15CB01800	Teichert-Balin Tami A & David R Balin	11977 SW Lausanne St Wilsonville 97070	
31W15CB05400	Hiday Melinda R	29242 SW San Remo Ct Wilsonville 9707	
31W15CB05500	Case Theodore J & Nicole K	29264 SW San Remo Ct Wilsonville 9707	
31W15CB05600	Paolazzi John E	29286 SW San Remo Ct Wilsonville 9707	
31W15CB05700	Collier Adam S & Kellena S	29298 SW San Remo Ct Wilsonville 9707	
31W15CB05800	Tate Juliet & Bradley	29243 SW San Remo Ct Wilsonville 9707	
31W15CB16100	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15CB16900	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15CB17500	Arbor Villebois Homeowners Assn	*no Site Address*	
31W15 02890	Northwest Wilsonville Properties LLC	29500 SW Grahams Ferry Rd Wilsonville	

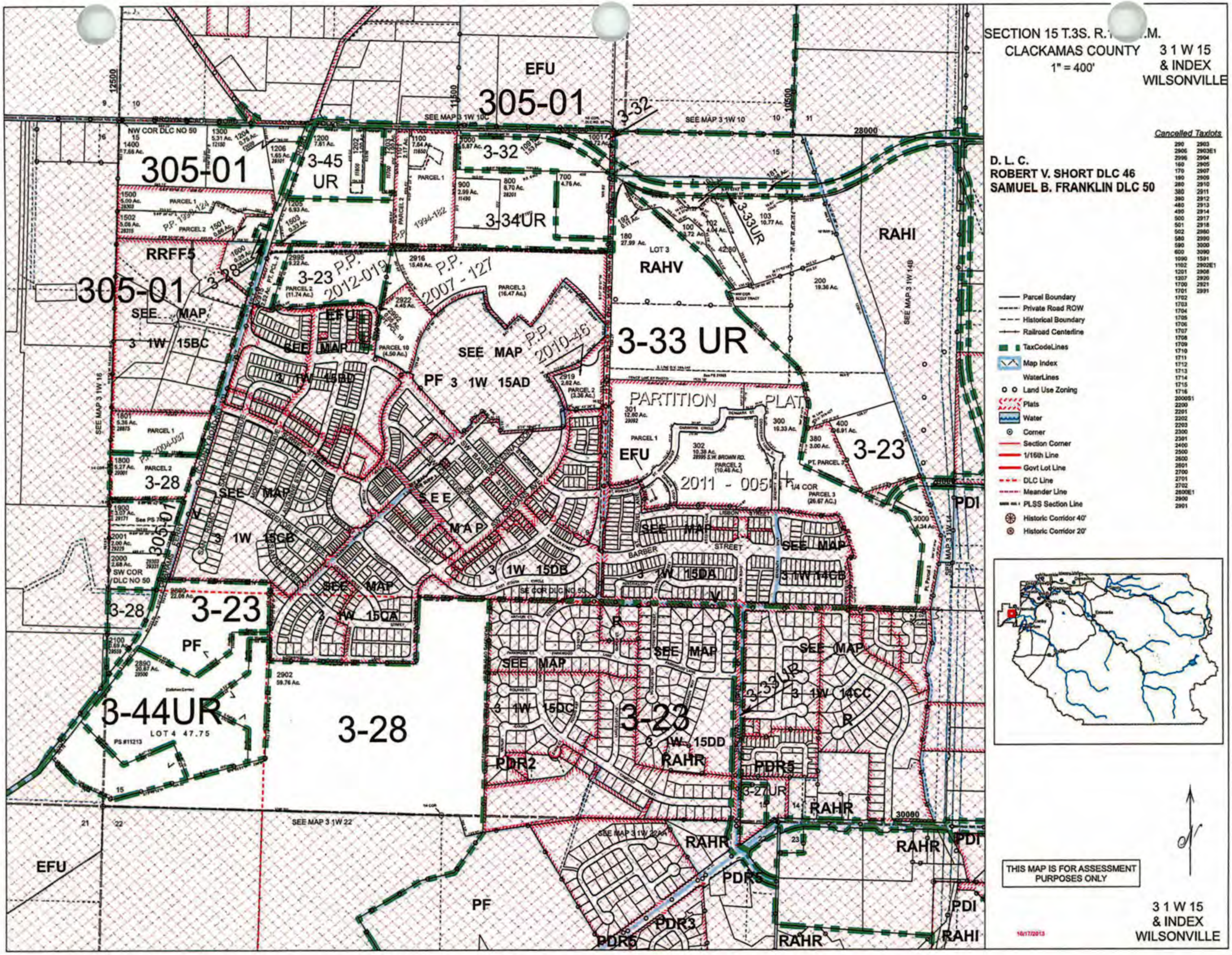
The Information Provided Is Deemed Reliable, But Is Not Guaranteed.



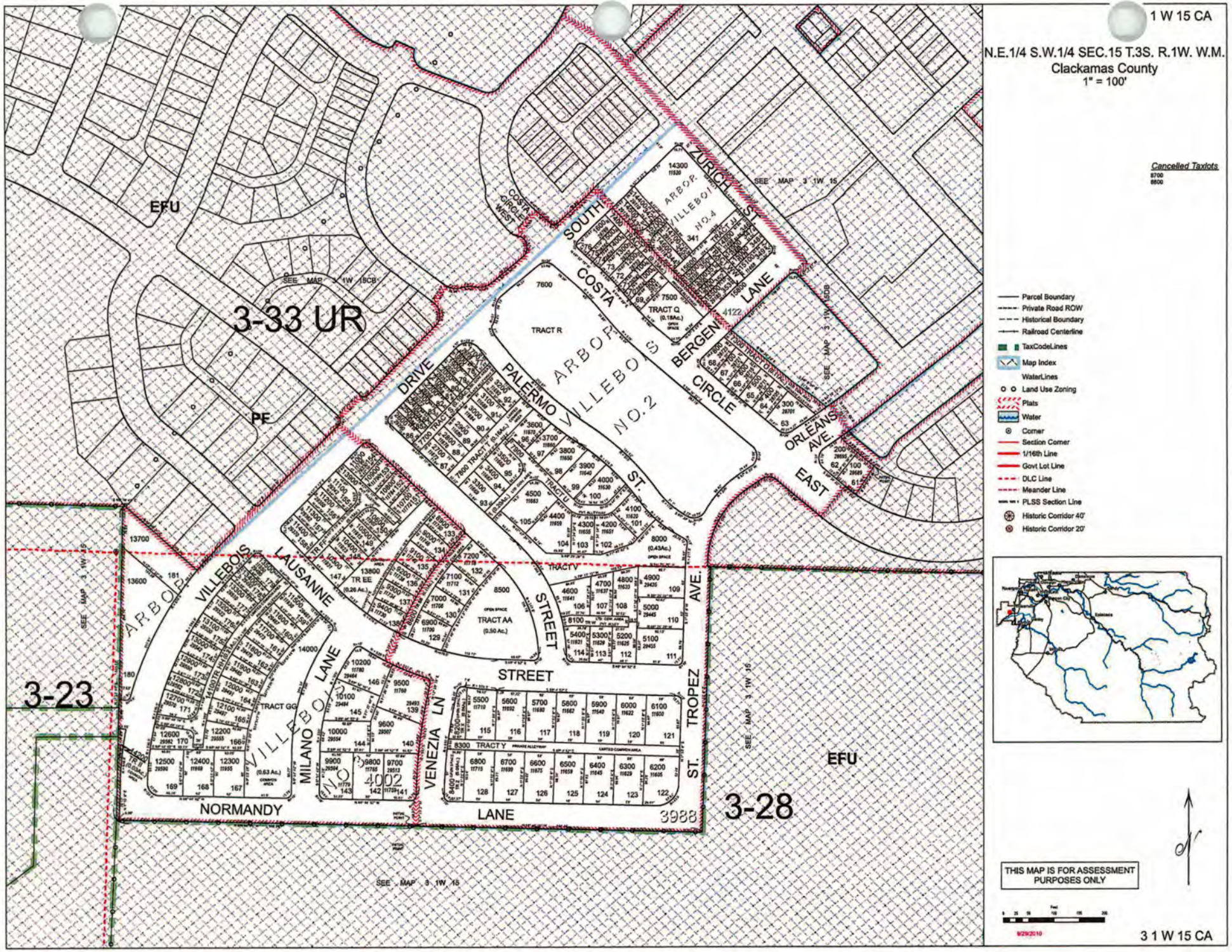
Public Notification Search

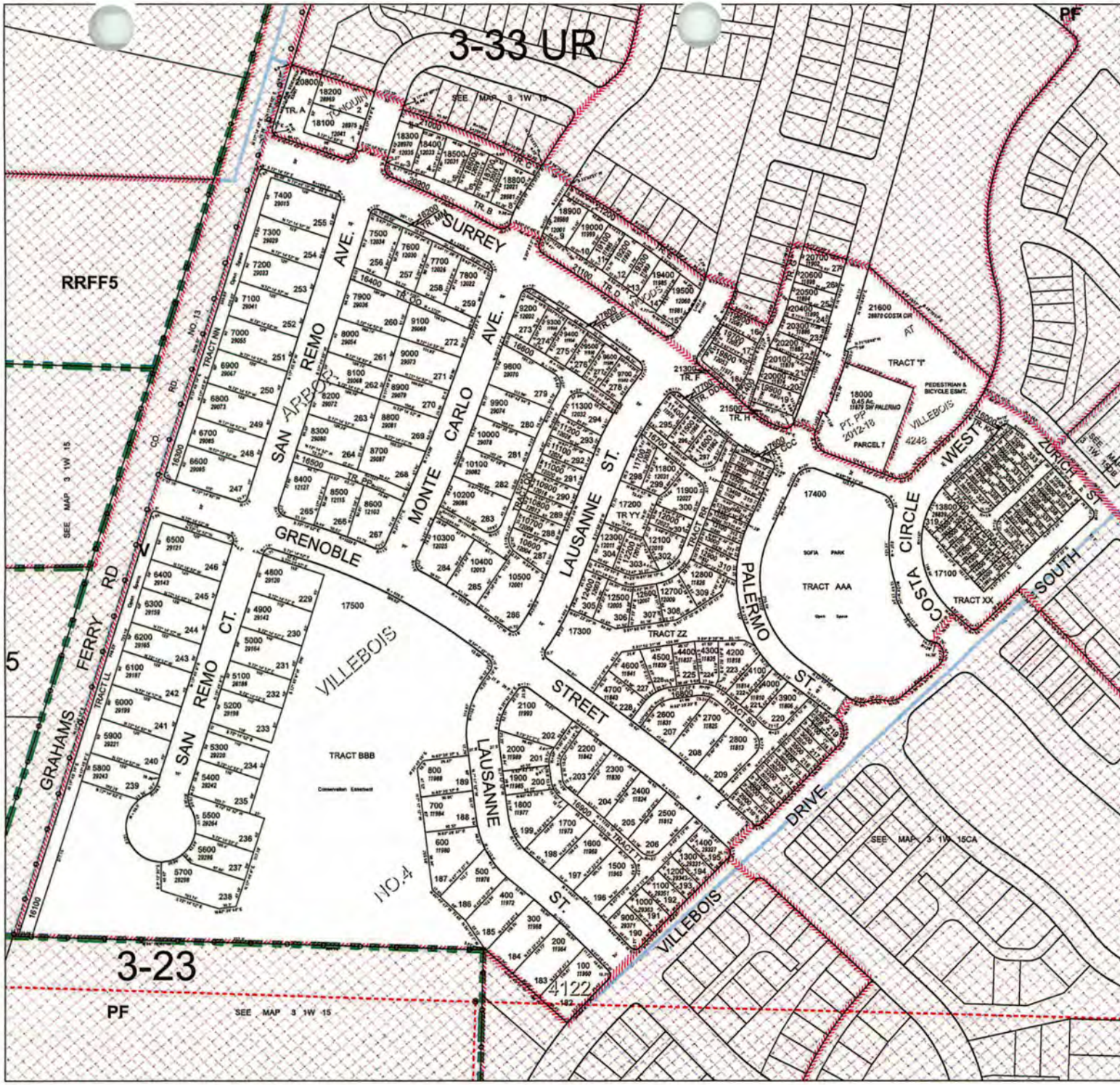
- Subject
- Radius = 250'
- Notification Parcels

Prepared by: Fidelity National Title
Data: CoreLogic, Metro RLIS
Date: 12/16/2013
This information is reliable, but not guaranteed. It is not a survey.



CLACKAMAS COUNTY
1" = 400'
3 1 W 15
& INDEX
WILSONVILLE
D. L. C.
ROBERT V. SHORT DLC 46
SAMUEL B. FRANKLIN DLC 50
Cancelled Taxlots
Parcel Boundary
Private Road ROW
Historical Boundary
Railroad Centerline
TaxCodeLines
Map Index
WaterLines
Land Use Zoning
Plats
Water
Corner
Section Corner
1/16th Line
Govt Lot Line
DLC Line
Meander Line
PLSS Section Line
Historic Corridor 40'
Historic Corridor 20'
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY
3 1 W 15
& INDEX
WILSONVILLE
EFU
305-01
3-45 UR
3-32
3-34UR
3-33UR
RRFF5
RAHV
RAHI
3-23
3-33 UR
PARTITION PLAT
3-28
3-44UR
PF
PDI
RAHR
PDR2
PDR3
PDR5
3-27UR
SEE MAP 3 1W 15AD
SEE MAP 3 1W 15BC
SEE MAP 3 1W 15CB
SEE MAP 3 1W 15DA
SEE MAP 3 1W 15DB
SEE MAP 3 1W 15DC
SEE MAP 3 1W 15DD
SEE MAP 3 1W 14CC
SEE MAP 3 1W 22


1 W 15 CA
N.E.1/4 S.W.1/4 SEC.15 T.3S. R.1W. W.M.
Clackamas County
1" = 100'
Cancelled Taxlots
8700
8800
Parcel Boundary
Private Road ROW
Historical Boundary
Railroad Centerline
TaxCodeLines
Map Index
WaterLines
Land Use Zoning
Plats
Water
Corner
Section Corner
1/16th Line
Govt Lot Line
DLC Line
Meander Line
PLSS Section Line
Historic Corridor 40'
Historic Corridor 20'
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY
3 1 W 15 CA
3-33 UR
3-23
3-28
EFU
PF
SEE MAP 3 1W 15
SEE MAP 3 1W 15CB
SEE MAP 3 1W 15DB
SEE MAP 3 1W 15
SEE MAP 3 1W 15
COSTA CIRCLE WEST
SOUTH
ZURICH ST
COSTA
BERGEN
LANE
CIRCLE
ORLEANS AVE.
EAST
ARBOR VILLEBOIS NO.2
ARBOR VILLEBOIS NO.4
PALERMO
DRIVE
ST.
STREET
VILLEBOIS
LAUSANNE
MILANO
LANE
VENEZIA LN
TROPEZ
AVE.
ST.
NORMANDY
LANE
TRACT R
TRACT Q
TRACT AA
TRACT GG
TRACT V
TRACT Y
TR EE
4122
4002
3988

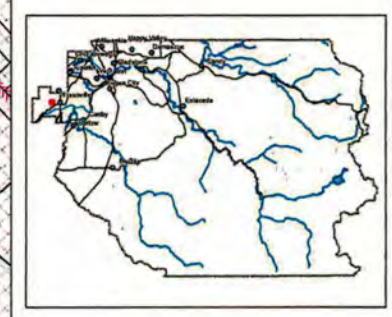


1 W 15CB

N.W.1/4 S.W.1/4 SEC.15 T.3S. R.1W. W.M.
CLACKAMAS COUNTY
1" = 100'

Cancelled Taxlots

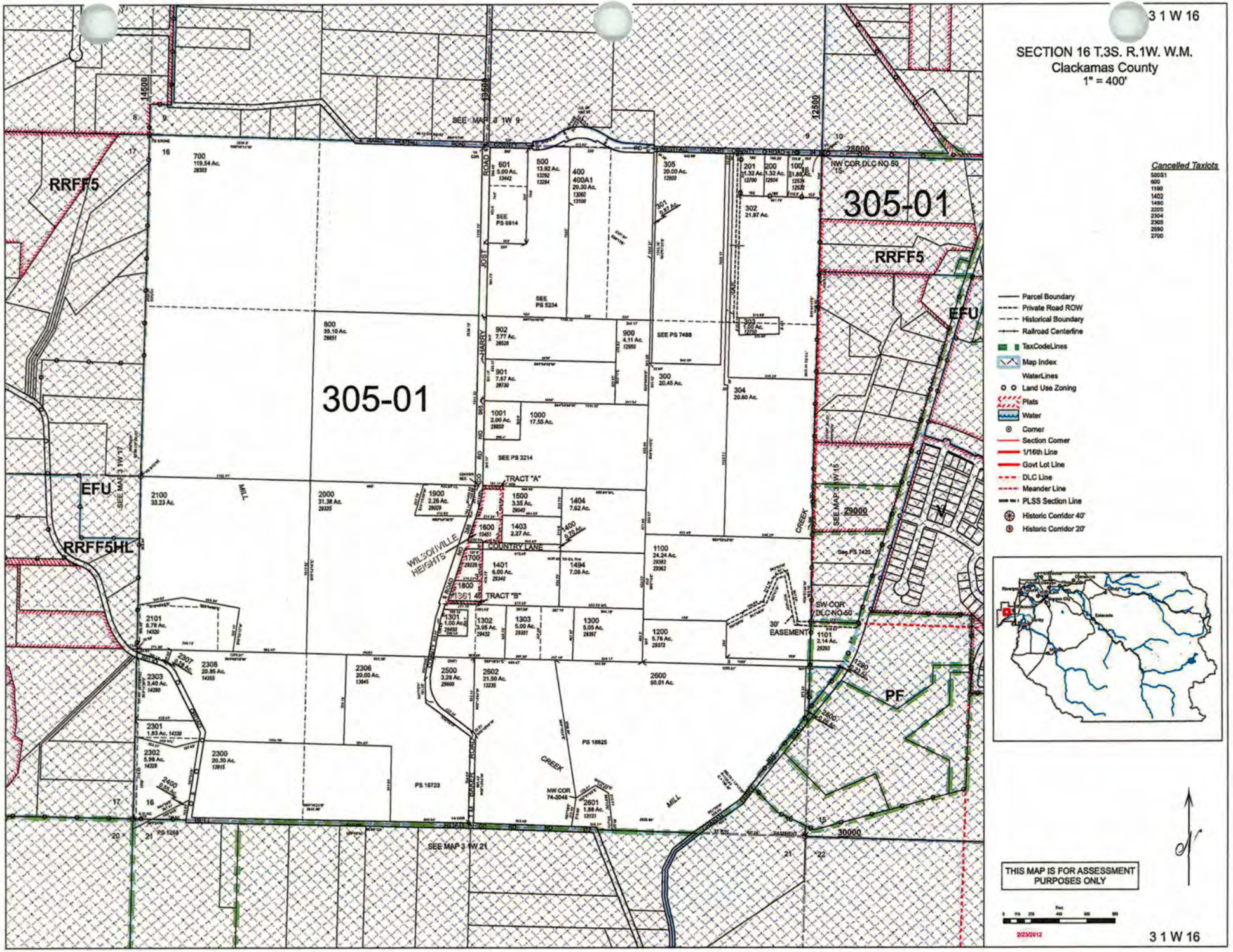
- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'

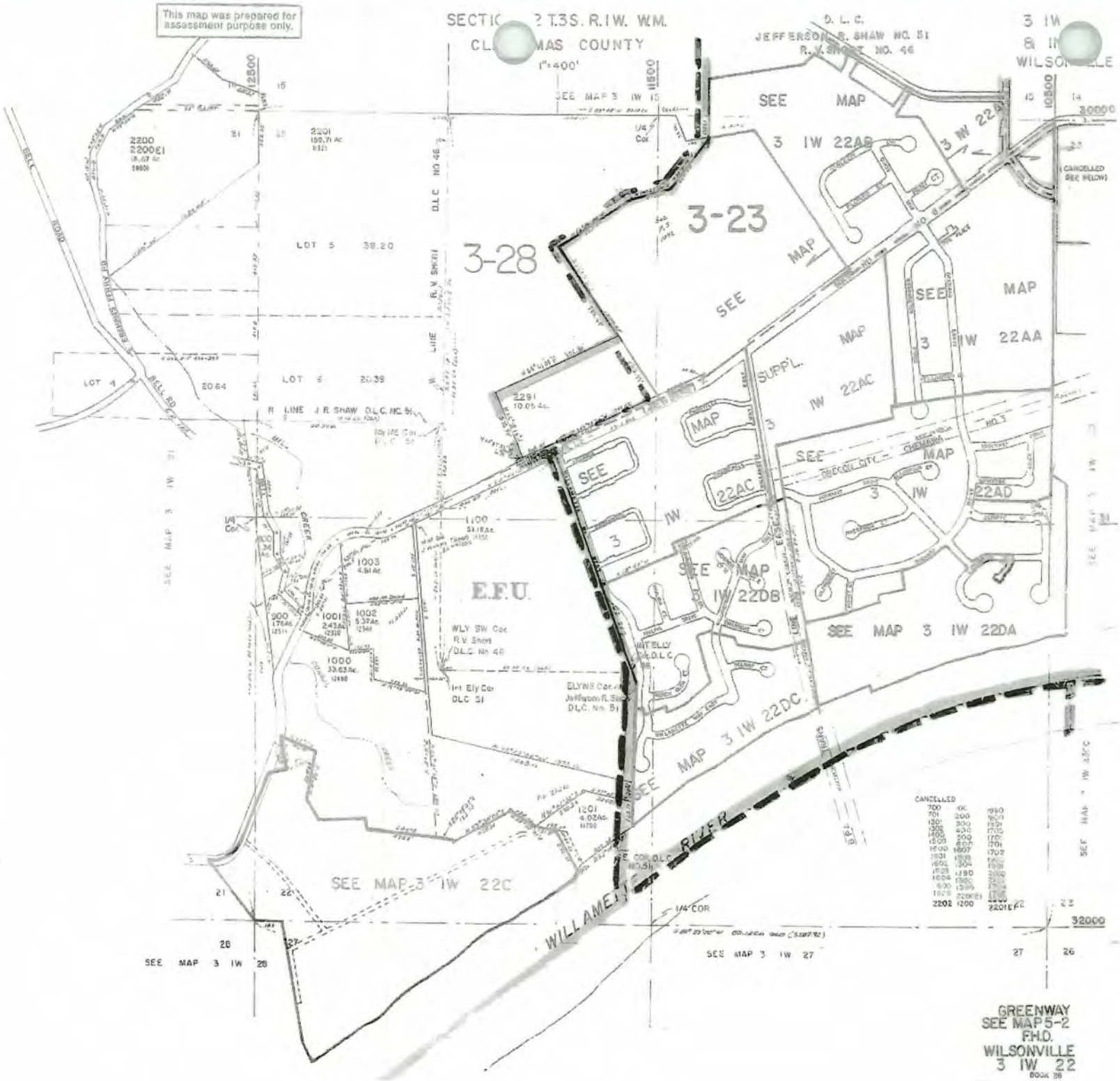


THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

10/21/2013

3 1 W 15CB


3 1 W 16
SECTION 16 T.3S. R.1W. W.M.
Clackamas County
1" = 400'
Cancelled Taxlots
500S1
600
1190
1402
1490
2200
2304
2305
2590
2700
Parcel Boundary
Private Road ROW
Historical Boundary
Railroad Centerline
TaxCodeLines
Map Index
WaterLines
Land Use Zoning
Plats
Water
Corner
Section Corner
1/16th Line
Govt Lot Line
DLC Line
Meander Line
PLSS Section Line
Historic Corridor 40'
Historic Corridor 20'
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY
2/23/2012
3 1 W 16
305-01
305-01
RRFF5
RRFF5
RRFF5HL
EFU
EFU
PF
SEE MAP 3 1W 9
SEE MAP 3 1W 17
SEE MAP 3 1W 15
SEE MAP 3 1W 21
NW COR DLC NO 50
SW COR DLC NO 50
30' EASEMENT
TRACT "A"
TRACT "B"
COUNTRY LANE
WILSONVILLE HEIGHTS
MILL
CREEK
HARRY JOST ROAD
SEE PS 6914
SEE PS 5234
SEE PS 7488
SEE PS 3214
SEE PS 7425
PS 16723
PS 18825
NW COR 74-3048
14500
13500
12500
28000
29000
30000


This map was prepared for assessment purpose only.
SECTION 2 T.3S. R.1W. W.M.
CLACKAMAS COUNTY
1"=400'
D. L. C.
JEFFERSON R. SHAW NO. 51
R. V. SHORT NO. 46
3 IW
& IN
WILSONVILLE
SEE MAP 3 IW 15
SEE MAP 3 IW 22AB
3-23
3-28
SEE MAP 3 IW 22AA
SEE MAP 3 IW 22AC
SUPP'L. MAP
SEE MAP 3 IW 22AD
SEE MAP 3 IW 22DB
SEE MAP 3 IW 22DA
SEE MAP 3 IW 22DC
SEE MAP 3 IW 22C
SEE MAP 3 IW 28
SEE MAP 3 IW 27
E.F.U.
LOT 5 38.20
LOT 6 20.39
LOT 4 20.64
R. LINE J. R. SHAW D.L.C. NO. 51
WLY SW Cor R.V. Short D.L.C. No. 46
Int Ely Cor DLC 51
ELYNE Cor. Jefferson R. Shaw D.L.C. No. 51
INT ELLY Cor. D.L.C.
WILLAMETTE RIVER
CANCELLED
CANCELLED SEE BELOW
GREENWAY
SEE MAP 5-2
F.H.D.
WILSONVILLE
3 IW 22
BOOK 38

SECTION II) PRELIMINARY DEVELOPMENT PLAN

SUPPORTING COMPLIANCE REPORT
PRELIMINARY DEVELOPMENT PLAN 7 - SOUTH

SECTION IIA

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I. WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE

SECTION 4.125 VILLAGE (V) ZONE

(.02) PERMITTED USES

Examples of principle uses that are typically permitted:

A. Single Family Dwellings

H. Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association.

Response: This Preliminary Development Plan (PDP) application proposes to create 100 lots for the development of a range of single-family detached dwellings, as well as tracts for open space, a pocket park, linear greens, and landscaping. All proposed uses within the subject PDP are permitted pursuant to this section.

(.05) DEVELOPMENT STANDARDS APPLYING TO ALL DEVELOPMENTS IN THE VILLAGE ZONE

In addition to other applicable provisions of the Wilsonville Planning and Land Development Ordinance, all development in the Village zone shall be subject to Tables V-1 through V-4, and to the following. If there is a conflict between the provisions of the Village zone and other portions of the Code, then provisions of this section shall apply.

A. Block, Alley, Pedestrian and Bicycle Standards:

1. Maximum Block Perimeter: 1,800 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent a block perimeter from meeting this standard.

2. Maximum spacing between streets or private drive for local access: 530 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent street extensions from meeting this standard. Under such circumstances, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets or private drives, unless the Development Review Board makes a finding that barriers such as buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard.

Response: Compliance with these standards has been demonstrated by the concurrent application for SAP - South Plan Area 2. PDP 7 South is consistent with Specific Area Plan - South Plan Area 2. No refinements or amendments are proposed.

3. If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be

provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard.

Response: Where local access spacing exceeds 530 feet, an intervening pedestrian/bicycle access is provided in compliance with the 330-foot standard. When the pedestrian/bicycle access is located in conjunction with an alley, a public pedestrian/bicycle access easement will be granted. All pedestrian/bicycle accesses will be lighted to not discourage travel during dawn or dusk hours.

B. Access: All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer.

Response: All of the lots within the proposed PDP that have frontage on a public street and an alley will take vehicular access from an alley to a garage or parking area.

C. Trailers, travel trailers, mobile coaches, or any altered variation thereof shall not be used for the purpose of conducting a trade or calling, or for storage of material, unless approved for such purpose as a temporary use.

Response: No trailers, travel trailers, mobile coaches, or such vehicles will be used for the purpose of conducting a trade or calling or for the storage of material unless approved as a temporary use.

D. Fences:

1. General Provisions:

a. Fencing within the Village Zone shall be in compliance with the Master Fencing Program in the adopted Architectural Pattern Book for the appropriate SAP.

b. When two or more properties with different setbacks abut, the property with the largest front yard setback requirement shall be used to determine the length and height of the shard side yard fence, as required by section 4.125(.05)(D)(1)(a) above.

c. The Development Review Board may, in their discretion, require such fencing as deemed necessary to promote and provide traffic safety, noise mitigation, and nuisance abatement, and the compatibility of different uses permitted on adjacent lots of the same zone and on adjacent lots of different zones.

2. Residential:

a. **The maximum height of any fence located in the required front yard of a residential development shall not exceed three (3) feet.**

b. **Fences on residential lots shall not include chain link, barbed wire, razor wire, electrically charged wire, or be constructed of sheathing material such as plywood or flake board. Fences in residential areas that protect wetlands, or other sensitive areas, may be chain link.**

Response: The SAP South Master Fencing Program is part of the SAP South Pattern Book. A concurrent application to amend Specific Area Plan - South Plan Area 2 has been submitted, which included the addition of Plan Area 2 to the SAP South Master Fencing Program. Additions to the Master Fencing Program included the continuation of an Enhanced Full View or Partial View Fence with Landscaping along Grahams Ferry Road where residential lots are proposed, a Secondary Site Identifier at the site entrance, and SROZ fencing where lots are adjacent to the SROZ. Residential lot fencing occurs when each home is constructed, details of which are provided with Building Permit review. Residential lot fencing will occur in compliance with the fencing specified for the specific lot type and style in accordance with the SAP South Master Fencing Program.

E. Recreational Area in Multi-Family Residential and Mixed Use Developments

Response: PDP 7 South includes lots for the development of single family residential homes. Therefore, this standard does not apply.

F. Fire Protection:

1. All structures shall include a rated fire suppression system (i.e., sprinklers), as approved by the Fire Marshal

Response: All of the homes within the proposed PDP area will include appropriate fire suppression systems. This will be verified with review of future building permit applications.

Table V-1 Development Standards

Response: *Sheet 4 - Tentative Plat* (see Notebook Section IIIB) depicts proposed lot sizes and dimensions. All of the lots will be developed with single-family detached dwelling units. All of the lots meet applicable requirements, as addressed below. No buildings are proposed with this application. Final compliance with these standards will be reviewed at building permit submittal.

Single-Family Dwellings

Minimum lot size: 2,250 square feet

Minimum lot width: 35 feet

Minimum lot depth: 50 feet

Response: As demonstrated in the attached Tentative Plat Compliance Report (see Notebook Section IIIA), all of the lots within the proposed Tentative Plat meet the applicable minimum lot size, width, and depth requirements of this Section and

of the SAP - South Architectural Pattern Book, with allowed variations for site features, e.g. site topography or road alignments.

Allowed variations are requested for Lots 90 and 97, where the presence of surrounding open space tracts including SROZ areas and the termination of SW Alta Court limit the available area for lot frontage. Lot 90 has 32.5 feet of frontage on the southwestern terminus of SW Alta Court. Lot 97 has 59 feet of frontage on the northeastern terminus of SW Alta Court. However, where the front wall of each residential building on both Lots 90 and 97 are anticipated to be located, the lot width is approximately 60 feet. Lots 90 and 97 have been designed to protect surrounding significant natural resources and it is not possible to increase the width of these lots or extend the street without encroaching into the adjacent SROZ areas.

Additionally, a variation is requested for medium lots to be 50 feet wide within the block bounded by SW Almafi Lane, SW Naples Street, SW Como Drive, and SW Beaumont Lane. These lots meet the minimum lot size and depth for Mediums, but exceed the lot width range shown in the SAP - South Pattern Book (+/- 41' to 49') by one (1) foot. However, lots are not of a sufficient depth to be classified as Standards and lot depth cannot be increased due to street alignment, presence of the alley, and the intent to protect SROZ areas on the east and west sides of this block.

(.07) GENERAL REGULATIONS - OFF-STREET PARKING, LOADING & BICYCLE PARKING

Except as required by Subsections (A) through (D), below, the requirements of Section 4.155 shall apply within the village zone.

A. General Provisions:

1. The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set forth herein shall be considered by the Development Review Board as minimum criteria.

2. The Board shall have the authority to grant variances or refinements to these standards in keeping with the purposes and objectives set forth in this zone.

Response: The applicant acknowledges that the provision and maintenance of off-street parking is the continuing obligation of the property owner. There are no variances or refinements to the standards of this section proposed with this application.

B. Minimum and Maximum Off-Street Parking Requirements:

1. Table V-2, Off-Street Parking Requirements, below, shall be used to determine the minimum and maximum parking standards for noted land uses. The number of required parking spaces shown in Table V-2 shall be determined by rounding to the nearest whole parking space...

Table V-2: Off-Street Parking Requirements

Category	Min. Vehicle Spaces	Max. Vehicle Spaces	Bicycle Short Term	Bicycle Long Term
Single Family Detached Dwelling Units	1.0 / DU	NR	NR	NR

Response: Each of the homes will provide a minimum of a two-car garage in compliance with this standard.

C. Minimum Off-Street Loading Requirements:

Response: The proposed PDP includes lots for development of single-family homes. Therefore, no loading areas are required.

D. Bicycle Parking Requirements:

Response: The proposed PDP includes single-family detached residential units. There is no bicycle parking requirement for these unit types, as noted in *Table V-2* above. Therefore, these standards do not apply.

(.08) OPEN SPACE

Open space shall be provided as follows:

A. In all residential developments and in mixed-use developments where the majority of the developed square footage is to be in residential use, at least twenty-five percent (25%) of the area shall be open space, excluding street pavement and surface parking. In multi-phased developments, individual phases are not required to meet the 25% standard as long as an approved Specific Area Plan demonstrates that the overall development shall provide a minimum of 25% open space. Required font yard areas shall not be counted towards the required open space area.

B. Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City of Wilsonville standards. The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage. See SROZ provisions, Section 4.139.10.

C. The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or maintenance are the responsibility of a private party or homeowners' association, the

City Attorney shall review and approve any pertinent bylaws, covenants, or agreements prior to recordation.

Response: *Figure 5 - Parks & Open Space Plan* of the *Villebois Village Master Plan* states that there are a total of 159.73 acres within Villebois, which is approximately 33% of Villebois. An amendment to Specific Area Plan - South to include Plan Area 2 has been submitted concurrently. Specific Area Plan - South Plan Area 2 included minor refinements to park and open space areas, which increased parks and open space areas within the subject site. Parks and open space areas within PDP 7 South are 24.06 acres in size, consistent with the acreage proposed for the subject area with SAP South Plan Area 2. Additionally, parks and open spaces compromise 56% of PDP 7 South, exceeding the minimum requirement of 25%. Therefore, PDP 7 South is consistent with the overall development and will provide the planned parks and open space areas for the subject area.

(.09) STREET & ACCESS IMPROVEMENT STANDARDS

A. Except as noted below, the provisions of Section 4.177 apply within the Village zone:

1. General Provisions:

a) All street alignment and access improvements shall conform to Figures 7, 8, 9A, and 9B of the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan and the following standards:

Response: An amendment to SAP South to add Plan Area 2 has been submitted concurrently with PDP 7S. Specific Area Plan - South Plan Area 2 proposed minor refinements to the street network. Street alignments and access improvements within this PDP are consistent with the *Villebois Village Master Plan* and SAP - South Plan Area 2 and the proposed *Master Plan* refinements.

i. All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan.

Response: All street improvements within this PDP will comply with the applicable Public Works Standards. The street system within PDP 7 South is designed to provide for the continuation of streets within Villebois and the adjoining streets according to the *Master Plan*. The street system is illustrated on *Sheet 7 - Circulation Plan* (see Notebook Section IIB).

ii. All streets shall be developed according to the Master Plan.

Response: The street system is illustrated on *Sheet 7 - Circulation Plan* (see Notebook Section IIB). All streets in PDP 7 South will be developed in accordance with the *Master Plan*.

2. **Intersections of streets**

a) **Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.**

b) **Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District.**

Response: The attached drawings (see Notebook Section IIB) demonstrate that all proposed streets will intersect at angles consistent with the above standards.

c) **Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:**

i. **1000 ft. for major arterials**
ii. **600 ft. for minor arterials**
iii. **100 ft. for major collector**
iv. **50 ft. for minor collector**

Response: The attached drawings (see Notebook Section IIB) demonstrate that opposing intersections on public streets are offset, as appropriate, so that no danger to the traveling public is created.

d) **Curb Extensions:**

i. **Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F) below, and shall:**

- **Not obstruct bicycle lanes on collector streets.**
- **Provide a minimum 20 foot wide clear distance between curb extensions all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District.**

Response: Proposed curb extensions are shown on *Sheet 7 - Circulation Plan* (see Notebook Section IIB), none of which are located on collector streets. The attached drawings illustrate that all street intersections will have a minimum 20 foot wide clear distance between curb extensions.

3. **Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%, may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards.**

Response: *Sheet 5 - Grading & Erosion Control Plan* (see Notebook Section IIB), demonstrates that proposed streets can comply with this standard.

4. **Centerline Radius Street Curves:**

The minimum centerline radius street curves shall be as follows:

a) **Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.**

b) **Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.**

c) **Local streets: 75 feet**

Response: *Sheet 4 - Tentative Plat* (see Notebook Section IIB) demonstrates that all streets will comply with the above standards.

5. **Rights-of-way:**

a) **See (.09) (A), above.**

Response: Proposed rights-of-way are shown on the attached drawings (see Notebook Section IIB). Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of final plat(s) in accordance with Section 4.177.

6. **Access drives.**

a) **See (.09) (A), above.**

b) **16 feet for two-way traffic.**

Response: The attached drawings (see Notebook Section IIB) demonstrate that all proposed access drives will have a minimum improvement width of 16 feet and will provide two-way travel. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. All access drives will include dedicated easements for fire access and will be designed to provide a clear travel lane free from any obstructions.

7. **Clear Vision Areas**

a) **See (.09) (A), above.**

Response: The *Circulation Plan* (see Notebook Section IIB) illustrates clear vision areas will be provided and maintained in compliance with the Section 4.177.

8. Vertical clearance:

a) See (.09) (A), above.

Response: The *Circulation Plan (see Notebook Section IIB)* illustrates vertical clearance will be provided and maintained in compliance with the Section 4.177.

9. Interim Improvement Standard:

a) See (.09) (A), above.

Response: An interim street section improvement will be provided on Grahams Ferry Road to create consistency with street improvements completed previously with phased development of SAP North and SAP South. No other interim street improvements are proposed.

(.10) SIDEWALK AND PATHWAY IMPROVEMENT STANDARDS

A. The provisions of Section 4.178 shall apply within the Village zone.

Response: All sidewalks and pathways within SAP - South Plan Area 2 will be constructed in accordance with the standards of Section 4.178 and the *Villebois Village Master Plan*.

(.11) LANDSCAPING, SCREENING AND BUFFERING

A. Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:

1. Streets in the Village zone shall be developed with street trees as described in the Community Elements Book.

Response: An amendment to SAP - South to add Plan Area 2 to the Community Elements Book has been submitted concurrently. As amended, the Community Elements Book includes the Street Master Plan for SAP - South Plan Area 2. *Sheet 10 - Street Tree/Lighting Plan* (see Notebook Section IIB) shows the street trees proposed within this PDP. Street trees within PDP 7 South will comply with the Street Tree Master Plan for Plan Area 2 and the appropriate standards of Section 4.176.

(.12) MASTER SIGNAGE AND WAYFINDING

Response: An amendment to SAP - South to add Plan Area 2 to the SAP South Signage & Wayfinding Plan has been submitted concurrently. Plan Area 2 includes a 'Secondary Site Identifier' at the entrance from Grahams Ferry Road to subject area. All signage in the subject area will comply with the SAP - South Vol. IV Master Signage & Wayfinding Plan for the addition of Plan Area 2. The attached PDP plans (see Notebook Section IIB) and FDP plans (see Notebook Section VIB) show provision of the 'Secondary Site Identifier.'

(.13) DESIGN PRINCIPLES APPLYING TO THE VILLAGE ZONE

A. The following design principles reflect the fundamental concepts, and support the objectives of the *Villebois Village Master Plan*, and guide the fundamental qualities of the built environment within the Village zone.

1. The design of landscape, streets, public places and buildings shall create a place of distinct character.

2. The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the *Villebois Village Master Plan*.

3. The design of buildings shall functionally relate to adjacent open space, gateways, street orientation, and other features as shown in the *Villebois Village Master Plan*.

4. The design of buildings and landscape shall functionally relate to sunlight, climate, and topography in a way that acknowledges these conditions as particular to the Willamette Valley.

5. The design of buildings shall incorporate regional architectural character and regional building practices.

6. The design of buildings shall include architectural diversity and variety in its built form.

7. The design of buildings shall contribute to the vitality of the street environment through incorporation of storefronts, windows, and entrances facing the sidewalk.

8. The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.

9. The design of buildings and landscape shall minimize the visual impact of, and screen views of off-street parking from streets.

10. The design of exterior lighting shall minimize off-site impacts, yet enable functionality.

Response: The proposed PDP and FPD (application attached in Notebook Section VI) are guided by SAP - South Plan Area 2, including the Architectural Pattern Book and Community Elements Book, in order to achieve a built environment that reflects the fundamental concepts and objectives of the *Master Plan*. The Design Principles of Section (.13) have driven the development of the SAP Drawings, the Architectural Pattern Book and the Community Elements Book, submitted with the concurrent SAP - South amendment, and will work in concert to assure that the vision of Villebois is realized.

(.14) DESIGN STANDARDS APPLYING TO THE VILLAGE ZONE

A. The following design standards implement the Design Principles found in (.13), above, and enumerate the architectural details and design requirements applicable to buildings and other features within the Village (V) zone. The Design Standards are based primarily on the features, types, and details of the residential traditions in the Northwest, but are not intended to mandate a particular style or fashion. All development within the Village zone shall incorporate the following:

1. Generally:

a. Flag lots are not permitted.

Response: As shown on the *Tentative Plat* (see Notebook Section IIB), no flag lots are proposed.

b. The minimum lot depth for a single-family dwelling with an accessory dwelling unit shall be 70 feet.

Response: The Architectural Pattern Book standardizes lot depth of Medium, Standard, and Large Lots at lengths that exceed 70 feet. Medium Lots have minimum lot depths of 71 feet, and Standard and Large Lots have minimum lot depths of 90 feet. Therefore, Medium, Standard, and Large Lots meet the minimum lot depth requirement for a single family dwelling with an accessory dwelling unit. However, no accessory dwelling units are proposed with this application.

2. Building and site design shall include:

a. Proportions and massing of architectural elements consistent with those established in an approved Pattern Book or Village Center Design.

b. Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Pattern Book, Community Elements Book or approved Village Center Architectural Standards.

c. Protective overhangs or recesses at windows and doors.

d. Raised stoops, terraces or porches at single-family dwellings.

e. Exposed gutters, scuppers, and downspouts, or approved equivalent.

f. The protection of existing significant trees as identified in an approved Community Elements Book.

g. A landscape plan in compliance with Section (.07) and (.11), above.

h. Building elevations of block complexes shall not repeat an elevation found on an adjacent block.

i. Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.

j. A porch shall have no more than three walls.

k. A garage shall provide enclosure for the storage of no more than three vehicles.

Response: The above Design Standards are incorporated into the Architectural Pattern Book, which is intended to identify architectural details and design features for use with Specific Area Plan - South Plan Area 2. In addition, Design Standards are incorporated into the Community Elements Book, which is intended to identify important contributing elements that establish a coherent community identity. Conformance with the Pattern Book and Community Elements Book will assure consistency with the Design Standards of subsection (.14). Subsequent Building Permit applications will review building and site design for consistency with the Pattern Book.

The *Tree Preservation Plan* (see Notebook Section IIB) rates the condition of existing trees and identifies trees for protection or removal within PDP 7 South. The *Parks/Open Space/Pathways Plan* (see Notebook Section IIB) depicts the landscape and program elements for the park/trail/open space areas of PDP 7 South. The Final Development Plan application (see Notebook Section VI) advances landscaping and parks drawings.

3. Lighting and site furnishings shall be in compliance with the approved Community Elements Book.

Response: The FDP application (see Notebook Section VI) shows site furnishings within the parks. *Sheet 10 - Street Tree/Lighting Plan* (see Notebook Section IIB) shows proposed street trees and lighting for this Preliminary Development Plan. The proposed lighting and site furnishings will comply with the Community Elements Book as amended for Plan Area 2.

4. Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein.

Response: The criteria of Tables V-3 and V-4 (Permitted Materials & Configurations) are referenced in the Architectural Pattern Book. Subsequent Building Permit applications will review proposed buildings for consistency with the criteria of Table V-3 and Table V-4 and the Architectural Pattern Book.

(.18) VILLAGE ZONE DEVELOPMENT PERMIT PROCESS

B. Unique Features and Processes of the Village (V) Zone. To be developed, there are three (3) phases of project approval. Some of these phases may be combined, but generally the approvals move from the conceptual stage through to detailed architectural, landscape and site plan review in stages. All development within the Village zone shall be subject to the following processes:

2. Preliminary Development Plan (PDP) approval by the Development Review Board, as set forth in Section 4.125(.18)(G) through (K) (Stage II equivalent), below. Following SAP approval, an applicant may file applications for Preliminary Development Plan approval (Stage II equivalent) for an approved phase in accordance with the approved SAP, and any conditions attached thereto. Land divisions may also be preliminarily approved at this stage. Except for land within the Central SAP or multi-family dwellings outside the Central SAP, application for a zone change and Final Development Plan (FDP) shall be made concurrently with an application for PDP approval. The SAP and PDP/FDP may be reviewed simultaneously when a common ownership exists.

Final Development (FDP) approval by the Development Review Board or the Planning Director, as set forth in Sections 4.125(.18)(L) through (P) (Site Design Review equivalent), below, may occur as a separate phase for lands

in the Central SAP or multi-family dwellings outside the Central SAP.

Response: The Applicant is requesting approval of a Preliminary Development Plan (PDP). Compliance with Sections 4.125(.18)(G) through (K) is demonstrated in the following sections of this report. An amendment to Specific Area Plan - South to add Plan Area 2 has been submitted concurrently with this application.

The following applications are included with this submittal: Tentative Plat (see Notebook Section III), Zone Change (see Notebook Section IV), Tree Removal Plan (see Section V), and Final Development Plan (see Section VI).

G. Preliminary Development Plan Approval Process:

1. An application for approval of a Preliminary Development Plan for a development in an approved SAP shall:

a) Be filed with the City Planning Division for the entire SAP, or when submission of the SAP in phases has been authorized by the Development Review Board, for a phase in the approved sequence.

Response: A concurrent application for Specific Area Plan - South to add Plan Area 2 has been submitted. SAP - South Plan Area 2 included an amended *Phasing Plan*, which depicts Plan Area 2 as Phase 7 of SAP - South. PDP 7 South is submitted for the entirety of Plan Area 2.

b) Be made by the owner of all affected property or the owner's authorized agent; and.

Response: This application is made by Polygon Northwest Company with authorization from the property owner. The application form can be found in Notebook Section IB.

c) Be filed on a form prescribed by the City Planning Division and filed with said division and accompanied by such fee as the City Council may prescribe by resolution; and.

Response: The appropriate application form and fee have been filed with this submittal. A copy of the form and fee are included in Notebook Sections IB and IC, respectively.

d) Set forth the professional coordinator and professional design team for the project; and.

Response: The professional coordinator and professional design team are set forth in the Introductory Narrative, located in Notebook Section IA.

e) State whether the development will include mixed land uses, and if so, what uses and in what proportions and locations.

Response: This PDP does not include mixed land uses. The proposed land uses are shown on *Sheet 8 - Site/Land Use Plan* (see Notebook Section IIB).

f) **Include a preliminary land division (concurrently) per Section 4.400, as applicable.**

Response: A request for preliminary land division approval is included in Notebook Section III. A Tentative Plat application is included in Notebook Section III, which includes a Supporting Compliance Report, Tentative Plat, draft CC&R's, a copy of the certification of assessments and liens form, and subdivision name approval from the County Surveyor's Office.

g) **Include a concurrent application for a Zone Map Amendment (i.e., Zone Change) for the subject phase.**

Response: A Zone Change application is submitted concurrently (see Notebook Section IV), which proposes to zone the subject PDP area as Village (V). Notebook Section IV includes a Supporting Compliance Report, Zone Change Map, and legal description and sketch.

2. **The application for Preliminary Development Plan approval shall include conceptual and quantitatively accurate representations of the entire development sufficient to demonstrate conformance with the approved SAP and to judge the scope, size and impact of the development on the community and shall be accompanied by the following information:**

   a) **A boundary survey or a certified boundary description by a surveyor licensed in the State of Oregon.**

   b) **Topographic information sufficient to determine direction and percentage of slopes, drainage patterns, and in environmentally sensitive areas, (e.g., flood plain, wetlands, forested areas, steep slopes or adjacent to stream banks). Contour lines shall relate to North American Vertical Datum of 1988 and be at minimum intervals as follows:**

      i) **One (1) foot contours for slopes of up to five percent (5%);**
      ii) **Two (2) foot contours for slopes from six percent (6%) to twelve (12%);**
      iii) **Five (5) foot contours for slopes from twelve percent (12%) to twenty percent (20%). These slopes shall be clearly identified, and**
      iv) **Ten (10) foot contours for slopes exceeding twenty percent (20%).**

   c) **The location of areas designated Significant Resource Overlay Zone (SROZ), and associated 25-foot Impact Areas, within the PDP and within 50 feet of the PDP boundary, as required by Section 4.139.**

Response: A the legal description and sketch for the zone map amendment (see Section IVC of this Notebook), prepared by a surveyor licensed in the State of Oregon, is provided as a certified boundary description. Topographic information and SROZ information in accordance with Sections 4.125(.18)G.2.b. & c. is shown on the *Existing Conditions*, located in Section IIB of this Notebook.

d) A tabulation of the land area to be devoted to various uses, and a calculation of the average residential density per net acre.

Response: Following is a tabulation of land area devoted to the various uses and a calculation of net residential density:

Gross Acreage	42.76 Acres
Open Space	24.06 Acres
Public Streets	6.83 Acres
Lots and Alleys	11.58 Acres

Net Residential Density: 100 lots / 11.58 Acres = 8.6 units per net acre

e) The location, dimensions and names, as appropriate, of existing and platted streets and alleys on and within 50 feet of the perimeter of the PDP, together with the location of existing and planned easements, sidewalks, bike routes and bikeways, trails, and the location of other important features such as section lines, section corners, and City boundary lines. The plan shall also identify all trees 6 inches and greater d.b.h. on the project site only.

Response: The attached plans (see Notebook Section IIB) illustrate the existing conditions including information listed above, as applicable to the subject site.

f) Conceptual drawings, illustrations and building elevations for each of the listed housing products and typical non-residential and mixed-use buildings to be constructed within the Preliminary Development Plan boundary, as identified in the approved SAP, and where required, the approved Village Center Design.

Response: The proposed PDP includes Medium, Standard, and Large lot types, which are all detached single-family homes. Conceptual elevations for the homes are included in Section IIG of this Notebook.

g) A composite utility plan illustrating existing and proposed water, sanitary sewer, and storm drainage facilities necessary to serve the SAP.

Response: Proposed storm drainage facilities, and water and sanitary lines are shown on *Sheet 6 - Composite Utility Plan* (see Notebook Section IIB).

h) **If it is proposed that the Preliminary Development Plan will be executed in Phases, the sequence thereof shall be provided.**

Response: *Sheet 11 - Phasing Plan* (see Notebook Section IIB) illustrates phases to be executed with PDP 7S.

i) **A commitment by the applicant to provide a performance bond or other acceptable security for the capital improvements required by the project.**

Response: The applicant will provide a performance bond or other acceptable security for the capital improvements required by the project.

j) **At the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the SAP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire SAP, and it shall meet Subsection 4.140(.09)(J)(2).**

Response: A copy of the Traffic Impact Analysis is provided in Section IID of this Notebook.

H. PDP Application Submittal Requirements:

1. The Preliminary Development Plan shall conform with the approved Specific Area Plan, and shall include all information required by (.18)(D)(1) and (2), plus the following:

a) **The location of water, sewerage and drainage facilities;**
b) **Conceptual building and landscape plans and elevations, sufficient to indicate the general character of the development;**
c) **The general type and location of signs;**
d) **Topographic information as set forth in Section 4.035;**
e) **A map indicating the types and locations of all proposed uses; and**
f) **A grading and erosion control plan illustrating existing and proposed contours as prescribed previously in this section.**

Response: Amendment to Specific Area Plan - South to add Plan Area 2 has been submitted concurrently with the proposed PDP. Therefore, PDP 7S is consistent with Specific Area Plan - South Plan Area 2. No SAP refinements are proposed. As demonstrated above, the PDP application includes all information required by 4.125(.18)(D)(1) and (2), as applicable to a PDP.

Reduced drawings are provided as Notebook Section IIB. *Sheet 2 - Existing Conditions* shows the existing site features, including topographic features. Proposed lots to be created for development are shown on *Sheet 4 - Tentative Plat*. *Sheet 5 - Grading and Erosion Control Plan* shows the location of drainage facilities, topographic information, and a grading and erosion control facilities. *Sheet 6 - Composite Utility Plan* indicates the proposed location of water, sanitary, and drainage facilities. *Sheet 8 - Site/Land Use Plan* indicates the types and locations of all proposed uses in the Preliminary Development Plan.

Specific Area Plan - South Plan Area 2 including amendments to the Master Signage and Wayfinding Plan have been submitted concurrently with PDP 7S, which included a secondary site identifier at the site entrance on Grahams Ferry Road. PDP 7 South includes a Secondary Site Identifier at the street entrance from Grahams Ferry Road.

Landscape plans for the park areas are located with the FDP application materials in Section VI of the Notebook.

The proposed PDP includes Medium, Standard, and Large lot types, both of which provide for single-family detached homes. Conceptual elevations for the homes within the PDP are provided in Notebook Section IIG. Future proposed homes will be designed to be consistent with the conceptual elevations in the *Architectural Pattern Book*.

2. **In addition to this information, and unless waived by the City's Community Development Director as enabled by Section 4.008(.02))B), at the applicant's expense, the City shall have a Traffic Impact Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the PDP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire PDP, and it shall meet Subsection 4.140(.09)(J)(2) for the full development of all five SAPs.**

Response: A copy of the Traffic Impact Analysis is provided in Notebook Section IID.

3. **The Preliminary Development Plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the phase of development. However, approval of a Final Development Plan is a separate and more detailed review of proposed design features, subject to the standards of Section 4.125(.18)(L) through (P), and Section 4.400 through Section 4.450.**

Response: The plan sheets for the proposed Preliminary Development Plan provide sufficient detail to show the ultimate operation and appearance of the subject phase of development. The FDP application for design of the included park areas within the PDP area is submitted concurrent with this application (see Notebook Section VI).

4. **Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted.**

Response: Copies of legal documents will be provided as appropriate and required by the Development Review Board.

I. **PDP Approval Procedures**

1. **An application for PDP approval shall be reviewed using the following procedures:**

   a) **Notice of a public hearing before the Development Review Board regarding a proposed PDP shall be made in accordance with the procedures contained in Section 4.012.**

   b) **A public hearing shall be held on each such application as provided in Section 4.013.**

   c) **After such hearing, the Development Review Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application.**

Response: In accordance with the procedures contained in Section 4.012, the City shall provide notice of a public hearing before the Development Review Board on the proposed Preliminary Development Plan. This report, in conjunction with all submitted information, demonstrates that the proposal conforms to the applicable permit criteria set forth in the City's Code.

J. **PDP Refinements to Approved Specific Area Plan**

1. **In the process of reviewing a PDP for consistency with the approved Specific Area Plan, the Development Review Board may approve refinements, but not amendments, to the SAP. Refinements to the SAP may be approved by the Development Review Board as set forth in Section (.18)(J)(2), below.**

   a) **Refinements to the SAP are defined as:**

      i. **Changes to the street network or functional classification of streets that do not significantly reduce circulation system function or connectivity for vehicles, bicycles or pedestrians.**

Response: An amendment to Specific Area Plan - South to add Plan Area 2 has been submitted concurrently with PDP 7 South. The street network and functional classification of streets is consistent with SAP - South Plan Area 2. No refinements to SAP South - Plan Area 2 are proposed.

ii. **Changes to the nature or location of parks types, trails or open space that to not significantly reduce function, usability, connectivity, or overall distribution or availability of these uses in the Preliminary Development Plan.**

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP. The nature and location of park types and trails and open spaces within PDP 7S is consistent with SAP - South Plan Area 2. No refinements to SAP - South Plan Area 2 are proposed.

iii. **Changes to the nature or location of utilities or storm water facilities that do not significantly reduce the service or function of the utility or facility.**

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP. SAP - South Plan Area 2 is consistent with the utilities and storm water facilities shown in the *Villebois Village Master Plan* amended in October 2013. The nature and location of utilities and storm water facilities within PDP 7 South are consistent with SAP - South Plan Area 2. No refinements to SAP - South Plan Area 2 are proposed.

iv. **Changes to the location or mix of land uses that do not significantly alter the overall distribution or availability of uses in the Preliminary Development Plan. For the purposes of this subsection, "land uses" or "uses" are defined in the aggregate, with specialty condos, mixed use condos, urban apartments, condos, village apartments, neighborhood apartments, row houses and small detached uses comprising a land use group and medium detached, standard detached, large and estate uses comprising another.**

v. **A change in density that does not exceed ten percent, provided such density change has not already been approved as a refinement to the underlying SAP or PDP, and does not result in fewer than 2,300 dwelling units in the Village.**

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP. The location and mixes of land uses and

residential density within PDP 7S is the same as SAP - South Plan Area 2. No refinements to SAP - South Plan Area 2 are needed or proposed.

vi. **Changes that are significant under the above definitions, but necessary to protect an important community resource or improve the function of collector or minor arterial roadways.**

Response: As described above, no refinements are proposed with PDP 7 South. Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP.

2. **Refinements meeting the above definition may be approved by the DRB upon the demonstration and finding that:**

   a) **The refinements will equally or better meet the conditions of the approved SAP, and the Goals, Policies and Implementation Measures of the Villebois Village Master Plan.**

Response: As described above, no refinements are proposed with PDP 7 South. Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP.

   b) **The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the PDP and Village area, and**

Response: As described above, no refinements are proposed with PDP 7 South. Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP.

   c) **The refinement will not preclude an adjoining or subsequent PDP or SAP from development consistent with the approved SAP or Master Plan.**

Response: PDP 7 South is consistent with the concurrent SAP - South Plan Area 2 application. No refinements to the SAP are needed or proposed.

3. **Amendments to the SAP, not including SAP amendments for phasing, must follow the same procedures applicable to adoption of the SAP itself. Amendments are defined as changes to elements of the SAP not constituting a refinement.**

4. **Amendments to the SAP for phasing will be processed as a Class II administrative review proposal.**

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with the proposed PDP 7 South. PDP 7 South is consistent with SAP - South Plan Area 2. No amendments to SAP South are proposed.

K. **PDP Approval Criteria**

The Development Review Board may approve an application for a PDP only upon finding that the following approval criteria are met:

1. That the proposed PDP:

a. Is consistent with the standards identified in this section.

Response: This Supporting Compliance Report provides explanation of how the proposed development is consistent with the standards of the Village zone.

b. Complies with the applicable standards of the Planning and Land Development Ordinance, including Section 4.140(.09)(J)(1)-(3).

Response: This Supporting Compliance Report provides an explanation of how the proposed development is consistent with the applicable standards of the Planning and Land Development Ordinance. A description of how the proposed development complies with Section 4.140(.09)J.1-3 is included in the subsequent pages of this report.

c. Is consistent with the approved Specific Area Plan in which it is located.

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with PDP 7S. PDP 7S is consistent with Specific Area Plan - South Plan Area 2.

d. Is consistent with the approved Pattern Book and, where required, the approved Village Center Architectural Standards

Response: No buildings are proposed with this Preliminary Development Plan. Subsequent Building Permit applications for residential buildings in this Preliminary Development Plan will document compliance with the *Architectural Pattern Book*. However, proposed lots are sized to accommodate proposed uses in a manner consistent with *Table V-1* and the *Architectural Pattern Book*.

COMMUNITY ELEMENTS BOOK

Lighting Master Plan

Response: *Sheet 10 - Street Tree/Lighting Plan* (see Notebook Section IIB) illustrate proposed lighting within the PDP. The proposed lighting is consistent with the Lighting Master Plan within the SAP - South Community Elements Book as amended for the addition of Plan Area 2.

Curb Extensions

Response: As shown on the *Tentative Plat*, curb extensions are proposed at a number of intersections in the PDP area. The location of these curb extensions is consistent with the Curb Extension Concept Plan Diagram in the Community Elements Book as amended for the addition of Plan Area 2.

Street Tree Master Plan

Response: *Sheet 10 - Street Tree/Lighting Plan* (see Notebook Section IIB) illustrates that street trees proposed along the streets in the PDP area are consistent with the designated street tree lists. The street trees proposed are consistent with the Street Tree Master Plan in the Specific Area Plan - South Community Elements Book as amended for the addition of Plan Area 2.

Site Furnishings

Response: Mailbox kiosks will be located and designed consistent with other areas of SAP - South. The concurrent FDP application for the proposed park and open space areas further addresses details regarding site furnishings in these areas (see Notebook Section VI).

Play Structures

Response: No play structures are proposed with this PDP application; however, the concurrent FDP application for the proposed park and areas includes details regarding these areas (see Notebook Section VI).

Tree Protection

Response: The Tree Protection component of the SAP - South Community Elements Book (page 15) describes the goal, policies, and implementation measures for tree protection within Specific Area Plan - South. These tree protection guidelines were used to promote the protection of existing trees in the design of the PDP area. *Sheet 10 - Tree Protection Plan* (see Notebook Section IIB) has been prepared for this PDP, consistent with Implementation Measures 1 and 2 of the Tree Protection component of the *Community Elements Book*. The *Tree Preservation Plans* illustrate which trees are proposed to be preserved. The *Tree Protection Plans* were based on a Tree Report prepared by Morgan E. Holen, a certified arborist with Morgan Holen & Associates, LLC (see Notebook Section V).

Plant List

Response: The *Community Elements Book* approved with SAP - South contains a Plant List (page 16) of non-native and native trees, shrubs, and groundcovers, ferns, herbs, vines, perennials, grasses, and bulbs for species to plant throughout Villebois. Within the rights-of-way in this PDP, only street trees and rainwater components are proposed. Additional landscaping details are provided with the FDP application, which is submitted concurrent with this PDP (see Notebook Section VI).

MASTER SIGNAGE AND WAYFINDING PLAN

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with PDP 7S and included amendments to the Master Signage and Wayfinding Plan. Therefore, this PDP is consistent with Specific Area Plan - South Plan Area 2. Amendments to the Master Signage and Wayfinding Plan included the addition of a Secondary Site Identifier at the street entrance from Grahams Ferry Road. The Secondary Site Identifier is provided with PDP 7 South.

RAINWATER PROGRAM

Response: A rainwater management plan is included with the supporting utility reports located in Notebook Section IIC. Rainwater will be treated through several components proposed within the rights-of-way as shown on the attached plans. The rainwater components within rights-of-way will be detailed within subsequent construction drawings. The rainwater management plan included in this application is consistent with the rainwater program for SAP - South.

3. **If the PDP is to be phased, that the phasing schedule is reasonable and does not exceed two years between commencement of development of the first, and completion of the last phase, unless otherwise authorized by the Development Review Board.**

Response: The PDP is proposed to be executed in two phases. Construction of the 1st phase will begin in the late summer/fall of 2014. Phase 2 is expected to begin by late summer/fall of 2014. *Sheet 11 - Phasing Plan* (see Notebook Section IIB) illustrates phases to be executed with PDP 7S.

4. **Parks within each PDP or PDP phase shall be constructed prior to occupancy of 50% of the dwelling units in the PDP or PDP phase, unless weather or special circumstances prohibit completion, in which case bonding for the improvements shall be permitted.**

Response: The parks within PDP 7S will be completed prior to occupancy of 50% of the housing units, as required. Bonding will be provided if special circumstances prohibit completion.

5. **In the Central SAP, parks shall be constructed within each PDP as provided above, and that pro-rata portion of the estimated cost of Central SAP parks not within the PDP, calculated on a dwelling unit basis, shall be bonded or otherwise secured to the satisfaction of the city.**

Response: The proposed PDP is within SAP South Plan Area 2. Therefore, this standard does not apply.

6. **The Development Review Board may require modifications to the PDP, or otherwise impose such conditions as it may deem necessary to ensure conformance with the approved SAP, the Villebois Village Master Plan, and compliance with applicable requirements and standards of the Planning and Land Development Ordinance, and the standards of this section.**

Response: This report demonstrates that the proposed Preliminary Development Plan is consistent with Specific Area Plan - South Plan Area 2. Amendments to the *Villebois Village Master Plan* and Specific Area Plan - South Plan Area 2 have been submitted concurrently with this PDP. Therefore, the PDP is consistent with the *Villebois Village Master Plan* and applicable requirements and standards of the Planning and Land Development Ordinance.

SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ) ORDINANCE

Response: The subject site includes forested and wetland areas mapped as SROZ on the City of Wilsonville Significant Resource Overlay Zone Map. The application for SAP - South Plan Area 2 requested approval of Verification of the SROZ Boundary, Significant Resource Impact Report (SRIR) review for proposed encroachments, and Significant Resource Overlay (SROZ) Map Refinement. Compliance with Section 4.139 was addressed in greater detail with the concurrent application for SAP - South Plan Area 2. The SRIR is provided in Section IIF of this Notebook. The SRIR, prepared by SWCA Environmental Consultants, provides the technical information used to determine the presence of natural resource(s) and verify and refine the boundaries of the SROZ on the site. The proposed PDP plan is consistent with the encroachments and the mitigation submitted at the SAP level, as Specific Area Plan - South Plan Area 2 has been submitted concurrently and PDP 7 South does not proposed any refinements to SAP - South Plan Area 2.

SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS

(.09) FINAL APPROVAL (STAGE TWO)

J. A planned development permit may be granted by the Development Review Board only if it is found that the development conforms to all the following criteria, as well as to the Planned Development Regulations in Section 4.140:

1. The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council.

Response: This Supporting Compliance Report demonstrates that the location, design, size, and uses proposed with the PDP are both separately and as a whole consistent with SAP South, and thus the *Villebois Village Master Plan*, the City's Comprehensive Plan designation of Residential - Village for the area, and the City's Planning and Land Development Ordinance.

2. That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.

Response: A copy of the Traffic Impact Analysis is attached in Section IID of this Notebook.

a. In determining levels of Service D, the City shall hire a traffic engineer at the applicant's expense who shall prepare a written report containing the following minimum information for consideration by the Development Review Board:

i. An estimate of the amount of traffic generated by the proposed development, the likely routes of travel of the estimated generated traffic, and the source(s) of information of the estimate of the traffic generated and the likely routes of travel; (Amended by Ord 561, adopted 12/15/03.)

ii. What impact the estimate generated traffic will have on existing level of service including traffic generated by (1) the development itself, (2) all existing developments, (3) Stage II developments approved but not yet built, and (4) all developments that have vested traffic generation rights under section 4.140(.10), through the most probable used intersection(s), including state and county intersections, at the time of peak level of traffic. This analysis shall be conducted for each direction of travel if backup from other intersections will interfere with intersection operations. (Amended by Ord 561, adopted 12/15/03.).

Response: A copy of the Traffic Impact Analysis, completed by DKS Associates and complying with these requirements, is attached in Section IID of this Notebook.

b. The following are exempt from meeting the Level of Service D criteria standard:

i. A planned development or expansion thereof which generates three (3) new p.m. peak hour traffic trips or less;

ii. A planned development or expansion thereof which provides an essential governmental service.

Response: This PDP does not request an exemption from meeting the Level of Service D. Therefore, this criterion does not apply to this project.

c. Traffic generated by development exempted under this subsection on or after Ordinance No. 463 was enacted shall not be counted in determining levels of

service for any future applicant. (Added by Ord 561, adopted 12/15/03.)

Response: A copy of the Traffic Impact Analysis is attached in Section IID of this Notebook.

d. Exemptions under 'b' of this subsection shall not exempt the development or expansion from payment of system development charges or other applicable regulations. (Added by Ord 561, adopted 12/15/03.)

Response: The subject PDP is not exempt from subsection 'b.' System development charges will be provided as required.

e. In no case will development be permitted that creates an aggregate level of traffic at LOS "F". (Added by Ord 561, adopted 12/15/03.)

Response: A copy of the Traffic Impact Analysis is attached in Section IID of this Notebook. The location, design, size and uses are such that traffic generated by the proposed development and existing developments at intersection(s) evaluated can be accommodated safely and without congestion in excess of Level of Service D. The proposed development does not create an aggregate level of traffic at LOS "F".

3. That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services.

Response: This Supporting Compliance Report, the Utility and Drainage Reports (see Notebook Section IIC), and *Sheet 6 - Composite Utility Plan* (see Notebook Section IIB) show that the future residents of PDP 7 South will be adequately served by the planned facilities and services.

SECTION 4.171 GENERAL REGULATIONS - PROTECTION OF NATURAL FEATURES & OTHER RESOURCES

(.02) General Terrain Preparation

A. All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.

B. All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code.

C. In addition to any permits under the Uniform Building Code, all development shall be planned, designed, constructed and maintained so as to:

1. Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.

2. **Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.**

3. **Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.**

Response: The reduced drawings (see Notebook Section IIB) demonstrate that the subject Preliminary Development Plan is designed with maximum regard to natural terrain features and topography. The PDP does not contain hillside or flood plain areas. PDP 7 South includes non-locally significant wetland areas adjacent to the southwestern portion of the subject area, one locally significant wetland area, and SROZ areas, as shown on the *Existing Conditions Plan* (see Exhibit IIB). These features are proposed to be maintained within open space areas. *Sheet 5 - Grading and Erosion Control Plan* shows proposed grading within the subject area and *Sheet 9 - Tree Preservation Plan* shows proposed tree preservation.

All subsequent grading, filling and excavating will be done in accordance with the Uniform Building Code. Disturbance of soils and removal of trees and other native vegetation will be limited to the extent necessary to construct the proposed development. Construction will occur in a manner that avoids substantial probabilities of accelerated erosion; pollution, contamination or siltation of lakes, rivers, streams and wetlands; damage to vegetation; and injury to wildlife and fish habitats.

(.03) Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:

Response: The subject Preliminary Development Plan does not include any areas of slopes in excess of 25%. Therefore, this standard does not apply to this application.

(.04) Trees and Wooded Areas.

A. All developments shall be planned, designed, constructed and maintained so that:

1. **Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.**

2. **Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.**

3. **Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.**

B. **Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:**

1. **Avoiding disturbance of the roots by grading and/or compacting activity.**

2. **Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.**

3. **Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.**

4. **Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.**

Response: The site is the former location of the Living Enrichment Center. There are numerous existing trees within the site. To minimize impacts to existing trees on the site, the proposed development footprint is predominantly located within the existing development areas previously impacted by the Living Enrichment Center. Trees have only been inventoried within the proposed development footprint. Outside the development footprint area, all existing trees will be retained within parks and open spaces. *Sheet 9 - Tree Preservation Plan* (see Notebook Section IIB) depicts existing trees within the development footprint area and identifies trees to be retained and to be removed. This application includes a request for approval of a Type "C" Tree Removal Plan, which is included in Notebook Section V.

The attached Tree Report (see Section IIE), prepared by Morgan Holen of Morgan Holen & Associates LLC, inventories and evaluates existing trees within the development footprint. Trees and forested areas on the site will be retained to the extent feasible as depicted on the *Tree Preservation Plan*. Trees and forested areas that are preserved will be protected during site preparation and construction in accordance with City Public Works design specifications and Section 4.171(.04).

(.05) **High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:**

A. **Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage powerline easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage powerline easements and rights of way and petroleum pipeline easement shall be carefully reviewed.**

B. **Any proposed non-residential development within high voltage powerline easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.**

Response: PDP 7 South does not contain any high voltage powerline or petroleum pipeline easements or rights of way.

(.06) Hazards to Safety: Purpose:

A. To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.

B. To protect lives and property from damage due to soil hazards.

C. To protect lives and property from forest and brush fires.

D. To avoid financial loss resulting from development in hazard areas.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety.

(.07) Standards for Earth Movement Hazard Areas:

A. No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety. No earth movement hazard areas have been identified within the subject PDP area.

(.08) Standards for Soil Hazard Areas:

A. Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.

B. The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety. No soil hazard areas have been identified within the subject area.

(.09) Historic Protection: Purpose:

A. To preserve structures, sites, objects, and areas within the City of Wilsonville having historic, cultural, or archaeological significance.

Response: A Historic/ Cultural Resource Inventory has been submitted concurrently with SAP - South Plan Area 2. The inventory determined that the subject PDP contains one archeological resource. However, the resource is an isolated find and does not qualify for site designation or listing on the National Register of Historical Places. Therefore, no further archeological work or avoidance

measures have been recommended at this time. If any resources are discovered during construction, activities should be halted and the resource consultant should be notified.

SECTION 4.172 FLOOD PLAIN REGULATIONS

Response: The subject PDP does not include any flood plain areas. Therefore, the standards of Section 4.172 are not applicable to PDP 7 South.

SECTION 4.176 LANDSCAPING, SCREENING & BUFFERING

Response: Landscaping will be provided in accordance with the standards in Section 4.176. *Sheet 10 - Street Tree/Lighting Plan* (see Notebook Section IIB) depicts street trees along rights-of-way within the subject Preliminary Development Plan area. The plan has been developed in conformance with the Community Elements Book and the applicable standards of Section 4.176. Landscaping in the park areas is reviewed with the FDP application, included in Notebook Section VI.

SECTION 4.177 STREET IMPROVEMENT STANDARDS

Response: The rights-of-way proposed within the subject PDP are shown on the reduced drawings (see Notebook Section IIB). Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with the final plat.

Reduced drawings (see Notebook Section IIB) demonstrate that all proposed access drives (alleys) within the PDP area will have a minimum improvement width of 16 feet and will provide two-way travel. All access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions.

Clear vision areas will be maintained in accordance with the standards of Subsection 4.177(.01)(I). Vertical clearance will be maintained over all streets and access drives in accordance with Subsection 4.177(.01)(J).

SECTION 4.178 SIDEWALK & PATHWAY STANDARDS

(.01) Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.

(.02) Pathways

A. Bicycle facilities using a bicycle lane as the preferred facility design. Other facility designs described in the Public Works Standard shall only be used if the bike lane standard cannot be constructed due to physical or financial constraints. The order of preference for bicycle facilities is:

1. Bike lane.

2. Shoulder bikeway.

3. Shared roadway.

(.03) Bicycle and pedestrian paths shall be located to provide a reasonably direct connection between likely destinations. A reasonably direct connection is a route which minimizes out-of-direction travel considering terrain, physical barriers, and safety. The objective of this standard is to achieve the equivalent of a ¼ mile grid of routes.

(.04) Pathway Clearance

A. Vertical and horizontal clearance for bicycle and pedestrian paths is specified in the Public Works Standards. The clearance above equestrian trails shall be a minimum of ten feet.

Response: *Sheet 7 - Circulation Plan and Street Sections* (see Notebook Section IIB) depict cross-sections of the proposed sidewalks and pathways in compliance with the above standards and consistent with Specific Area Plan - South Plan Area 2. Pedestrian paths have been designed in a manner that considers connections between likely destinations.

SECTION 4.610.40 TYPE C PERMIT

A request for approval of the Tree Removal Plan for PDP 7S can be found in Section V of this Notebook.

II. CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable requirements of the Village Zone and other applicable requirements of the City of Wilsonville Planning & Land Development Ordinance for the requested Preliminary Development Plan. Therefore, the applicant requests approval of this application. Concurrent applications for a Tentative Plat, Zone Change, Tree Removal Plan, and Final Development Plan are included in this notebook as Sections III, IV, V, and VI, respectively, pursuant to City requirements.

PHASE 7 SOUTH
GRANDE POINTE AT VILLEBOIS
PRELIMINARY DEVELOPMENT PLAN

TL 2890 & 2800, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SECTION 15 W.M.
CITY OF WILSONVILLE, OREGON

APPLICANT:

POLYGON NORTHWEST COMPANY
109 E. 13TH ST.
VANCOUVER, WA 98660
[P] 503-221-1920
CONTACT: FRED GAST

OWNER:

POLYGON NORTHWEST COMPANY
109 E. 13TH ST.
VANCOUVER, WA 98660
[P] 503-221-1920
CONTACT: FRED GAST

PLANNER:

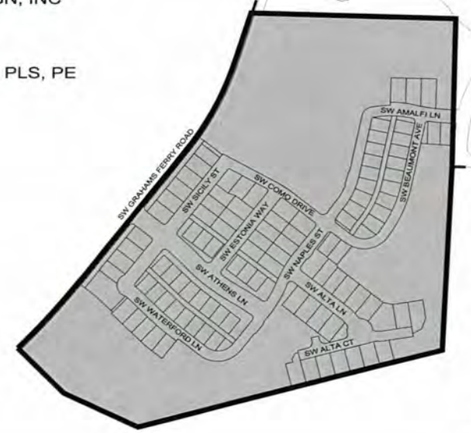
PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Stret
Tigard, OR 97223
[P] 503-941-9484
CONTACT: STACY CONNERY, AICP

CIVIL ENGINEER:

PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Street
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: PATRICK ESPINOSA, PE

SURVEYOR:

PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Street
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: TRAVIS JANSEN, PLS, PE



VICINITY MAP

UTILITIES & SERVICES:

WATER:	CITY OF WILSONVILLE
STORM:	CITY OF WILSONVILLE
SEWER:	CITY OF WILSONVILLE
POWER:	PORTLAND GENERAL ELECTRIC
GAS:	NORTHWEST NATURAL
FIRE:	TUALATIN VALLEY FIRE & RESCUE
POLICE:	CLACKAMAS COUNTY SHERIFF
SCHOOL:	WEST LINN / WILSONVILLE SCHOOL DISTRICT 3JT
PARKS:	CITY OF WILSONVILLE
PHONE:	FRONTIER
WASTE DISPOSAL:	UNITED DISPOSAL SERVICE
CABLE:	COMCAST

BENCHMARK:

OREGON STATE PLANE COORDINATE 5818 LOCATED IN MONUMENT BOX IN CENTERLINE OF TOOZE ROAD .2 MILES WEST OF 110TH.

ELEVATION DATUM: NAVD 88, ELEVATION = 202.991

LANDSCAPE ARCHITECT:

OTTEN LANDSCAPE ARCHITECTS, INC.
3933 SW KELLY AVE, SUITE B
PORTLAND, OR 97239
[P] 503-972-0311
CONTACT: JANET OTTEN, LANDSCAPE ARCHITECT

GEOTECHNICAL ENGINEER:

GEODESIGN, INC.
15575 SW SEQUOIA PARKWAY, SUITE 100
PORTLAND, OR 97224
[P] 503-968-8787
CONTACT: CRAIG WARE, PE

SHEET INDEX:

1	COVER SHEET
2	EXISTING CONDITIONS
3	AERIAL PHOTOGRAPH
4.1	TENTATIVE PLAT
4.2	TENTATIVE PLAT
5.1	GRADING / EROSION CONTROL PLAN
5.2	GRADING / EROSION CONTROL PLAN
6	COMPOSITE UTILITY PLAN
7.1	CIRCULATION PLAN
7.2	STREET SECTIONS
8.1	SITE / LAND USE PLAN
8.2	TYPICAL LOT PLAN
9.1	TREE PRESERVATION PLAN
9.2	TREE PRESERVATION PLAN
10	STREET TREE / LIGHTING PLAN
11	PHASING PLAN

N

SCALE
300 0 150 300
1 INCH = 300 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Cover Sheet

DATE 01/17/2014

1

N:\proj\395-021\09 Drawings\03 Planning\Sheets - PDP_395021.(1)PTITL[PDP].dwg - SHEET: 22x34 Jan. 17, 14 - 10:30 AM jmh

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GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

Existing Conditions

DATE 01/17/2014

2

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OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

Aerial
Photograph

DATE 01/17/2014

3

LEGEND:

STD	STANDARD LOTS
M	MEDIUM LOTS
LG	LARGE LOTS
OS	OPEN SPACE
PP	POCKET PARK
L/G	LINEAR GREEN
LT	LANDSCAPE TRACT
WQ	WATER QUALITY/DETENTION

GROSS AREA = 42.8 AC

KEY MAP
NTS

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tentative Plat

DATE 01/17/2014

4.1

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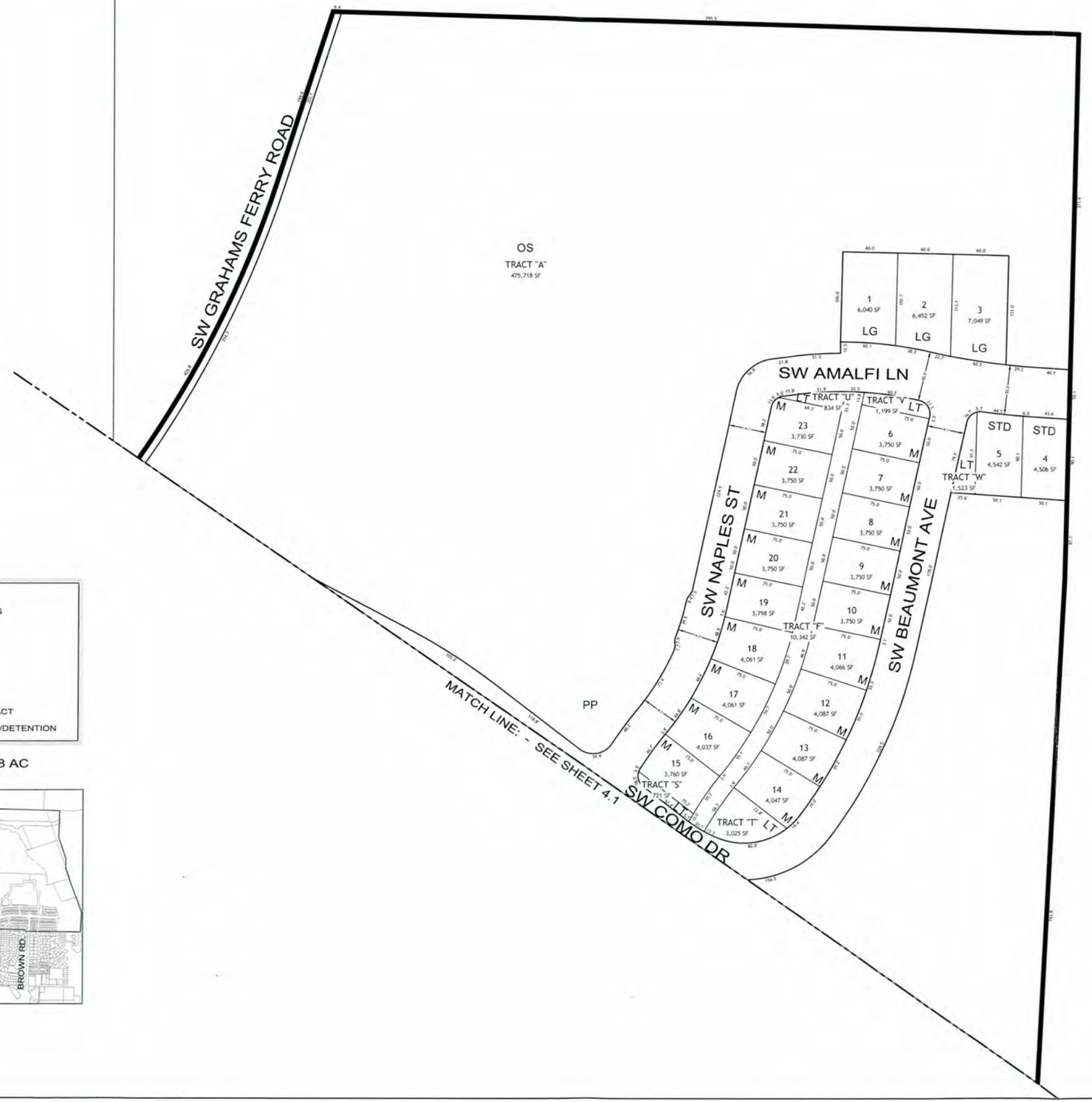

LEGEND:	
STD	STANDARD LOTS
M	MEDIUM LOTS
LG	LARGE LOTS
OS	OPEN SPACE
PP	POCKET PARK
L/G	LINEAR GREEN
LT	LANDSCAPE TRACT
WQ	WATER QUALITY/DETENTION

GROSS AREA = 42.8 AC

KEY MAP
NTS

N:\proj\395-021\09 Drawings\03 Planning\Sheets - PDP\395021 [4]PPLAT[PDP].dwg - SHEET: 22x34 (2) Jan. 17, 14 - 10:40 AM jmh

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POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

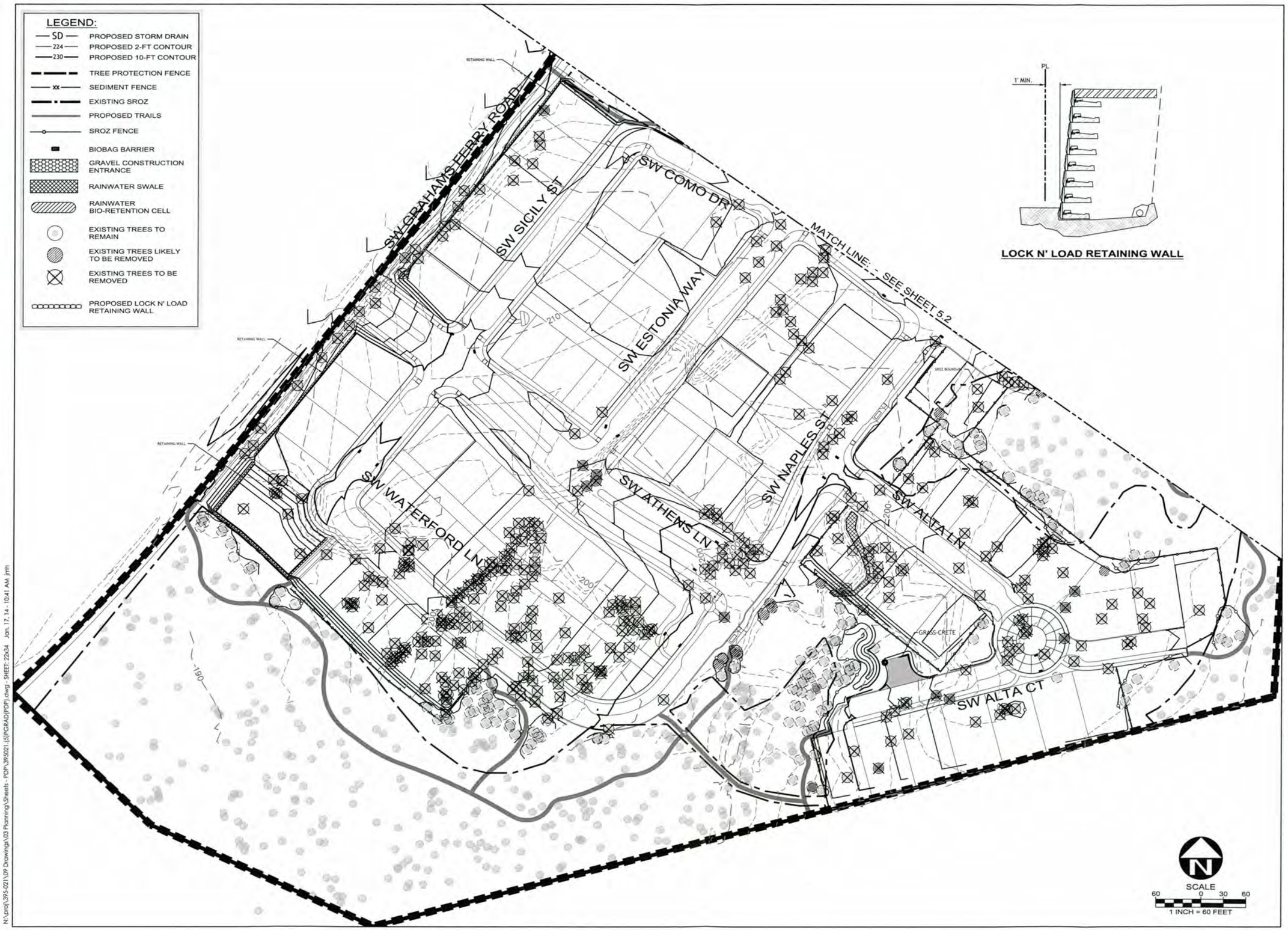
Tentative Plat

DATE 01/17/2014

4.2

LEGEND:

- SD — PROPOSED STORM DRAIN
- 224 — PROPOSED 2-FT CONTOUR
- 230 — PROPOSED 10-FT CONTOUR
- TREE PROTECTION FENCE
- xx SEDIMENT FENCE
- EXISTING SROZ
- PROPOSED TRAILS
- SROZ FENCE
- BIOBAG BARRIER
- GRAVEL CONSTRUCTION ENTRANCE
- RAINWATER SWALE
- RAINWATER BIO-RETENTION CELL
- EXISTING TREES TO REMAIN
- EXISTING TREES LIKELY TO BE REMOVED
- EXISTING TREES TO BE REMOVED
- PROPOSED LOCK N' LOAD RETAINING WALL



LOCK N' LOAD RETAINING WALL

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Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Grading & Erosion Control Plan

DATE 01/17/2014

5.1

LEGEND:

- SD — PROPOSED STORM DRAIN
- 224 — PROPOSED 2-FT CONTOUR
- 230 — PROPOSED 10-FT CONTOUR
- TREE PROTECTION FENCE
- xx — SEDIMENT FENCE
- BIOBAG BARRIER
- GRAVEL CONSTRUCTION ENTRANCE
- RAINWATER SWALE
- RAINWATER BIO-RETENTION CELL
- EXISTING TREES TO REMAIN
- EXISTING TREES LIKELY TO BE REMOVED
- EXISTING TREES TO BE REMOVED
- PROPOSED LOCK N' LOAD RETAINING WALL

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GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Grading & Erosion Control Plan

DATE 01/17/2014

5.2

LEGEND:

- SS — PROPOSED SANITARY SEWER
- EX SANITARY SEWER
- SD — PROPOSED STORM DRAIN
- EX STORM DRAIN
- W — PROPOSED WATER LINE
- EX WATER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED FIRE HYDRANT

RAINWATER SWALE

RAINWATER BIO-RETENTION CELL

NOTES:

1. ALL SANITARY TO BE 8" DIAMETER PIPE.
2. ALL WATER MAINS TO BE 8" DIAMETER PIPE, UNLESS OTHERWISE NOTED.
3. ALL STORM DRAIN TO BE 12" DIAMETER PIPE, UNLESS OTHERWISE NOTED.

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PDP 7S
VILLEBOIS

Preliminary Development Plan

Composite Utility Plan

DATE 01/17/2014

6

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OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Circulation Plan

DATE 01/17/2014

7.1

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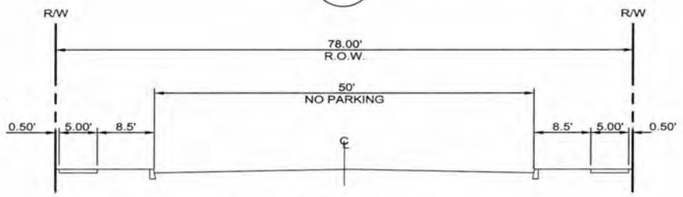
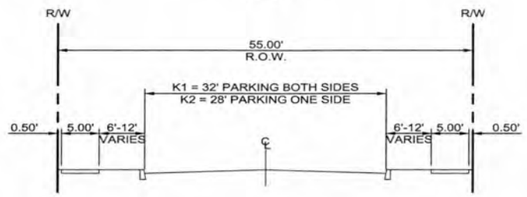


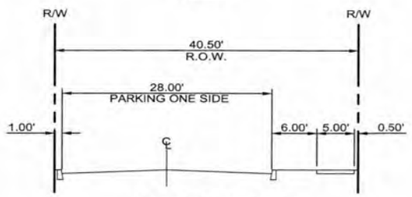
MINOR ARTERIAL -
SW GRAHAMS FERRY RD.
SCALE: 1"=10'

K



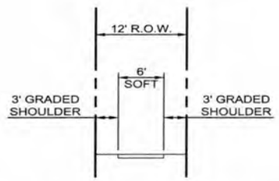
RESIDENTIAL-MINIMUM
SCALE: 1"=10'

L



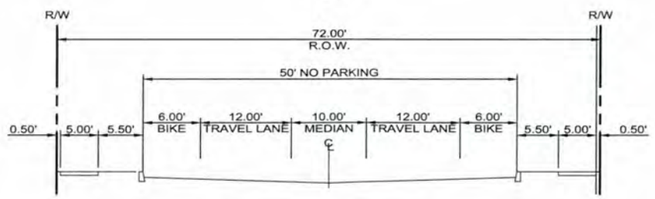
RESIDENTIAL
PARKING ONE SIDE
SCALE: 1"=10'

P



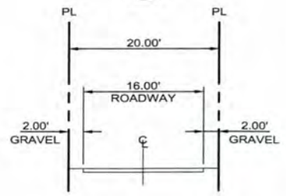
NATURE TRAIL
SCALE: 1"=10'

T



RESIDENTIAL-MEDIAN
SCALE: 1"=10'

O



PRIVATE LANE
SCALE: 1"=10'

SCALE
10 0 5 10
1 INCH = 10 FEET

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GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary
Development Plan

Street
Sections

DATE 01/17/2014

7.2

LEGEND:

STD	STANDARD LOTS
M	MEDIUM LOTS
LG	LARGE LOTS
OS	OPEN SPACE
PP	POCKET PARK
L/G	LINEAR GREEN
LT	LANDSCAPE TRACT
WQ	WATER QUALITY/DETENTION

LOT COUNT:

25	STANDARD LOTS
40	MEDIUM LOTS
35	LARGE LOTS
100	TOTAL

LAND AREA TABLE:

TOTAL AREA:	42.8 AC
PUBLIC STREETS:	6.8 AC
OPEN SPACE / PARK AREAS:	24.1 AC
LOTS & ALLEYS:	11.6 AC
WATER QUALITY TRACT:	0.3 AC

AVG. DENSITY PER NET ACRE:

100/ 11.58 = 8.6 UNITS / AC

FOR TYPICAL LOT PLANS
SEE SHEET 8.2.

SCALE
100 0 50 100
1 INCH = 100 FEET

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GEODESIGN, INC

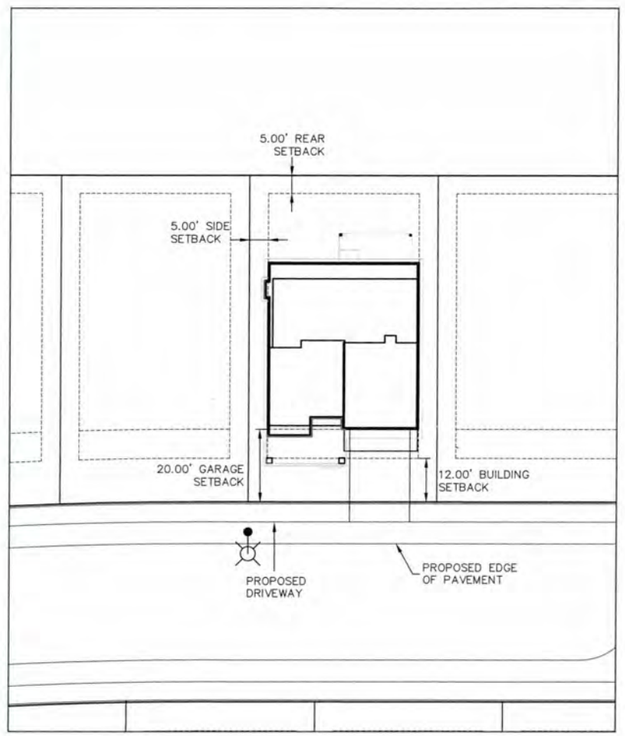
PDP 7S
VILLEBOIS

Preliminary
Development Plan

Site / Land
Use Plan

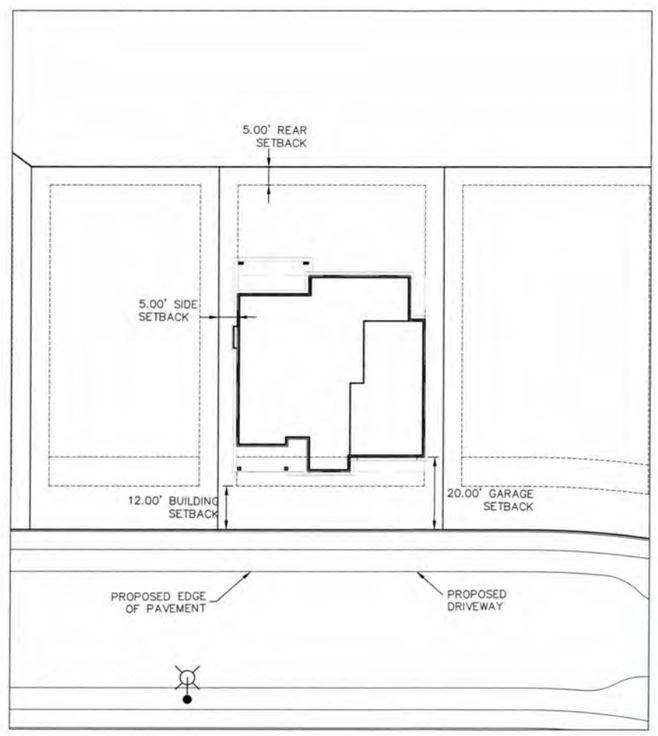
DATE 01/17/2014

8.1



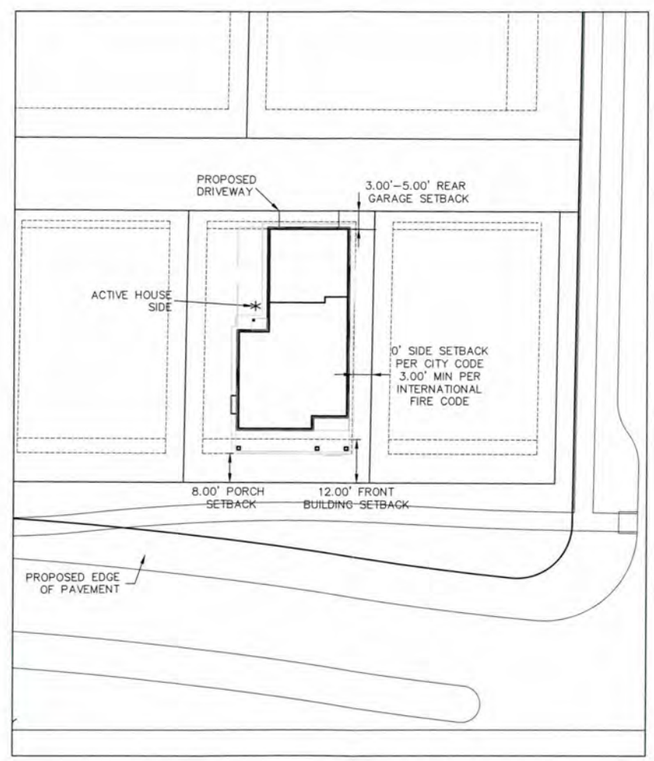
TYPICAL LOT PLAN - FRONT LOADED STANDARD

SCALE: 1" = 20'



TYPICAL LOT PLAN - FRONT LOADED LARGE

SCALE: 1" = 20'



TYPICAL LOT PLAN - REAR LOADED MEDIUM

SCALE: 1" = 20'

N:\proj\395-021\09 Drawings\03 Planning\Sheets - PDP\395021 (8)PSITE(PDP).dwg - SHEET: TYPICAL LOT Jan. 17, 14 - 10:50 AM jmh

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC

GEODESIGN, INC

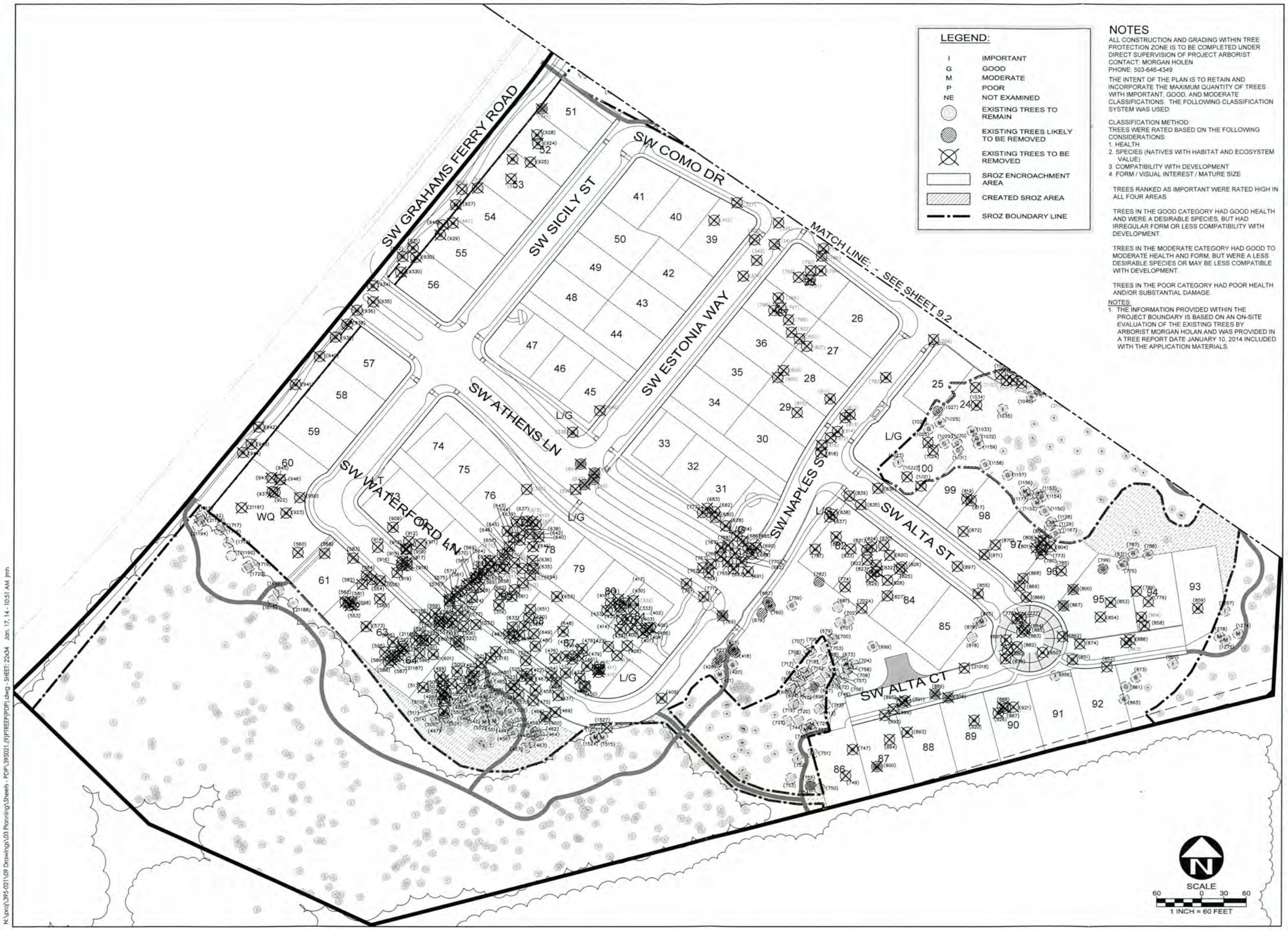
PDP 7S
VILLEBOIS

Preliminary Development Plan

Typical Lot Plan

DATE 01/17/2014

8.2



NOTES

ALL CONSTRUCTION AND GRADING WITHIN TREE PROTECTION ZONE IS TO BE COMPLETED UNDER DIRECT SUPERVISION OF PROJECT ARBORIST.
CONTACT: MORGAN HOLEN
PHONE: 503-646-4349

THE INTENT OF THE PLAN IS TO RETAIN AND INCORPORATE THE MAXIMUM QUANTITY OF TREES WITH IMPORTANT, GOOD, AND MODERATE CLASSIFICATIONS. THE FOLLOWING CLASSIFICATION SYSTEM WAS USED:

CLASSIFICATION METHOD:
TREES WERE RATED BASED ON THE FOLLOWING CONSIDERATIONS:
1. HEALTH
2. SPECIES (NATIVES WITH HABITAT AND ECOSYSTEM VALUE)
3. COMPATIBILITY WITH DEVELOPMENT
4. FORM / VISUAL INTEREST / MATURE SIZE

TREES RANKED AS IMPORTANT WERE RATED HIGH IN ALL FOUR AREAS.

TREES IN THE GOOD CATEGORY HAD GOOD HEALTH AND WERE A DESIRABLE SPECIES, BUT HAD IRREGULAR FORM OR LESS COMPATIBILITY WITH DEVELOPMENT.

TREES IN THE MODERATE CATEGORY HAD GOOD TO MODERATE HEALTH AND FORM, BUT WERE A LESS DESIRABLE SPECIES OR MAY BE LESS COMPATIBLE WITH DEVELOPMENT.

TREES IN THE POOR CATEGORY HAD POOR HEALTH AND/OR SUBSTANTIAL DAMAGE.

NOTES:
1. THE INFORMATION PROVIDED WITHIN THE PROJECT BOUNDARY IS BASED ON AN ON-SITE EVALUATION OF THE EXISTING TREES BY ARBORIST MORGAN HOLAN AND WAS PROVIDED IN A TREE REPORT DATE JANUARY 10, 2014 INCLUDED WITH THE APPLICATION MATERIALS.

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tree Preservation Plan

DATE 01/17/2014

9.1

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LEGEND:

I	IMPORTANT
G	GOOD
M	MODERATE
P	POOR
NE	NOT EXAMINED
	EXISTING TREES TO REMAIN
	EXISTING TREES LIKELY TO BE REMOVED
	EXISTING TREES TO BE REMOVED
	SROZ ENCROACHMENT AREA
	CREATED SROZ AREA
	SROZ BOUNDARY LINE

NOTES

ALL CONSTRUCTION AND GRADING WITHIN TREE PROTECTION ZONE IS TO BE COMPLETED UNDER DIRECT SUPERVISION OF PROJECT ARBORIST.
CONTACT: MORGAN HOLEN
PHONE: 503-646-4349

THE INTENT OF THE PLAN IS TO RETAIN AND INCORPORATE THE MAXIMUM QUANTITY OF TREES WITH IMPORTANT, GOOD, AND MODERATE CLASSIFICATIONS. THE FOLLOWING CLASSIFICATION SYSTEM WAS USED:

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TREES RANKED AS IMPORTANT WERE RATED HIGH IN ALL FOUR AREAS.

TREES IN THE GOOD CATEGORY HAD GOOD HEALTH AND WERE A DESIRABLE SPECIES, BUT HAD IRREGULAR FORM OR LESS COMPATIBILITY WITH DEVELOPMENT.

TREES IN THE MODERATE CATEGORY HAD GOOD TO MODERATE HEALTH AND FORM, BUT WERE A LESS DESIRABLE SPECIES OR MAY BE LESS COMPATIBLE WITH DEVELOPMENT.

TREES IN THE POOR CATEGORY HAD POOR HEALTH AND/OR SUBSTANTIAL DAMAGE.

NOTES:
1. THE INFORMATION PROVIDED WITHIN THE PROJECT BOUNDARY IS BASED ON AN ON-SITE EVALUATION OF THE EXISTING TREES BY ARBORIST MORGAN HOLAN AND WAS PROVIDED IN A TREE REPORT DATE JANUARY 10, 2014 INCLUDED WITH THE APPLICATION MATERIALS.

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tree Preservation Plan

DATE 01/17/2014

9.2

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STREET TREE LEGEND:

QTY.	SYMBOL	BOTANICAL NAME Common Name	SIZE	SPACING
14		CERCIDOPHYLLUM JAPONICUM Katsura Tree	2" cal.	30' o.c.
49		CRATAEGUS VIRDIS 'WINTER KING' Winter King Hawthorne	2" cal.	30' o.c.
17		FAGUS SYLVATICA European Beech	2 1/2" cal.	40' o.c.
63		FRAXINUS AMER. 'AUTUMN APPLAUSE' Autumn Applause Ash	2" cal.	30' o.c.
62		TILIA x EUCHLORA Crimean Linden	2" cal.	30' o.c.
46		ZELKOVA SERR. 'GREEN VASE' Green Vase Zelkova	2" cal.	30' o.c.

LEGEND:

- PROPOSED STREET LIGHT LOCATION
- EXISTING STREET LIGHT LOCATION

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PDP 7S
VILLEBOIS

Preliminary Development Plan

Street Tree & Lighting Plan

DATE 01/17/2014

10

N:\proj\395-021\09 Drawings\03 Planning\Sheets - PDP\395021 (11)PPHAS(PDP).dwg - SHEET: 22x34 Jan. 17, 14 - 11:12 AM jmh

Villebois

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GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Phasing Plan

DATE 01/17/2014

11

Pacific Community Design

MEMORANDUM

DATE: January 17, 2014

TO: City of Wilsonville

FROM: Jaklin Hunt, PE

RE: SAP South - Plan Area 2 (Grande Pointe at Villebois)
Utility Reports
Job No. 395-021

This memorandum is to address the utility reports that were created for the SAP South – Plan Area 2, otherwise known as Grande Pointe at Villebois. Plan Area 2 is located south of Villebois PDP 4 South, east of Grahams Ferry Road, and was previously identified as the L.E.C area.

The Water Quality and Detention Analysis and the Rainwater Management Plan, dated June 21, 2013, and completed by Pacific Community Design, analyzed the development and illustrated adequate water quality and rainwater mitigation for a 121-unit development.

The Sanitary Sewer Capacity Analysis memo, dated June 27, 2013 and completed by Pacific Community Design, illustrated that a 121-unit development resulted in less than the peak flows outlined in the original SAP South analysis.

The proposed unit count for this revised development submittal is 100 lots, with little change to the configuration of the proposed utilities. Given this reduction in the overall unit count, these reports show that the development can provide the required water quality and rainwater mitigation and that there is the necessary capacity in the sanitary sewer connection, as shown on the enclosed reports.

Thank you.

Attachments
1. Water Quality and Detention Analysis SAP South – Plan Area 2, dated 6/21/2013 and prepared by Pacific Community Design
2. Rainwater Management Plan for Mill Creek Basin, dated 6/21/2013 and prepared by Pacific Community Design
3. SAP South – Plan Area 2 (Grande Pointe at Villebois) Sanitary Sewer Capacity Analysis, dated 6/27/2013 and prepared by Pacific Community Design

12564 SW Main Street, Tigard, OR 97223 ♦ [T] 503-941-9484 [F] 503-941-9485

Pacific Community Design

VILLEBOIS

WATER QUALITY AND DETENTION ANALYSIS
SAP SOUTH - PLAN AREA 2

JOB # 395-021

DATE: 6/21/2013
BY: PATRICK ESPINOSA, PE

Prepared By:
Pacific Community Design, Inc.
12564 SW Main Street
Tigard, OR 97223
Tele: 503-941-9484

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APPENDIX A - FIGURES

Figure A1 - Soil Survey Map

Figure A2 - Pre-Developed Drainage Basin Map

Figure A3 - Developed Drainage Basin Map

APPENDIX B - SHED BASIN CALCULATIONS

Figure B1- SCS Curve Numbers

Figure B2 - Manning's "N" Values

Figures B3-B6 - Composite Curve Numbers

Figures B7-B9 - Impervious Area Calculations

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Developed Time of Concentration Calculations

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APPENDIX D - WATER QUALITY SWALE SIZING CALCULATIONS

INTRODUCTION

This report represents the analysis done for SAP South Plan Area 2 of Villebois, formerly known as the L.E.C. property, for water quality and detention facilities. The intent of this report is to demonstrate consistency between SAP South Plan Area 2 and the Villebois Master Plan Analysis, and demonstrate compliance with City of Wilsonville "Public Works Standards". All calculations and supporting figures are included with this document.

This report will identify the pre-development and developed runoff rates on-site during the 2, 10, 25 and 100-yr storm events.

PROJECT DESCRIPTION

PROJECT LOCATION

The proposed Villebois development, hereby referred to as "Grande Pointe at Villebois," is located on tax lots 2800 and 2890 of Clackamas County Tax Map 3S1W15. This portion of Villebois will consist of 121 residential homes on property located to the south of Phase 4 South and east of SW Grahams Ferry Road. The area of the site is 42.75 ac, 20.85 acres of which will be developed.

PROJECT ZONING/LAND USE

SAP South Plan Area 2 will be assigned the land use designation of Village zone by the City of Wilsonville. The Villebois Village Master Plan designates this area further as a Residential Village. This area will be developed as an urban village including single-family units of various sizes and park spaces.

EXISTING CONDITIONS

EXISTING TOPOGRAPHY, LAND USE, AND ONSITE DRAINAGE

The majority of the pre-developed site is open space, a large portion of which includes established tree groves. Asphalt access drives are located on portions of this property along with abandoned buildings that were once part of the Learning Enrichment Center (L.E.C.) facility that was located on this property. This property currently drains to the Mill Creek drainage basin via three separate overland routes. The northwest corner of the site (Shed Area A1) drains to the west to the existing road side ditch along the east side of Grahams Ferry Road, at an average gradient of 2%-6%. The runoff is then conveyed along the ditch to an existing culvert (Culvert 2) which conveys the stormwater to the west under Grahams Ferry Road. The southwest corner of the site (Shed Area A2) drains to the southwest, at an average gradient of 2%-3%, where it is directed to the existing roadside ditch along the east side of Grahams Ferry Road. The middle portion of the site (Shed Area B1) drains to the south of the site onto the adjacent property, at an average gradient of 1.5% where it enters a small channel that conveys the runoff to the southwest. The southeast corner of the site (Shed Area B2) drains to the southeast corner of the site onto the adjacent property, at an average gradient of 1.5% where it enters a small channel that conveys the runoff to the southeast. All drainage basins fall within hydrologic groups C & D per the Soil Survey Map for Clackamas

County (Figure A1). The pre-developed topography for the project site is shown in Figure A2. Below is a summary of the existing soil conditions for SAP South Plan Area 2:

TABLE 1
PROJECT SITE SOILS

SOIL NAME	SCS SYMBOL	HYDROLOGIC GROUP
ALOHA SILT LOAM (2-3 percent slopes)	1A	C
ALOHA SILT LOAM (4-6 percent slopes)	1B	C
AMITY (3-4 percent slopes)	3	D
WOOKBURN (2-4 percent slopes)	91A & 91B	C

SCS CURVE NUMBERS

Below is a summary of the SCS curve numbers in accordance with the Conditions of Approval for SAP South of the Villebois Village.

TABLE 2
SCS CURVE NUMBERS

LAND USE	CURVE NUMBER
OPEN SPACE AND LANDSCAPING	80
COMMERCIAL AREAS	94
RIGHT-OF-WAYS (based on 80% impervious - CN of 98 And 20% pervious - CN of 80)	94.4
RESIDENTIAL DEVELOPMENT (1/8 acre of less)	90
RESIDENTIAL DEVELOPMENT (1/4 acre)	83
DENSE FOREST AREA	80

HYDROLOGY

The site was divided into drainage sheds based on the existing topography and drainage patterns, as shown on Figure A2: Pre-Developed Drainage Basin Map and the Developed Shed Map. The Santa Barbara Urban Hydrograph (SBUH) methodology was used to calculate the runoff hydrographs for all of the pre-developed shed areas within the Mill Creek basin. The Hydraflow Hydrographs Modeling System 2004 software program by Intelisolve was used to perform these calculations. The following tables summarize the input parameters for the hydrographs as well as the results of the pre-developed analysis.

TABLE 3
PRE-DEVELOPED CONDITIONS HYDROCAD INPUT PARAMETERS

BASIN ID	AREA (acre)	TIME OF CONCENTRATION (min)	COMPOSITE CURVE NUMBER
BASIN A1	10.3	33.6	80
BASIN A2	14.5	53.2	80
BASIN B1	24.9	62.3	80
BASIN B2	6.7	71.4	80

TABLE 4
PRE-DEVELOPED CONDITIONS RUNOFF RATES (cfs)

BASIN ID	2-YEAR	10-YEAR	25-YEAR	100-YEAR
BASIN A1	1.11	2.37	3.05	4.00
BASIN A2	1.28	2.74	3.52	4.61
BASIN B1	2.06	4.36	5.60	7.36
BASIN B2	0.53	1.10	1.41	1.85

DEVELOPED CONDITIONS

DEVELOPED DRAINAGE CONDITIONS

Stormwater runoff from the developed site will be collected by a series of catch basins leading to an underground piping system. This system will transport the runoff to two separate locations. The majority of the site will drain to a detention pond located at the southwest corner of the site. This pond will detain the runoff to pre-developed levels prior to releasing to the existing roadside ditch along SW Grahams Ferry Road.

The remaining portion of the developed area (Shed Area B1-1) will be routed to a new

detention pond located at the middle of the development. This pond will detain the runoff prior to releasing to the south where it will converge with additional runoff collected from the undeveloped portion of the site to the north (Shed Area B1-2). In addition to the flows from this development, detained runoff from Villebois Phase 4 South (Pond N) to the north will be routed to this convergence location. The developed flows will be detained so that, with the addition of the flows from the existing development and undeveloped area to the north, pre-developed flows will not be exceeded.

A portion of the Grahams Ferry Road improvements will be collected by a new roadside ditch along the east side of the street. These flows, in addition to detained runoff from Villebois Phase 4 South (Pond M) to the north will be routed through this ditch to the existing culvert crossing Grahams Ferry Road to the west.

HYDROLOGY

In order to determine the required detention volume, SAP South Plan Area 2 was divided into a number of shed basins based on the proposed land use and geography. Each shed basin was analyzed to determine the composite curve number based on the land use (per the SAP South Conditions of Approval). The time of concentration was also estimated based on the overland drainage route and/or the estimated length of storm sewer mains in each respective basin. For developed shed basins an initial catchment time of 10-minutes and a pipe flow velocity of 3 ft/sec was assumed. Based on these parameters the Santa Barbara Urban Hydrograph (SBUH) methodology was used to calculate the runoff hydrographs for all of these developed shed areas. The Hydraflow Hydrographs Modeling System 2004 software program by Intelisolve was used to perform these calculations. The following tables summarize the developed shed basin input parameters and their resulting runoff rates.

TABLE 5
DEVELOPED CONDITIONS HYDROFLOW INPUT PARAMETERS

BASIN ID	AREA (acre)	COMPOSITE CURVE NUMBER	TIME OF CONCENTRATION (min)
SHED A1	5.19	82.9	30.3
SHED A2-1	15.59	91.4	22.2
SHED A2-2	6.05	81.3	32.5
SHED B1-1	4.68	88.3	13.2
SHED B1-2	6.31	80	41.1
SHED B1-3	3.02	80	41.1
SHED B2	3.08	80	36.3
TOTAL	**43.92**		

TABLE 6
DEVELOPED CONDITIONS RUNOFF RATES (cfs)

BASIN ID	2-YEAR	10-YEAR	25-YEAR	100-YEAR
SHED A1	0.78	1.52	1.90	2.43
SHED A2-1	5.03	7.94	9.33	11.19
SHED A2-2	0.76	1.55	1.97	2.55
SHED B1-1	1.40	2.37	2.84	3.47
SHED B1-2	0.63	1.34	1.72	2.25
SHED B1-3	0.30	0.64	0.82	1.08
SHED B2	0.32	0.69	0.88	1.16
POND M*	0.37	0.83	1.00	1.38
POND N*	0.66	1.35	2.18	3.05

*Runoff rates for Pond M and Pond N are based on the drainage report completed by OTAK and titled "Villebois SAP 4S - Portion of Mill Creek Basin Drainage Report" dated October 18, 2006.

WATER QUANTITY

Developed shed basin A1 will continue to flow to the existing roadside ditch along the east side of Grahams Ferry Road at a rate similar to the pre-developed conditions. The following table is a summary of the comparison between the pre and post developed runoff rates.

TABLE 7
SHED A1 - PREDEVELOPED AND DEVELOPED RUNOFF RATES

RETURN PERIOD	FLOW COMPLIANCE TARGET (cfs)	DESIGN RELEASE RATE* (cfs)
2-YEAR	1.11	1.15
10-YEAR	2.37	2.35
25-YEAR	3.05	2.90
100-YEAR	4.00	3.81

*Developed runoff rates include the addition of detained flows from Pond M within PDP 4 South

Runoff from developed shed basin A2-1 will be routed to a detention pond and detained to the pre-developed runoff rates. The Hydraflow Hydrographs Modeling System 2004 software program by Intelisolve was used to determine the required detention volume for this pond, as well as design the flow control structure. The following table is a summary of the pond volume and storage levels. Full calculations provided by Hydraflow are shown in Appendix C.

TABLE 8
POND 'A' DETENTION PERFORMANCE

RETURN PERIOD	FLOW COMPLIANCE TARGET (cfs)	DESIGN RELEASE RATE (cfs)	SURFACE ELEVATION	MAXIMUM STORAGE (cu.ft.)
2-YEAR	1.28	1.25	197.26	47,270
10-YEAR	2.83	2.62	197.98	54,999
25-YEAR	3.70	3.40	198.40	59,921
100-YEAR	4.61	4.66	199.06	67,956

Runoff from developed shed basin B1-1 will be routed to a detention pond and detained so that, with the addition of the flows from the existing development and undeveloped area to the north, pre-developed flows will not be exceeded. The Hydraflow Hydrographs Modeling System 2004 software program by Intelisolve was used to determine the required detention volume for this pond, as well as design the flow control structure. The following table is a summary of the pond volume and storage levels. Full calculations provided by Hydraflow are shown in Appendix C.

TABLE 9
POND 'B' DETENTION PERFORMANCE

RETURN PERIOD	FLOW COMPLIANCE TARGET (cfs)	DESIGN RELEASE RATE (cfs)	SURFACE ELEVATION	MAXIMUM STORAGE (cu.ft.)
2-YEAR	2.58	2.52	195.99	461
10-YEAR	5.45	4.85	196.52	994
25-YEAR	7.00	6.06	196.71	1,189
100-YEAR	9.21	7.89	196.91	1,393

*Developed runoff rates include the addition of detained flows from Pond N within PDP 4 South and undeveloped flows from Shed Areas B1-2, B1-3, and B2.

WATER QUALITY

The City of Wilsonville requires that 65% removal of phosphorous be provided for stormwater runoff if any new impervious surfaces are created during site development. A permanent water quality facility must be constructed or funded to reduce contaminants that enter the storm and surface water system. Impervious surfaces shall include pavement, gravel roads,

buildings, public and private roadways, and other surfaces that contribute runoff to the surface water system.

Water quality requirements for Shed Basin A2-1 will be addressed with a pollution control manhole and a water quality swale located in detention pond A. Water quality requirements for Shed Basin B1-1 will be addressed with a pollution control manhole and a water quality swale located in detention pond B.

CONCLUSION

Detention and water quality facilities within the SAP South Plan Area 2 portion of Villebois are consistent with the design requirements of the City of Wilsonville. Development of the site will maintain flows from the site tributary to Mill Creek Basin at the pre-developed levels. The analysis of the ponds within the proposed development demonstrates that adequate storage will be provided, and the sizing of the water quality swales demonstrates adequate water quality will be provided.

APPENDIX A

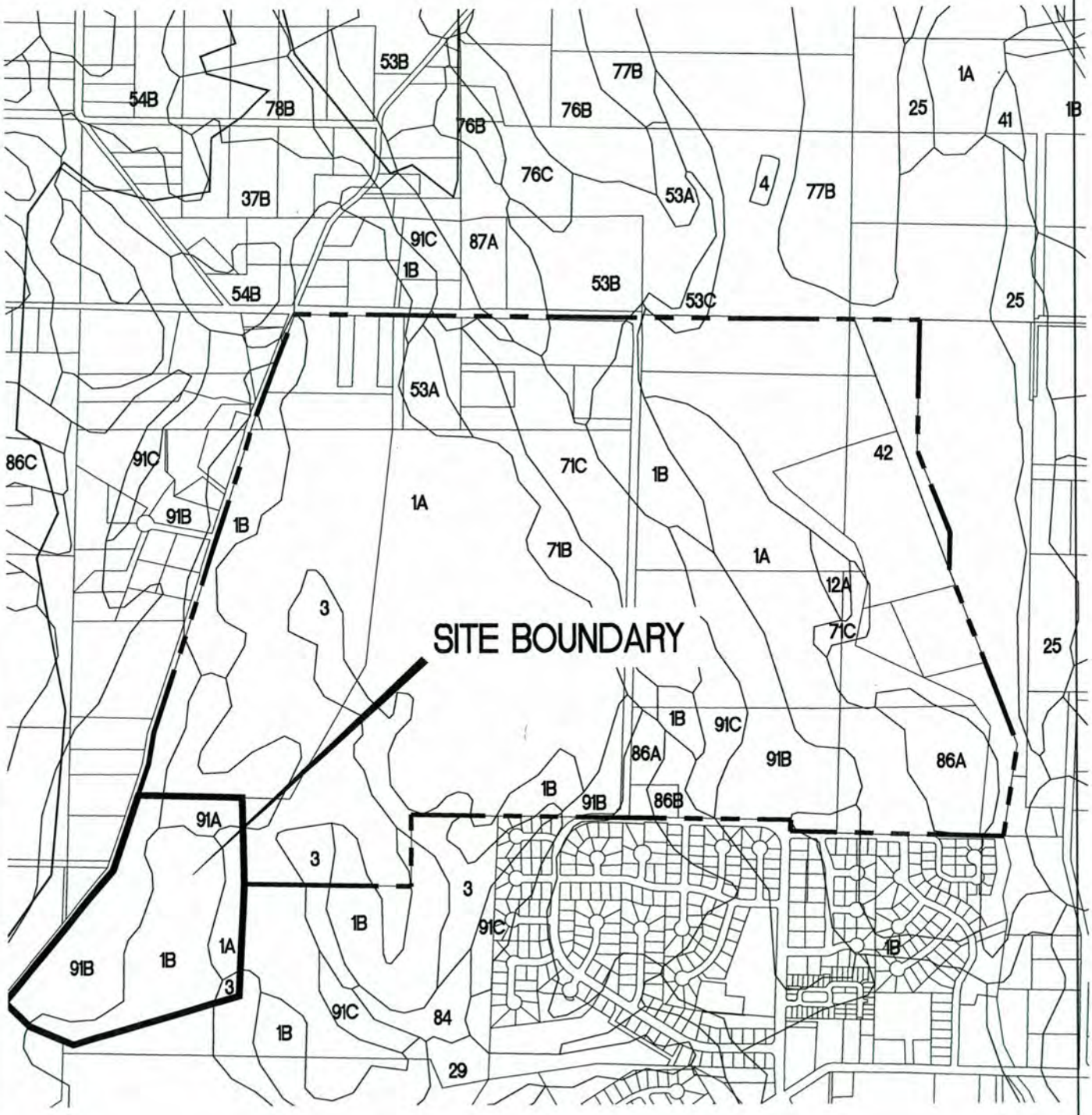

EXHIBIT A1: SOIL SURVEY MAP

DRAWN BY: PRE DATE: 6/20/13
REVIEWED BY: PRE DATE: 6/20/13
PROJECT NO.: 395-021
SCALE: 1"=1000'

Pacific Community Design

[T] 503-941-9484
[F] 503-941-9485

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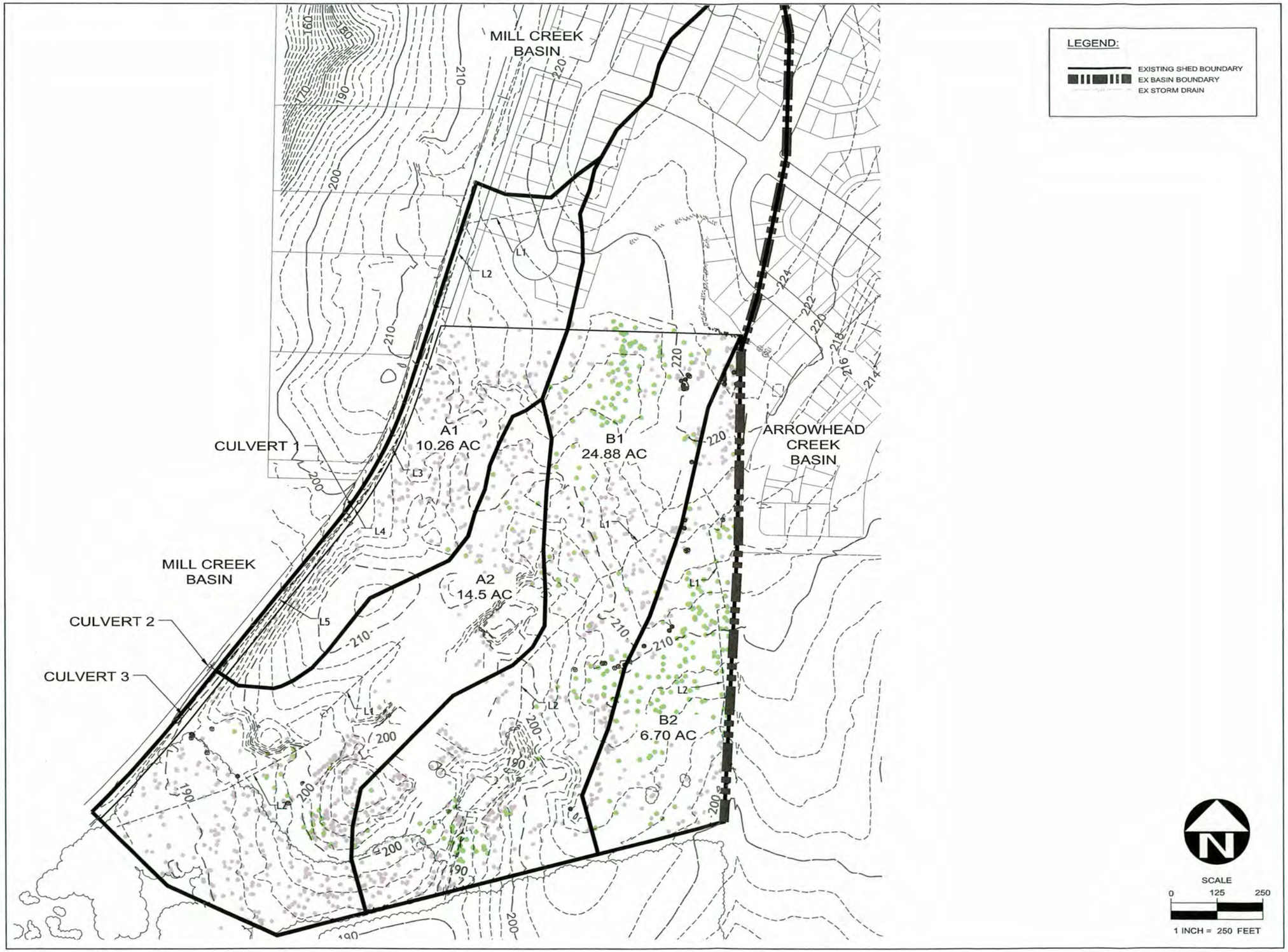

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Villebois

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OTTEN LANDSCAPE ARCHITECTS, INC

Villebois
SAP South
Plan Area 2
Hydrology

Pre-Developed
Drainage Basin Map

DATE: 6/24/2013

A2

LEGEND:

- PROPOSED SHED BOUNDARY
- EX BASIN BOUNDARY
- SD — PROPOSED STORM DRAIN

N

SCALE
0 125 250
1 INCH = 250 FEET

N:\proj\395-021\09 Drawings\03 Planning\Exhibits - Hydrology\395021.PROP.dwg - SHEET: 11x17 Jun. 26, 13 - 4:12 PM, pre

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Villebois
SAP South
Plan Area 2
Hydrology

Developed
Drainage Basin Map

DATE: 6/25/2013

A3

APPENDIX B

SCS CURVE NUMBERS
FIGURE B1

LAND USE DESCRIPTION		CURVE NUMBERS BY HYDROLOGIC SOIL GROUP			
		A	B	C	D
Cultivated land (1):	winter condition	86	91	94	95
Mountain open areas:	low growing brush & grasslands	74	82	89	92
Meadow or pasture:		65	78	85	89
Wood or forest land:	undisturbed	42	64	76	81
Wood or forest land:	young second growth or brush	55	72	81	86
Orchard:	with crop cover	81	88	92	94
Open spaces, lawns, parks, golf courses, cemeteries, landscaping					
Good condition:	grass cover on ≥ 75% of the area	68	80	86	90
Fair condition:	grass cover on 50-75% of the area	77	85	90	92
Gravel roads and parking lots:		76	85	89	91
Dirt roads and parking lots:		72	82	87	89
Impervious surfaces, pavement, roofs etc.		98	98	98	98
Open water bodies:	lakes, wetlands, ponds, etc.	100	100	100	100
Single family residential (2):	(per C.O.A)				
Lot Size (Acres)					
1/8	or less	90	90	90	90
1/4	or less	83	83	83	83
Commercial Development		94	94	94	94
PUD's, condos, apartments, commercial businesses & industrial areas	%impervious must be computed				

(1) For a more detailed description of agricultural land use curve numbers refer to National Engineering Handbook, Sec. 4, Hydrology, Chapter 9, August 1972.

(2) Assumes roof and driveway runoff is directed into street/storm system.

(3) The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.

MANNING'S "n" VALUES
FIGURE B2

SHEET FLOW EQUATION MANNING'S VALUES	n_s
Smooth surfaces (concrete, asphault, gravel, or bare hand packed soil)	0.011
Fallow Fields or loose soil surface (no residue)	0.05
Cultivated soil with residue cover £ 20%	0.06
Cultivated soil with residue cover > 20%	0.17
Short prairie grass and lawns	0.15
Dense grasses	0.24
Bermuda grasses	0.41
Range (natural)	0.13
Woods or forrest with light underbrush	0.40
Woods or forrest with dense underbrush	0.80

SHALLOW CONCENTRATED FLOW (after initial 300 ft of sheet flow, R = 0.1)	k_s
Forrest with heavy ground litter and meadows (n = 0.010)	3
Brushy ground with some trees (n = 0.060)	5
Fallow or minimum tillage cultivation (n = 0.040)	8
High grass (n = 0.035)	9
Short grass, pasture and lawns (n = 0.030)	11
Nearly bare ground (n = 0.25)	13
Paved and gravel areas (n = 0.012)	27

CHANNEL FLOW (Intermittent) (At the beginning of all visible channels, R = 0.2)	k_c
Forested swale with heavy ground cover (n = 0.10)	5
Forested drainage course/ravine with defined channel bed (n = 0.050)	10
Rock-lined waterway (n = 0.035)	15
Grassed waterway (n = 0.030)	17
Earth-lined waterway (n = 0.025)	20
CMP pipe (n = 0.024)	21
Concrete pipe (n = 0.012)	42
Other waterways and pipe 0.508/n	

CHANNEL FLOW (continuous stream, R = 0.4)	k_c
Meandering stream (n = 0.040)	20
Rock-lined stream (n = 0.035)	23
Grass-lined stream (n = 0.030)	27
Other streams, man-made channels and pipe (n = 0.807/n)	

Pacific Community Design

COMPOSITE CURVE NUMBER
SHED A1-1 - DEVELOPED

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

CURVE NUMBERS PER SAP SOUTH C.O.A. #59

Open Space and landscape areas	80
Commercial areas	94
Impervious Area Streets, Alleys *	98
Residential Development 1/8 acre or less	90
Residential Development 1/4 acre or less	83

* Streets and Alleys are modeled as 80% impervious and 20% pervious. Utilizing a CN of 80 for the pervious area and 98 for the impervious area, the weighted CN for streets and alleys would be 94.4.

ON-SITE	(AC)	CN	% of total
Row House (1/8 acre)	0.00	90	0.0%
Single Family Detached (1/8 acre)	0.00	90	0.0%
Commercial/Multi-Family areas	0.00	94	0.0%
Street and Alley ROW's	1.05	94.4	20.2%
Open Space Area	4.14	80	79.8%
TOTAL	5.19		

Composite Curve Number per COA = 82.9

FIGURE B3

Pacific Community Design

COMPOSITE CURVE NUMBER
SHED A2-1 DEVELOPED

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

CURVE NUMBERS PER SAP SOUTH C.O.A. #59

Open Space and landscape areas	80
Commercial areas	94
Impervious Area Streets, Alleys *	98
Residential Development 1/8 acre or less	90
Residential Development 1/4 acre or less	83

* Streets and Alleys are modeled as 80% impervious and 20% pervious. Utilizing a CN of 80 for the pervious area and 98 for the impervious area, the weighted CN for streets and alleys would be 94.4.

ON-SITE	(AC)	CN	% of total
Row House (1/8 acre)	0.00	90	0.0%
Single Family Detached (1/8 acre)	8.39	90	53.8%
Commercial/Multi-Family areas	0.00	94	0.0%
Street and Alley ROW's	6.52	94.4	41.8%
Open Space Area	0.68	80	4.4%
TOTAL	15.59		

Composite Curve Number per COA = 91.4

FIGURE B4

Pacific Community Design

COMPOSITE CURVE NUMBER
SHED A2-2 DEVELOPED

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

CURVE NUMBERS PER SAP SOUTH C.O.A. #59

Open Space and landscape areas	80
Commercial areas	94
Impervious Area Streets, Alleys *	98
Residential Development 1/8 acre or less	90
Residential Development 1/4 acre or less	83

* Streets and Alleys are modeled as 80% impervious and 20% pervious. Utilizing a CN of 80 for the pervious area and 98 for the impervious area, the weighted CN for streets and alleys would be 94.4.

ON-SITE	(AC)	CN	% of total
Row House (1/8 acre)	0.00	90	0.0%
Single Family Detached (1/8 acre)	0.00	90	0.0%
Commercial/Multi-Family areas	0.00	94	0.0%
Street and Alley ROW's	0.53	94.4	8.8%
Open Space Area	5.52	80	91.2%
TOTAL	6.05		

Composite Curve Number per COA = 81.3

FIGURE B5

Pacific Community Design

COMPOSITE CURVE NUMBER
SHED B1-1 DEVELOPED

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

CURVE NUMBERS PER SAP SOUTH C.O.A. #59

Open Space and landscape areas	80
Commercial areas	94
Impervious Area Streets, Alleys *	98
Residential Development 1/8 acre or less	90
Residential Development 1/4 acre or less	83

* Streets and Alleys are modeled as 80% impervious and 20% pervious. Utilizing a CN of 80 for the pervious area and 98 for the impervious area, the weighted CN for streets and alleys would be 94.4.

ON-SITE	(AC)	CN	% of total
Row House (1/8 acre)	0.00	90	0.0%
Single Family Detached (1/8 acre)	2.46	90	52.6%
Commercial/Multi-Family areas	0.00	94	0.0%
Street and Alley ROW's	0.99	94.4	21.2%
Open Space Area	1.23	80	26.3%
TOTAL	4.68		

Composite Curve Number per COA = 88.3

FIGURE B6

Pacific Community Design

PERCENT IMPERVIOUS
SHED A1-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 5.19 acres 226,076 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	0
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	36,590
Total	36,590
% Impervious =	16%

FIGURE B7

Pacific Community Design

PERCENT IMPERVIOUS
SHED A2-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 15.59 acres 679,100 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	219,281
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	227,209
Total	446,490
% Impervious =	66%

FIGURE B8

Pacific Community Design

PERCENT IMPERVIOUS
SHED A2-2

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 6.05 acres 263,538 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	0
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	18,469
Total	18,469
% Impervious =	7%

FIGURE B9

Pacific Community Design

PERCENT IMPERVIOUS
SHED B1-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 4.68 acres 203,861 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	64,295
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	34,500
Total	98,794
% Impervious =	48%

FIGURE B10

Pacific Community Design

PREDEVELOPED TIME OF CONCENTRATION
SHED A1

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 280 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	280 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.032 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	23.14 min.		23.14 min.
LAG TWO: INTERMITTENT CHANNEL FLOW (NEXT 465 FEET)			
Tc Velocity factor, k=	20		
Slope, S_0 =	0.012 ft/ft		
$V = k\sqrt{S_0}$	2.14 ft/s		
Flow Length, L =	465 ft		
$T = \frac{L}{(60)(V)}$	3.61 min.		26.75 min.
LAG THREE: CHANNEL FLOW (NEXT 362 FEET)			
Tc Velocity factor, k=	20		
Slope, S_0 =	0.025 ft/ft		
$V = k\sqrt{S_0}$	3.16 ft/s		
Flow Length, L =	362 ft		
$T = \frac{L}{(60)(V)}$	1.91 min.		28.66 min.
LAG FOUR: PIPE FLOW (NEXT 58 FEET)			
Tc Velocity factor, k=	42		
Slope, S_0 =	0.005 ft/ft		
$V = k\sqrt{S_0}$	2.97 ft/s		
Flow Length, L =	58 ft		
$T = \frac{L}{(60)(V)}$	0.33 min.		28.98 min.
LAG FIVE: CHANNEL FLOW (NEXT 542 FEET)			
Tc Velocity factor, k=	15		
Slope, S_0 =	0.017 ft/ft		
$V = k\sqrt{S_0}$	1.96 ft/s		
Flow Length, L =	542 ft		
$T = \frac{L}{(60)(V)}$	4.62 min.		33.60 min.
TOTAL PREDEVELOPED TIME OF CONCENTRATION =			**33.60 min.**

Pacific Community Design

PREDEVELOPED TIME OF CONCENTRATION
SHED B1

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.400		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.032 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	48.48 min.		48.48 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 670 FEET)			
Tc Velocity factor, k=	5		
Slope, S_0 =	0.026 ft/ft		
$V = k\sqrt{S_0}$	0.81 ft/s		
Flow Length, L =	670 ft		
$T = \frac{L}{(60)(V)}$	13.85 min.		62.33 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 62.33 min.

Pacific Community Design

PREDEVELOPED TIME OF CONCENTRATION
SHED A2

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.023 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	27.90 min.		27.90 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 660 FEET)			
Tc Velocity factor, k=	3		
Slope, S_0 =	0.021 ft/ft		
$V = k\sqrt{S_0}$	0.43 ft/s		
Flow Length, L =	660 ft		
$T = \frac{L}{(60)(V)}$	25.30 min.		53.20 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 53.20 min.

Pacific Community Design

PREDEVELOPED TIME OF CONCENTRATION
SHED B2

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.400		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.018 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	61.03 min.		61.03 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 471 FEET)			
Tc Velocity factor, k=	5		
Slope, S_0 =	0.023 ft/ft		
$V = k\sqrt{S_0}$	0.76 ft/s		
Flow Length, L =	471 ft		
$T = \frac{L}{(60)(V)}$	10.35 min.		71.38 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 71.38 min.

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION
SHED A1-1

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.032 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	24.45 min.		24.45 min.
LAG TWO: INTERMITTENT CHANNEL FLOW (NEXT 75 FEET)			
Tc Velocity factor, k=	17		
Slope, S_0 =	0.012 ft/ft		
$V = k\sqrt{S_0}$	1.82 ft/s		
Flow Length, L =	75 ft		
$T = \frac{L}{(60)(V)}$	0.69 min.		25.14 min.
LAG THREE: CHANNEL FLOW (NEXT 720 FEET)			
Tc Velocity factor, k=	23		
Slope, S_0 =	0.018 ft/ft		
$V = k\sqrt{S_0}$	3.09 ft/s		
Flow Length, L =	720 ft		
$T = \frac{L}{(60)(V)}$	3.89 min.		29.02 min.
LAG FOUR: PIPE FLOW (NEXT 100 FEET)			
Tc Velocity factor, k=	42		
Slope, S_0 =	0.005 ft/ft		
$V = k\sqrt{S_0}$	2.97 ft/s		
Flow Length, L =	100 ft		
$T = \frac{L}{(60)(V)}$	0.56 min.		29.59 min.
LAG FIVE: CHANNEL FLOW (NEXT 150 FEET)			
Tc Velocity factor, k=	23		
Slope, S_0 =	0.027 ft/ft		
$V = k\sqrt{S_0}$	3.78 ft/s		
Flow Length, L =	150 ft		
$T = \frac{L}{(60)(V)}$	0.66 min.		30.25 min.
TOTAL PREDEVELOPED TIME OF CONCENTRATION =			**30.25 min.**

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION
SHED B1-2

JOB NUMBI 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.017 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	31.49 min.		31.49 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 437 FEET)			
Tc Velocity factor, k=	5		
Slope, S_0 =	0.023 ft/ft		
$V = k\sqrt{S_0}$	0.76 ft/s		
Flow Length, L =	437 ft		
$T = \frac{L}{(60)(V)}$	9.60 min.		41.09 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 41.09 min.

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION
SHED B2

JOB NUMBI 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.020 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	29.51 min.		29.51 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 322 FEET)			
Tc Velocity factor, k=	5		
Slope, S_0 =	0.025 ft/ft		
$V = k\sqrt{S_0}$	0.79 ft/s		
Flow Length, L =	322 ft		
$T = \frac{L}{(60)(V)}$	6.79 min.		36.30 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 36.30 min.

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION
SHED A2-2

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 300 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	300 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.047 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	20.97 min.		20.97 min.
LAG TWO: SHALLOW CONCENTRATED FLOW (NEXT 362 FEET)			
Tc Velocity factor, k=	5		
Slope, S_0 =	0.011 ft/ft		
$V = k\sqrt{S_0}$	0.52 ft/s		
Flow Length, L =	362 ft		
$T = \frac{L}{(60)(V)}$	11.51 min.		32.47 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 32.47 min.

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION
SHED B1-3

JOB NUMBER: 395-021
PROJECT: Villebois SAP South Plan Area 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

			Accum. Tc
LAG ONE: SHEET FLOW (FIRST 220 FEET)			
Tt = Travel time			
Manning's "n " =	0.170		
Flow Length, L =	220 ft	(300 ft. max.)	
P = 2-year, 24hr storm =	2.5 in		
Slope, S_0 =	0.055 ft/ft		
$T_T = \frac{(0.42)(n * L)^{0.8}}{(P)^{0.5}(S_0)^{0.4}}$	15.36 min.		15.36 min.

TOTAL PREDEVELOPED TIME OF CONCENTRATION = 15.36 min.

Pacific Community Design

DEVELOPED TIME OF CONCENTRATION

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

SHED A2-1

Catchment Time	10 min.
Longest Run of Pipe	2195 ft
Velocity of Flow	3 ft/s
Time in Pipe = (2195 ft)/(3.00 ft/s) =	732 s

TOTAL DEVELOPED Tc =	**22.2 min.**

SHED B1-1

Catchment Time	10 min.
Longest Run of Pipe	570 ft
Velocity of Flow	3 ft/s
Time in Pipe = (570 ft)/(3.00 ft/s) =	190 s

TOTAL DEVELOPED Tc =	**13.2 min.**

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Hydrograph Return Period Recap

Hyd.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SBUH Runoff	-------	-------	1.11	-------	-------	2.37	3.05	-------	4.00	SHED A1 - PRE
2	SBUH Runoff	-------	-------	1.28	-------	-------	2.74	3.52	-------	4.61	SHED A2 - PRE
3	SBUH Runoff	-------	-------	2.06	-------	-------	4.36	5.60	-------	7.36	SHED B1 - PRE
4	SBUH Runoff	-------	-------	0.53	-------	-------	1.10	1.41	-------	1.85	SHED B2 - PRE
5	Combine	3, 4	-------	2.58	-------	-------	5.45	7.00	-------	9.21	SHED B1 & B2 - PRE
7	SBUH Runoff	-------	-------	0.78	-------	-------	1.52	1.90	-------	2.42	SHED A1 - DEVELOPED
8	SBUH Runoff	-------	-------	5.03	-------	-------	7.94	9.33	-------	11.19	SHED A2-1 - DEVELOPED
9	SBUH Runoff	-------	-------	0.76	-------	-------	1.55	1.97	-------	2.55	SHED A2-2 - DEVELOPED
10	SBUH Runoff	-------	-------	1.40	-------	-------	2.37	2.84	-------	3.47	SHED B1-1 - DEVELOPED
11	SBUH Runoff	-------	-------	0.63	-------	-------	1.34	1.72	-------	2.25	SHED B1-2 - DEVELOPED
12	SBUH Runoff	-------	-------	0.30	-------	-------	0.64	0.82	-------	1.08	SHED B1-3 - DEVELOPED
13	SBUH Runoff	-------	-------	0.32	-------	-------	0.69	0.88	-------	1.16	SHED B2 - DEVELOPED
16	Reservoir	8	-------	0.79	-------	-------	2.00	2.55	-------	3.50	SHED A2-1 - DETAINED
17	Combine	9, 16	-------	1.25	-------	-------	2.62	3.40	-------	4.66	SHED A2 - DEVELOPED
19	Reservoir	10	-------	1.28	-------	-------	2.20	2.65	-------	3.42	SHED B1-1 - DETAINED
20	Combine	11, 12, 13, 19	-------	2.52	-------	-------	4.85	6.06	-------	7.89	SHED B1 & B2 - DEVELOPED

Hydrograph Summary Report

Hyd.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SBUH Runoff	1.11	6	492	33,106	----	------	------	SHED A1 - PRE
2	SBUH Runoff	1.28	6	504	46,787	----	------	------	SHED A2 - PRE
3	SBUH Runoff	2.06	6	528	80,279	----	------	------	SHED B1 - PRE
4	SBUH Runoff	0.53	6	534	21,619	----	------	------	SHED B2 - PRE
5	Combine	2.58	6	528	101,898	3, 4	------	------	SHED B1 & B2 - PRE
7	SBUH Runoff	0.78	6	486	19,781	----	------	------	SHED A1 - DEVELOPED
8	SBUH Runoff	5.03	6	486	92,985	----	------	------	SHED A2-1 - DEVELOPED
9	SBUH Runoff	0.76	6	492	21,058	----	------	------	SHED A2-2 - DEVELOPED
10	SBUH Runoff	1.40	6	480	23,837	----	------	------	SHED B1-1 - DEVELOPED
11	SBUH Runoff	0.63	6	498	20,360	----	------	------	SHED B1-2 - DEVELOPED
12	SBUH Runoff	0.30	6	498	9,745	----	------	------	SHED B1-3 - DEVELOPED
13	SBUH Runoff	0.32	6	498	9,938	----	------	------	SHED B2 - DEVELOPED
16	Reservoir	0.79	6	1338	92,977	8	197.26	47,270	SHED A2-1 - DETAINED
17	Combine	1.25	6	498	114,035	9, 16	------	------	SHED A2 - DEVELOPED
19	Reservoir	1.28	6	492	23,837	10	195.99	461	SHED B1-1 - DETAINED
20	Combine	2.52	6	492	63,880	11, 12, 13, 19	------	------	SHED B1 & B2 - DEVELOPED

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

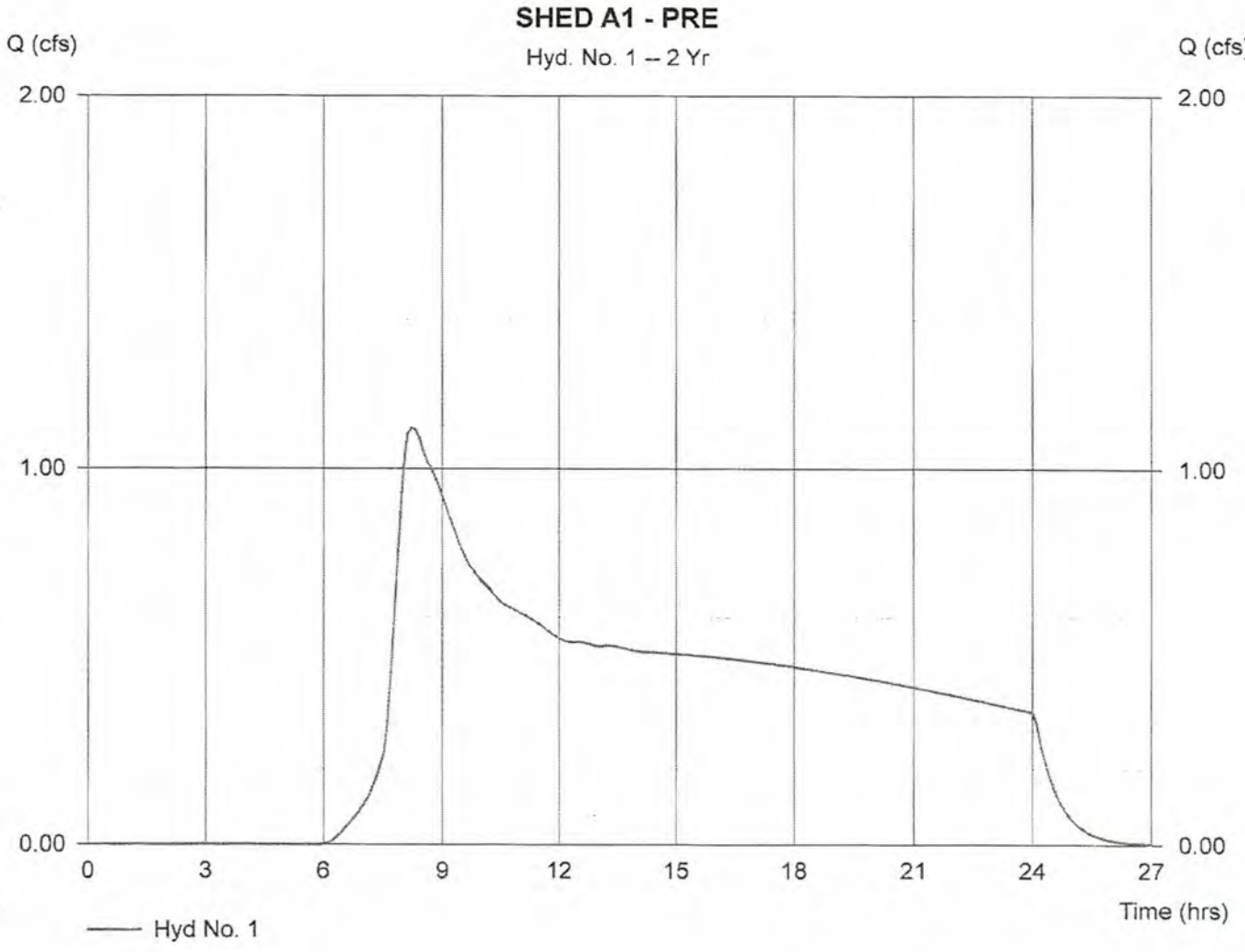
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 1

SHED A1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.11 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 10.26 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 33.6 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 33,106 cuft



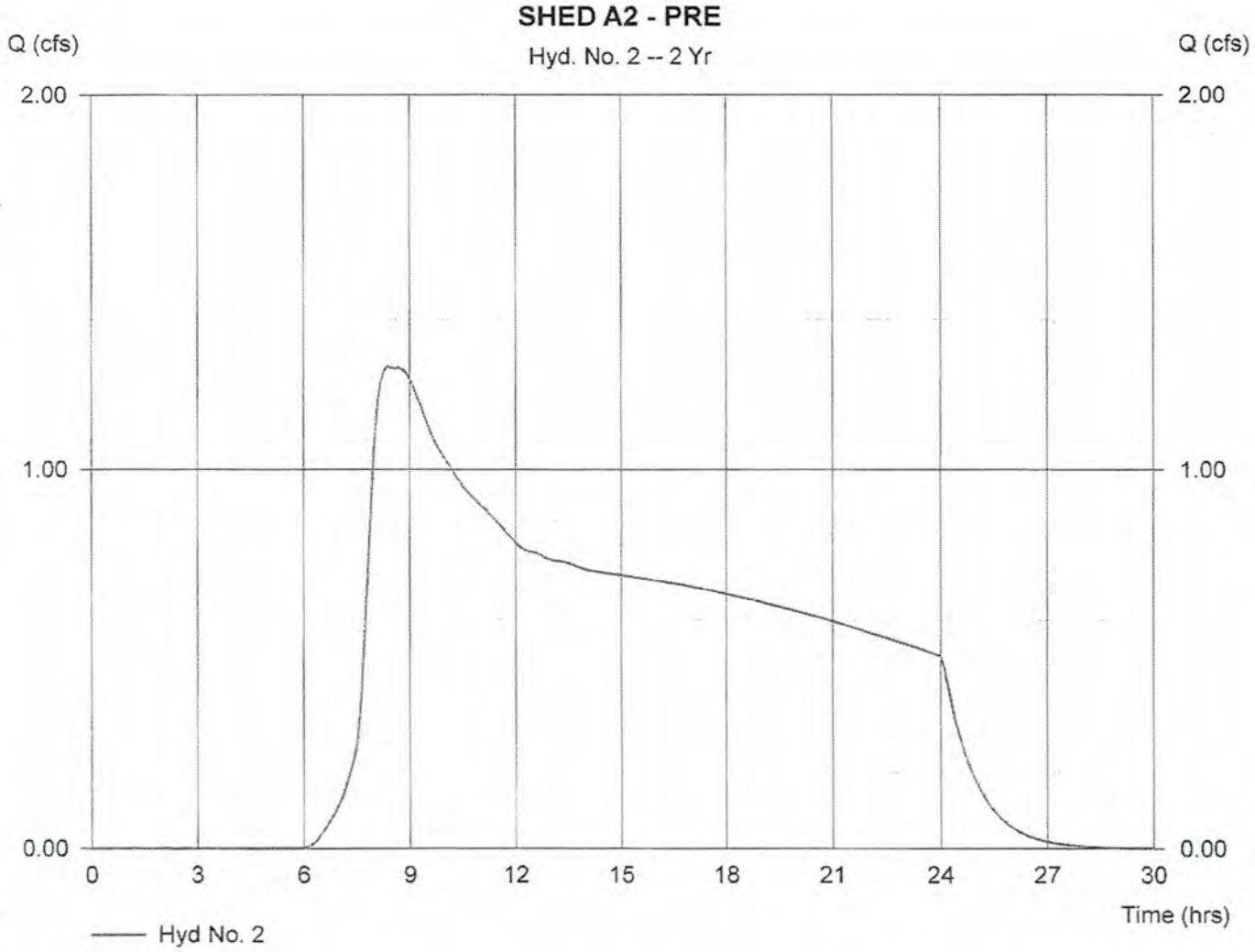
Hydrograph Plot

Hyd. No. 2

SHED A2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.28 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 14.50 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 53.2 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 46,787 cuft



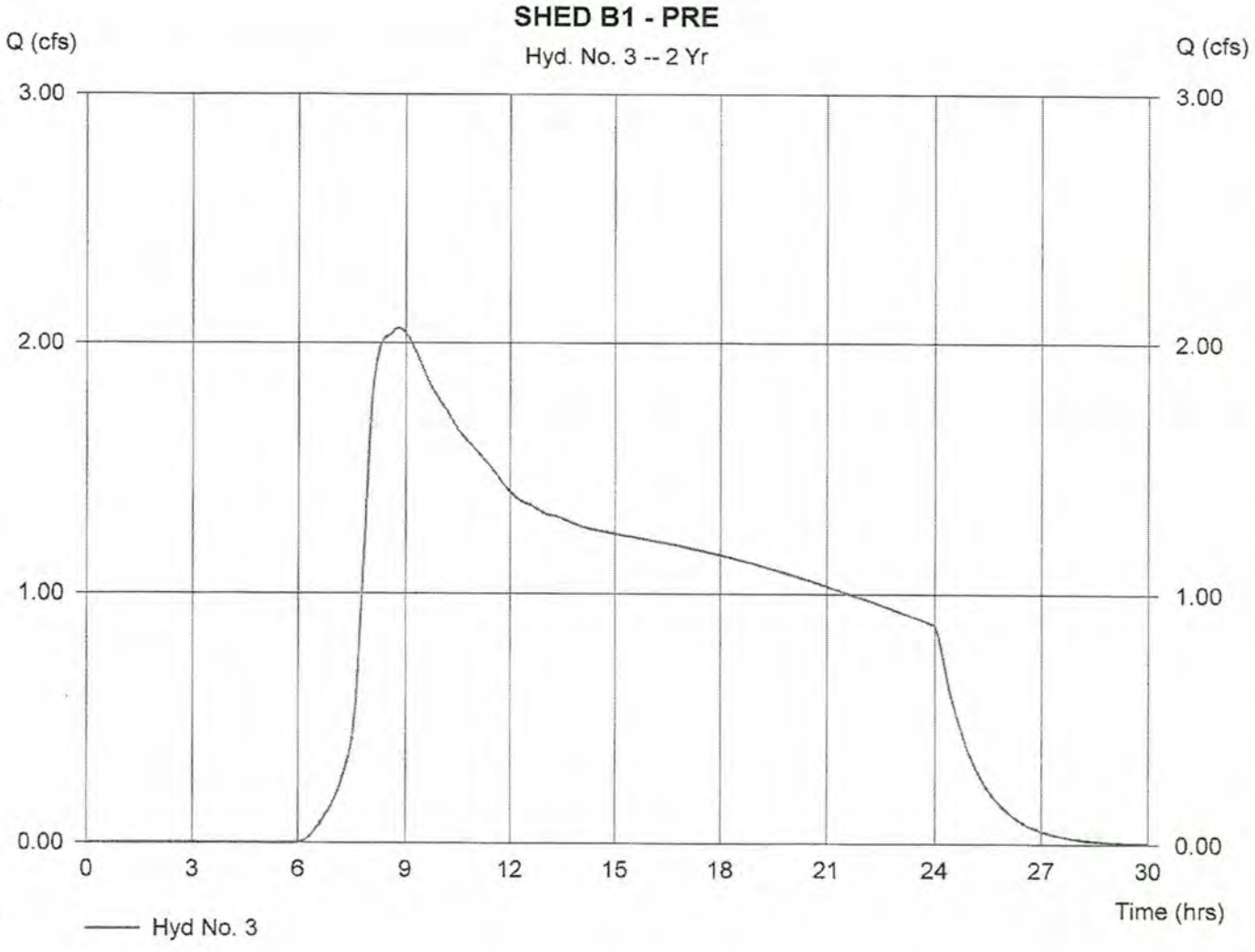
Hydrograph Plot

Hyd. No. 3

SHED B1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.06 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 24.88 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 62.3 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 80,279 cuft



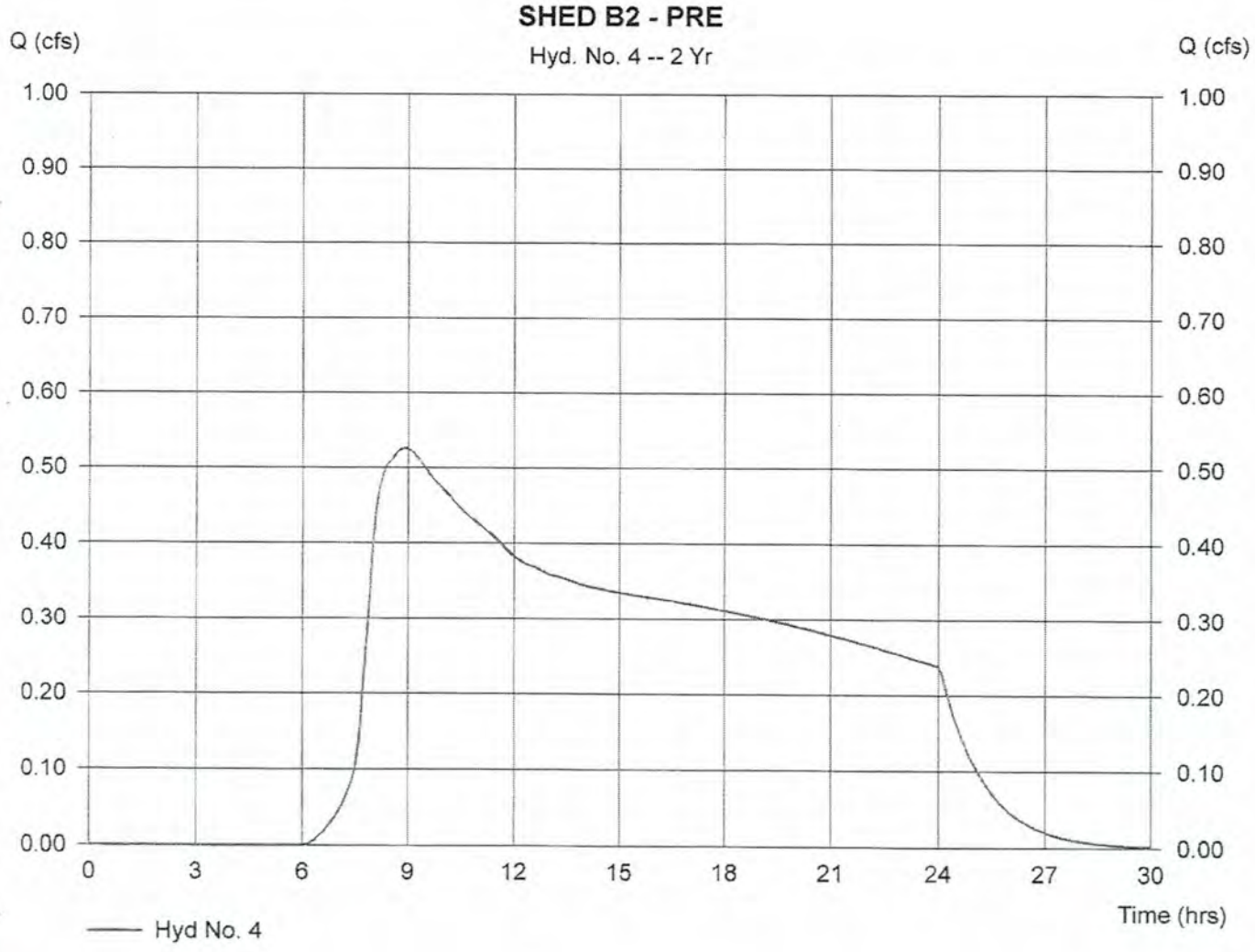
Hydrograph Plot

Hyd. No. 4

SHED B2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.53 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 6.70 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 71.4 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 21,619 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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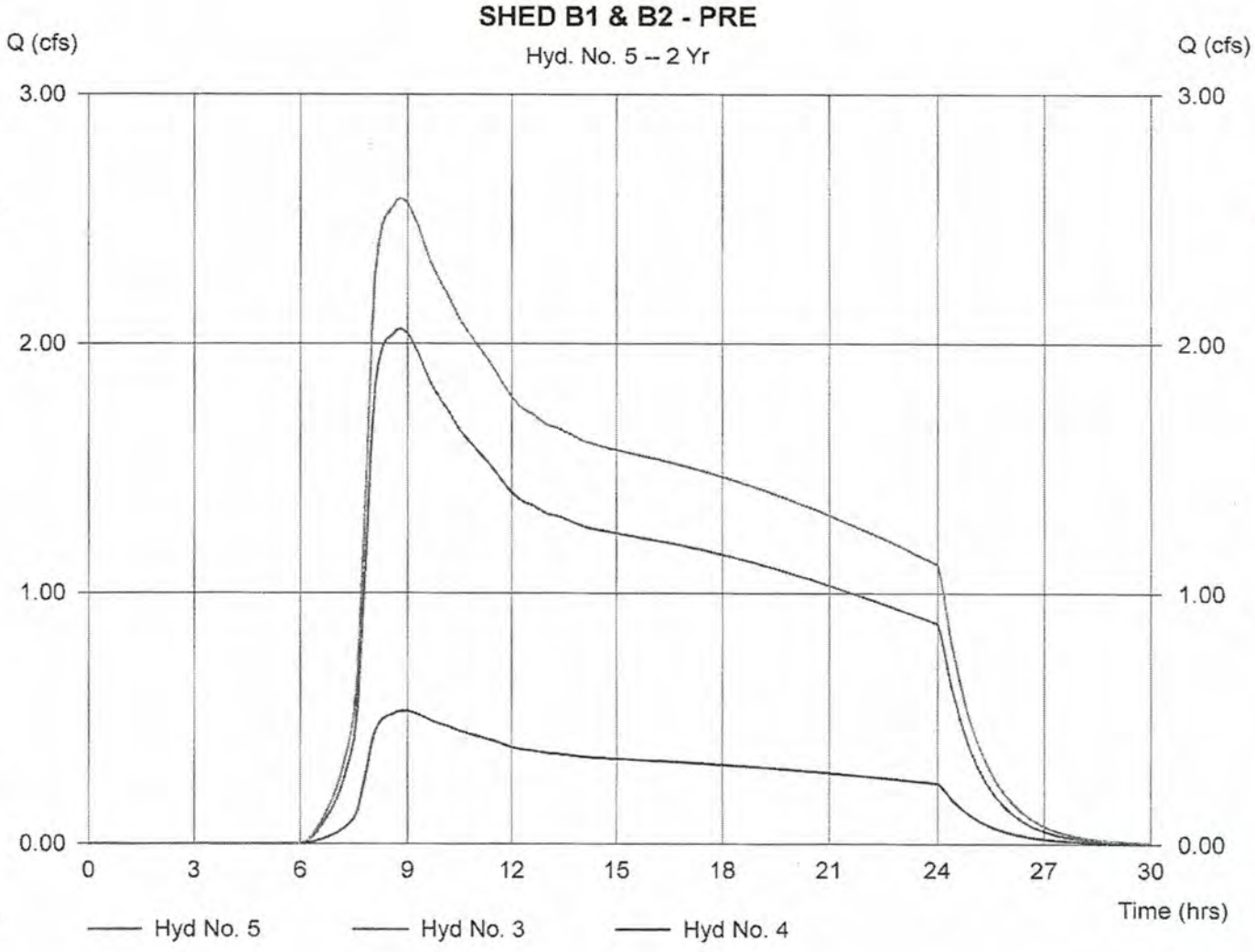
Hyd. No. 5

SHED B1 & B2 - PRE

Hydrograph type	= Combine	Peak discharge	= 2.58 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Inflow hyds.	= 3, 4		

Hydrograph Volume = 101,898 cuft



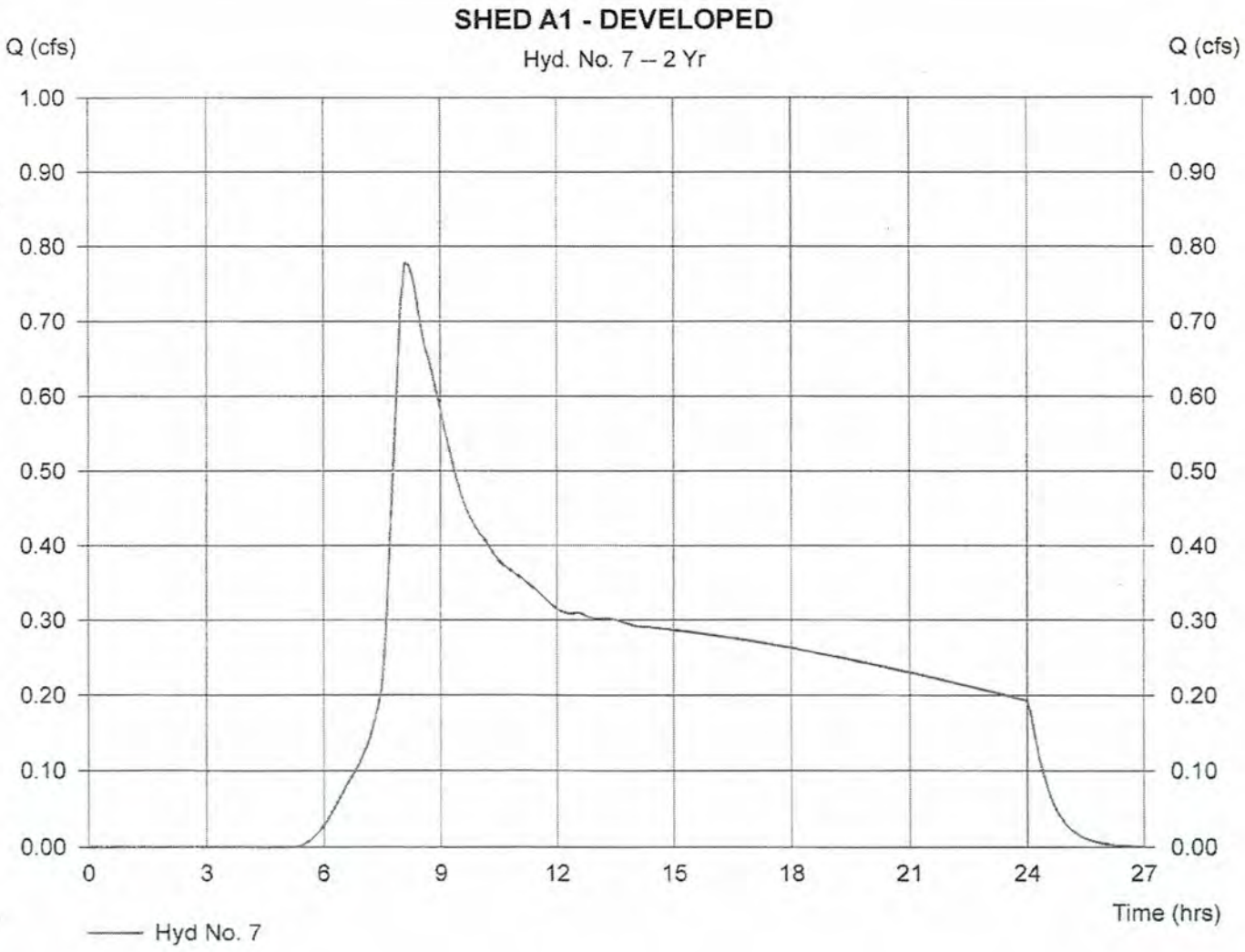
Hydrograph Plot

Hyd. No. 7

SHED A1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.78 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 5.19 ac	Curve number	= 82.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 30.3 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 19,781 cuft



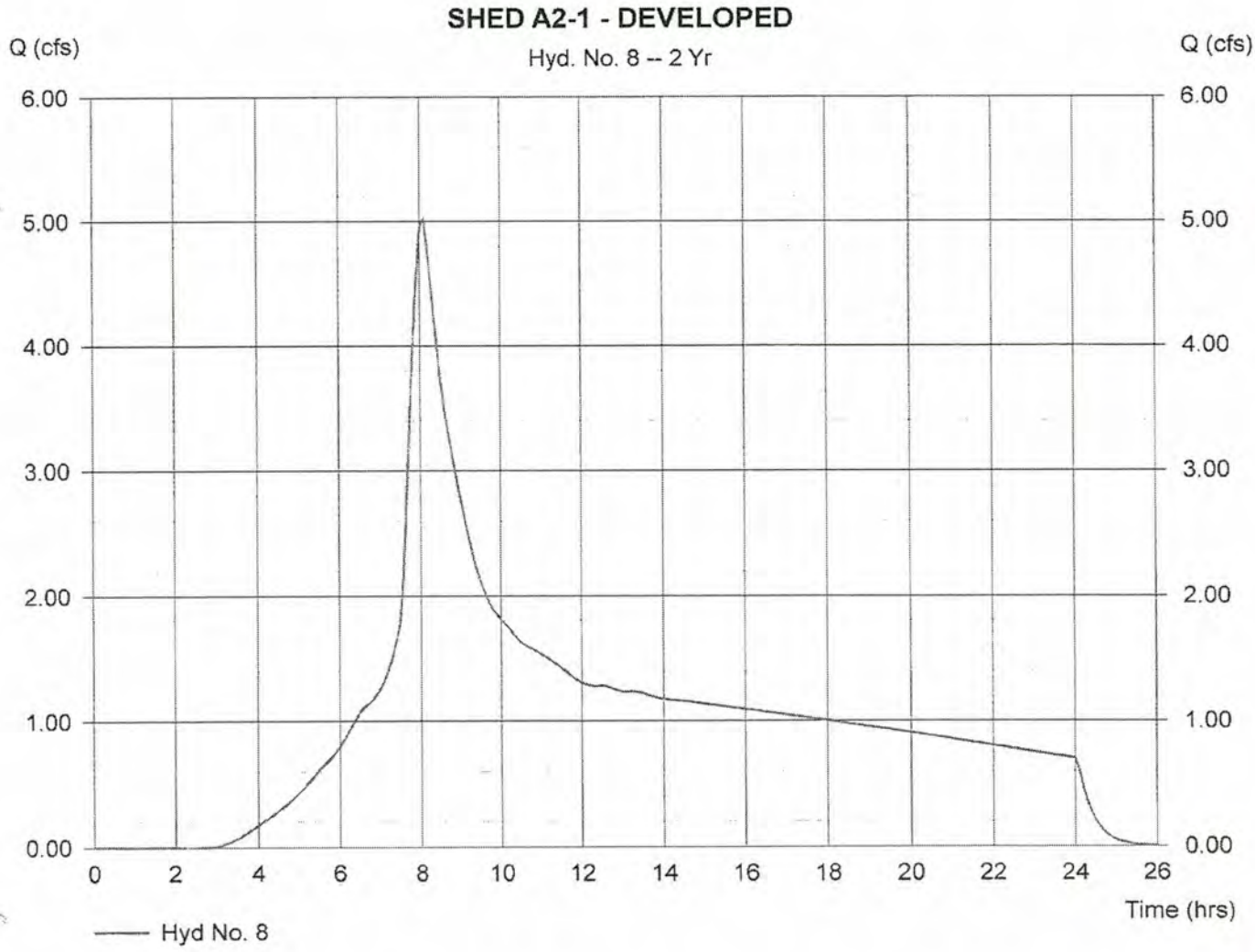
Hydrograph Plot

Hyd. No. 8

SHED A2-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 5.03 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 15.59 ac	Curve number	= 91.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 22.2 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 92,985 cuft



Hydrograph Plot

Hyd. No. 9

SHED A2-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.76 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 6.05 ac	Curve number	= 81.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 32.5 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 21,058 cuft

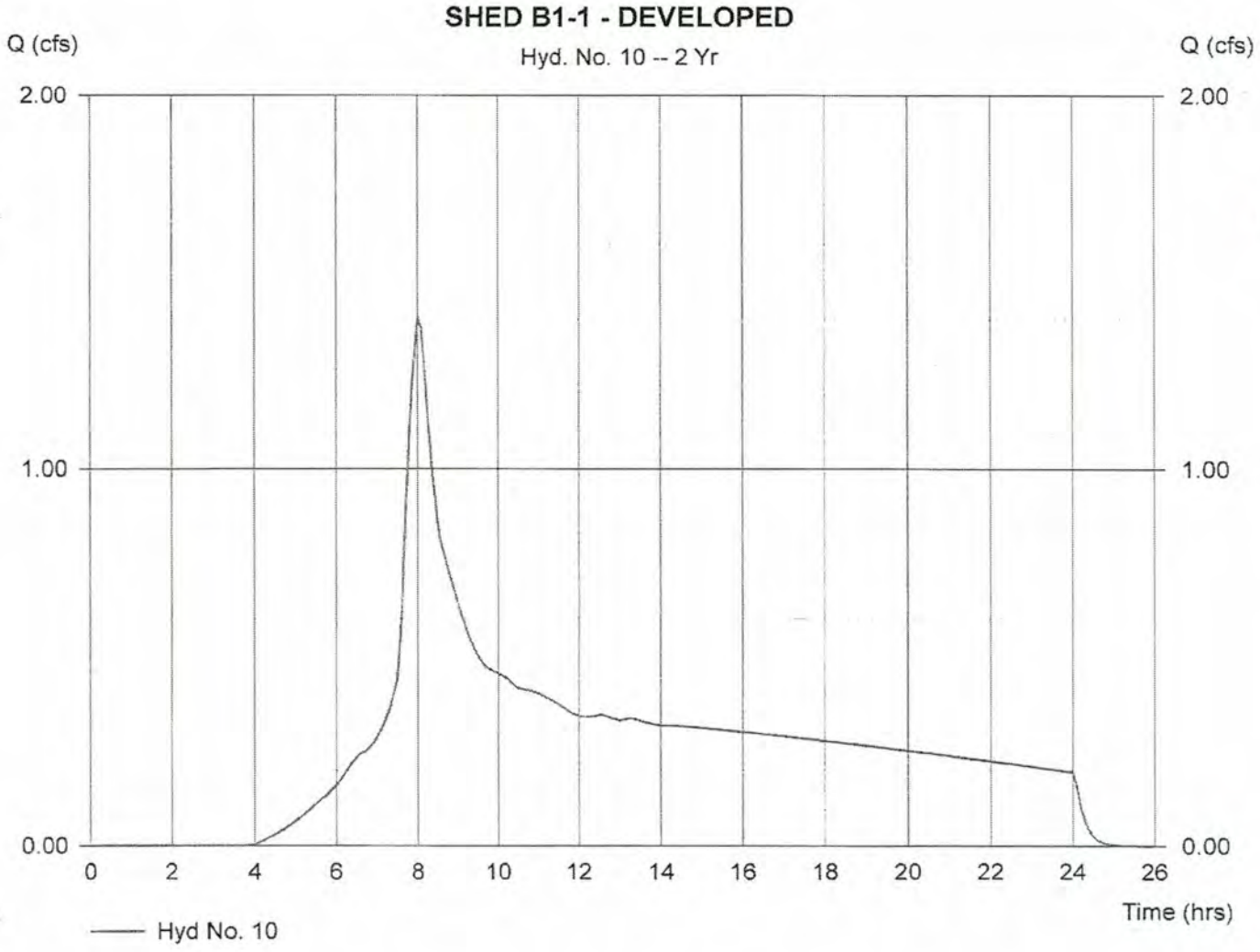
Hydrograph Plot

Hyd. No. 10

SHED B1-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.40 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 4.68 ac	Curve number	= 88.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 13.2 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 23,837 cuft



Hydrograph Plot

Hyd. No. 11

SHED B1-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.63 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 6.31 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 20,360 cuft

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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Hyd. No. 12

SHED B1-3 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.30 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 3.02 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 9,745 cuft

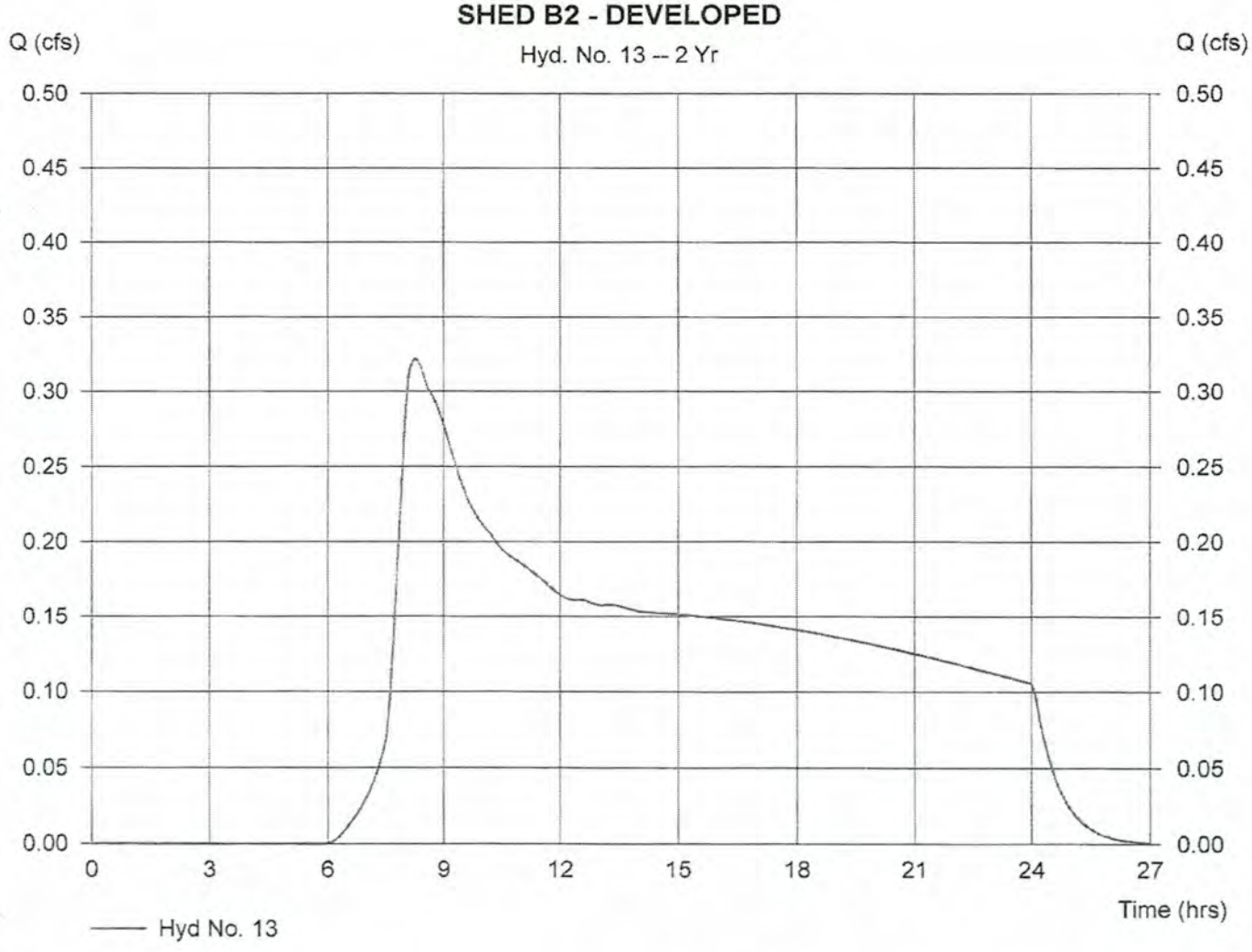
Hydrograph Plot

Hyd. No. 13

SHED B2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.32 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Drainage area	= 3.08 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 36.3 min
Total precip.	= 2.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 9,938 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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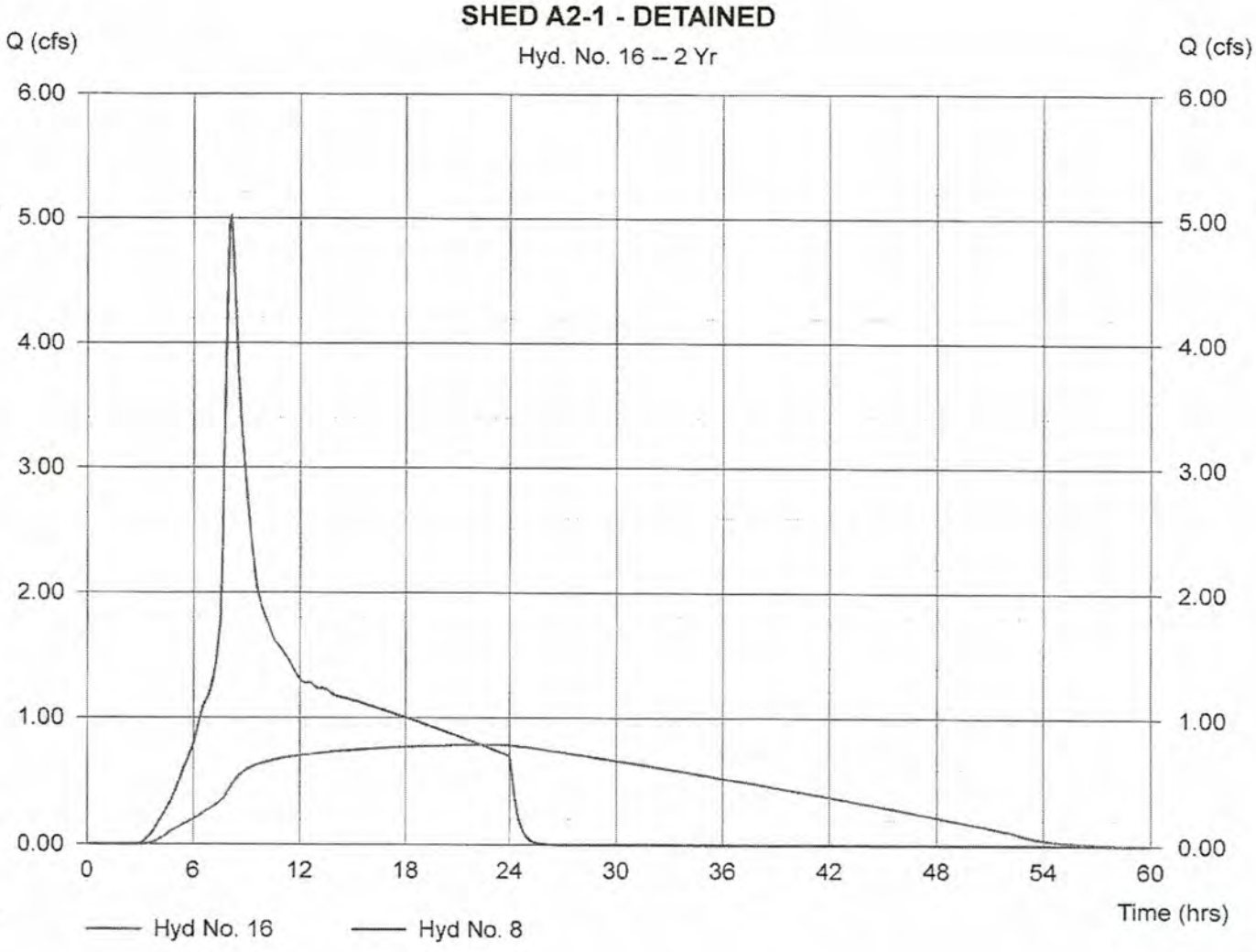
Hyd. No. 16

SHED A2-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 0.79 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Inflow hyd. No.	= 8	Max. Elevation	= 197.26 ft
Reservoir name	= POND A - WALLS	Max. Storage	= 47,270 cuft

Storage Indication method used.

Hydrograph Volume = 92,977 cuft



Pond Report

Pond No. 2 - POND A - WALLS

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	192.00	7,337	0	0
1.00	193.00	7,987	7,662	7,662
2.00	194.00	8,585	8,286	15,948
3.00	195.00	9,179	8,882	24,830
4.00	196.00	9,791	9,485	34,315
5.00	197.00	10,434	10,113	44,428
6.00	198.00	11,075	10,755	55,182
7.00	199.00	12,835	11,955	67,137
8.00	200.00	14,779	13,807	80,944

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	3.60	8.50	0.00
Span (in)	= 12.00	3.60	8.50	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 187.00	187.10	197.25	0.00
Length (ft)	= 80.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.71	0.00	0.00	0.00
Crest El. (ft)	= 199.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.

Hydrograph Plot

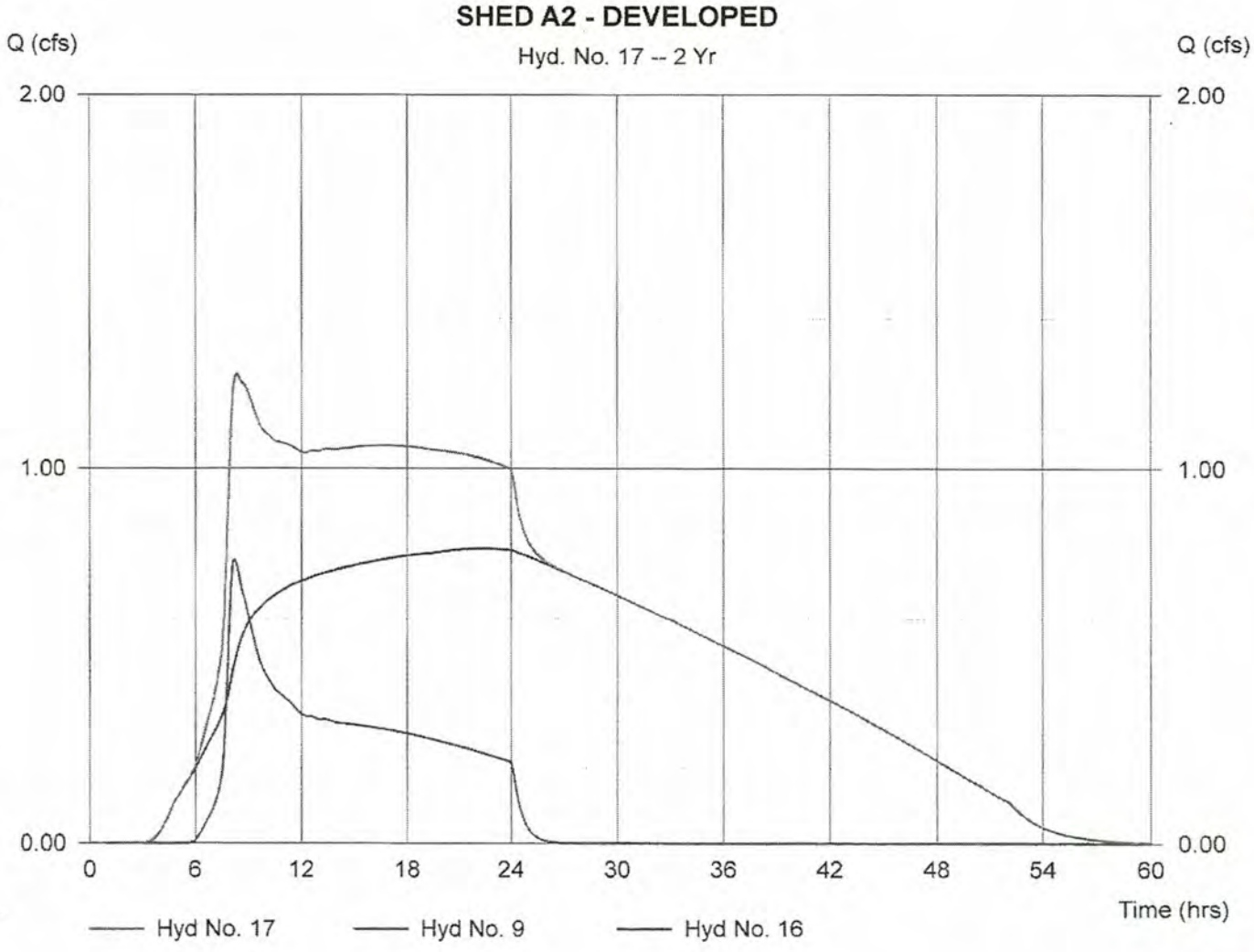
Hyd. No. 17

SHED A2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 9, 16

Peak discharge = 1.25 cfs
Time interval = 6 min

Hydrograph Volume = 114,035 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Jun 26 2013, 3:10 PM

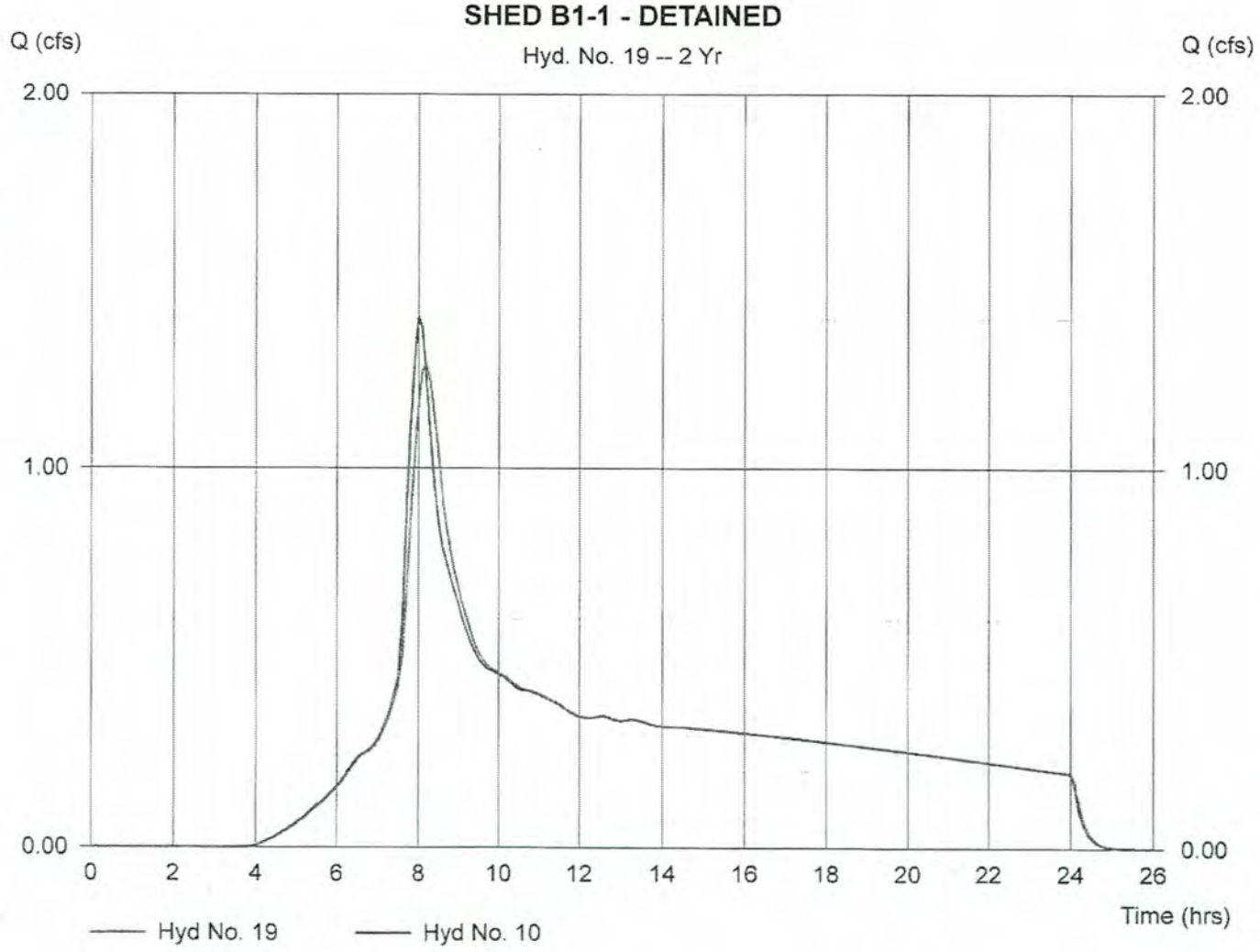
Hyd. No. 19

SHED B1-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 1.28 cfs
Storm frequency	= 2 yrs	Time interval	= 6 min
Inflow hyd. No.	= 10	Max. Elevation	= 195.99 ft
Reservoir name	= POND B	Max. Storage	= 461 cuft

Storage Indication method used.

Hydrograph Volume = 23,837 cuft



Pond Report

Pond No. 4 - POND B

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	195.00	165	0	0
1.00	196.00	770	468	468
2.00	197.00	1,256	1,013	1,481
3.00	198.00	1,773	1,515	2,995
4.00	199.00	2,309	2,041	5,036
5.00	200.00	2,861	2,585	7,621

Culvert / Orifice Structures

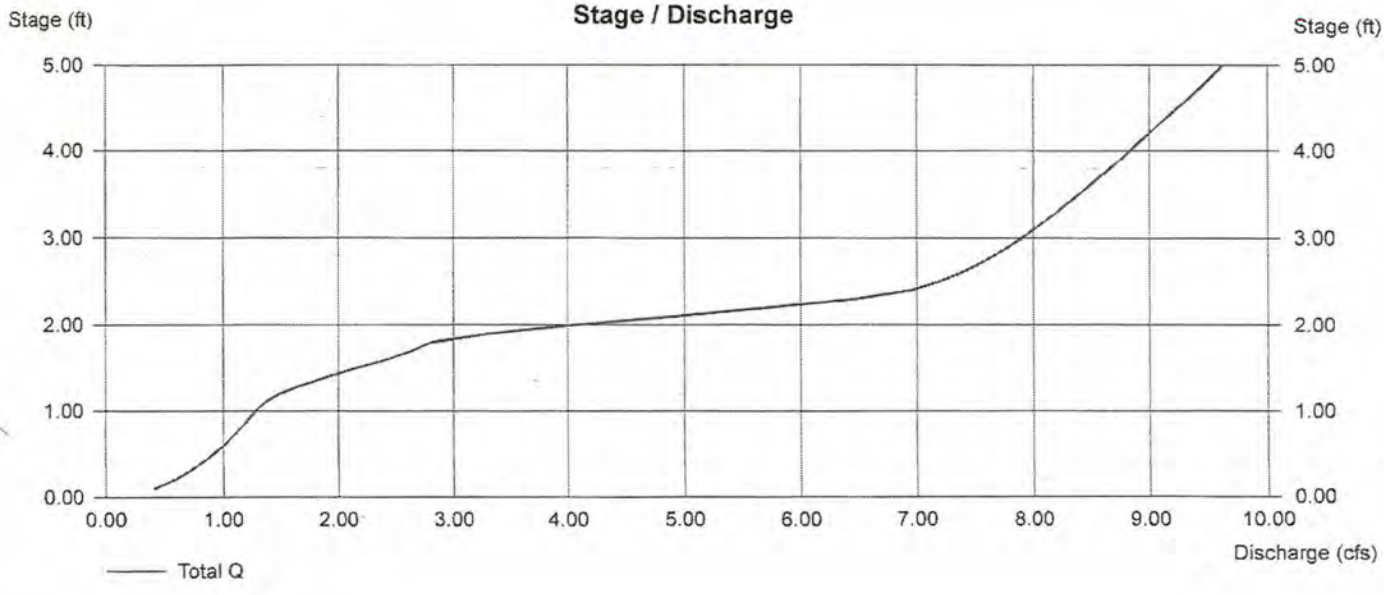
	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	7.00	8.00	0.00
Span (in)	= 12.00	7.00	8.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 193.00	193.10	196.05	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.000
Orif. Coeff.	= 0.60	0.60	0.60	0.00
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.14	0.00	0.00	0.00
Crest El. (ft)	= 196.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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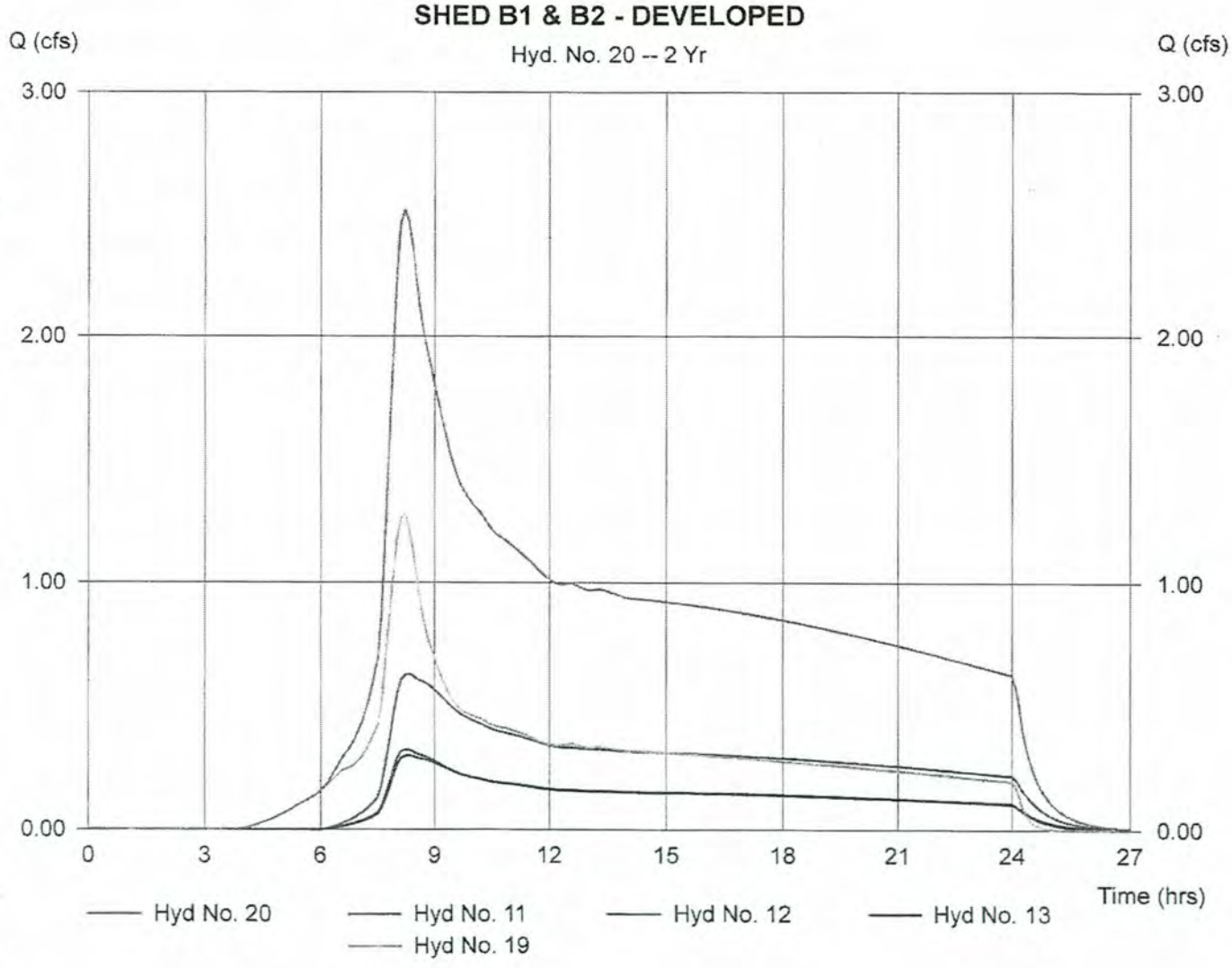
Hyd. No. 20

SHED B1 & B2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 11, 12, 13, 19

Peak discharge = 2.52 cfs
Time interval = 6 min

Hydrograph Volume = 63,880 cuft



Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SBUH Runoff	2.37	6	486	59,470	----	------	------	SHED A1 - PRE
2	SBUH Runoff	2.74	6	498	84,047	----	------	------	SHED A2 - PRE
3	SBUH Runoff	4.36	6	504	144,213	----	------	------	SHED B1 - PRE
4	SBUH Runoff	1.10	6	522	38,835	----	------	------	SHED B2 - PRE
5	Combine	5.45	6	504	183,049	3, 4	------	------	SHED B1 & B2 - PRE
7	SBUH Runoff	1.52	6	486	34,081	----	------	------	SHED A1 - DEVELOPED
8	SBUH Runoff	7.94	6	486	143,265	----	------	------	SHED A2-1 - DEVELOPED
9	SBUH Runoff	1.55	6	486	37,114	----	------	------	SHED A2-2 - DEVELOPED
10	SBUH Runoff	2.37	6	480	38,211	----	------	------	SHED B1-1 - DEVELOPED
11	SBUH Runoff	1.34	6	492	36,575	----	------	------	SHED B1-2 - DEVELOPED
12	SBUH Runoff	0.64	6	492	17,505	----	------	------	SHED B1-3 - DEVELOPED
13	SBUH Runoff	0.69	6	492	17,853	----	------	------	SHED B2 - DEVELOPED
16	Reservoir	2.00	6	708	143,258	8	197.98	54,999	SHED A2-1 - DETAINED
17	Combine	2.62	6	684	180,371	9, 16	------	------	SHED A2 - DEVELOPED
19	Reservoir	2.20	6	486	38,211	10	196.52	994	SHED B1-1 - DETAINED
20	Combine	4.85	6	492	110,144	11, 12, 13, 19	------	------	SHED B1 & B2 - DEVELOPED

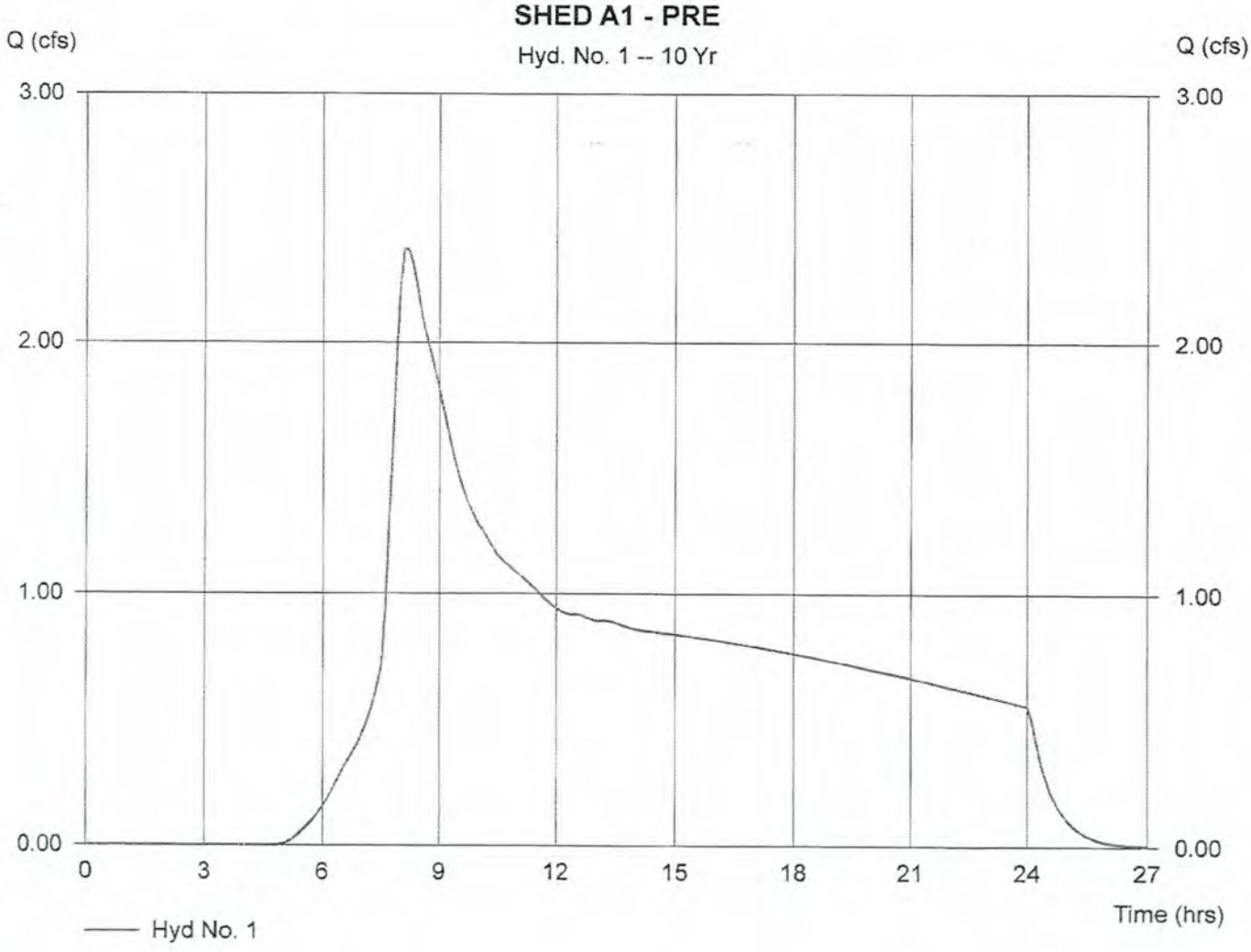
Hydrograph Plot

Hyd. No. 1

SHED A1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.37 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 10.26 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 33.6 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 59,470 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

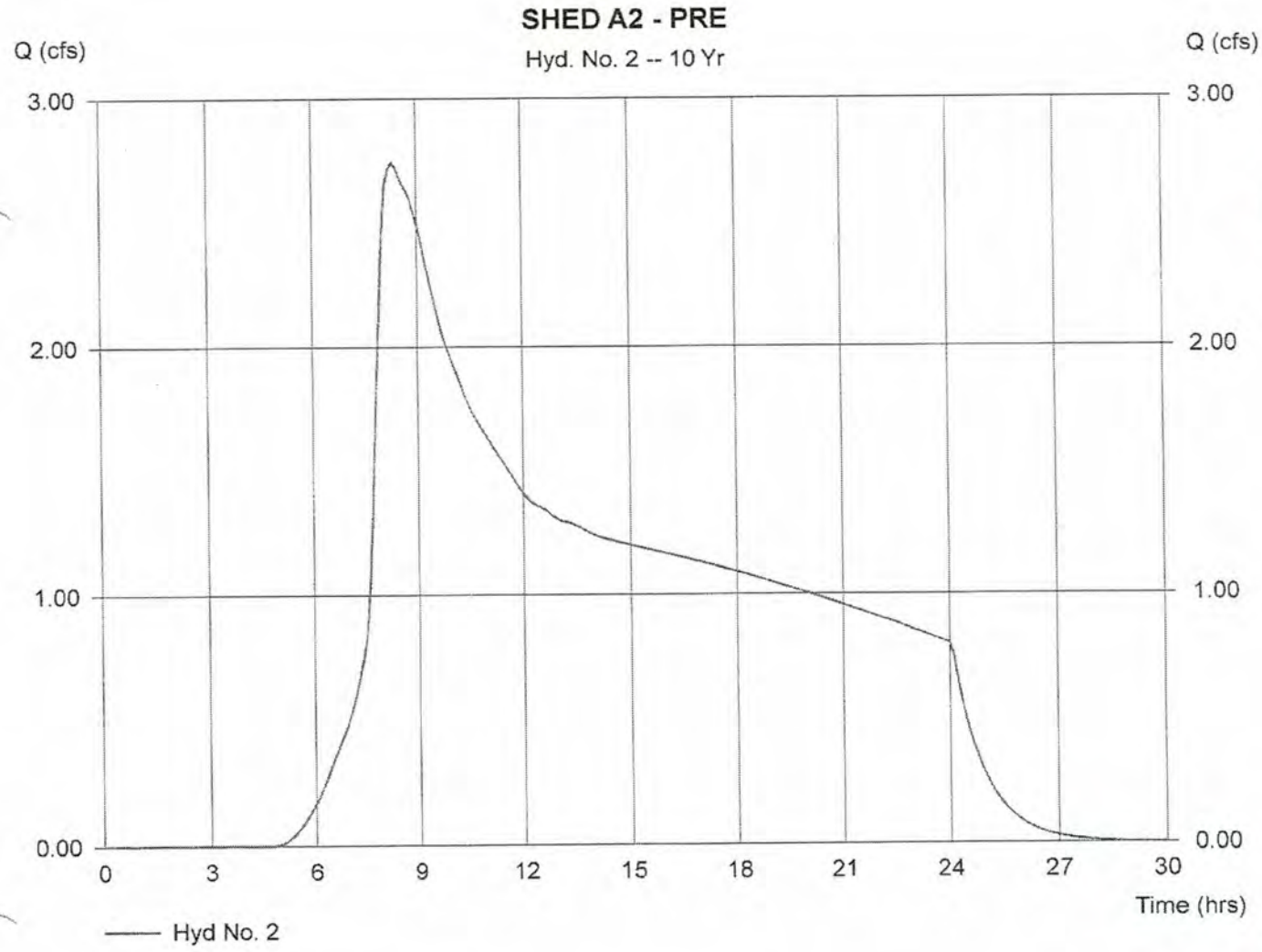
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 2

SHED A2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.74 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 14.50 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 53.2 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 84,047 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

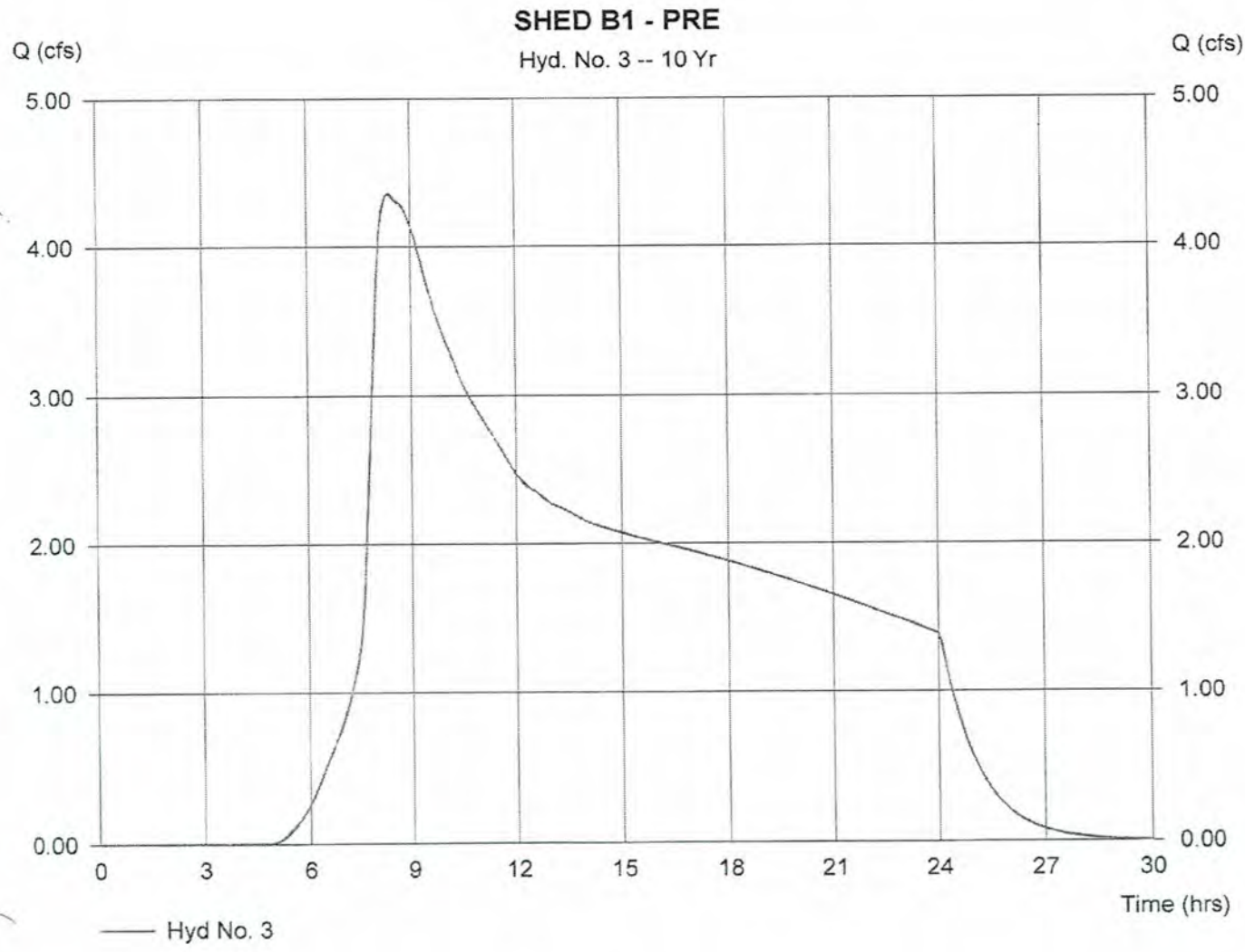
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 3

SHED B1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 4.36 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 24.88 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 62.3 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 144,213 cuft



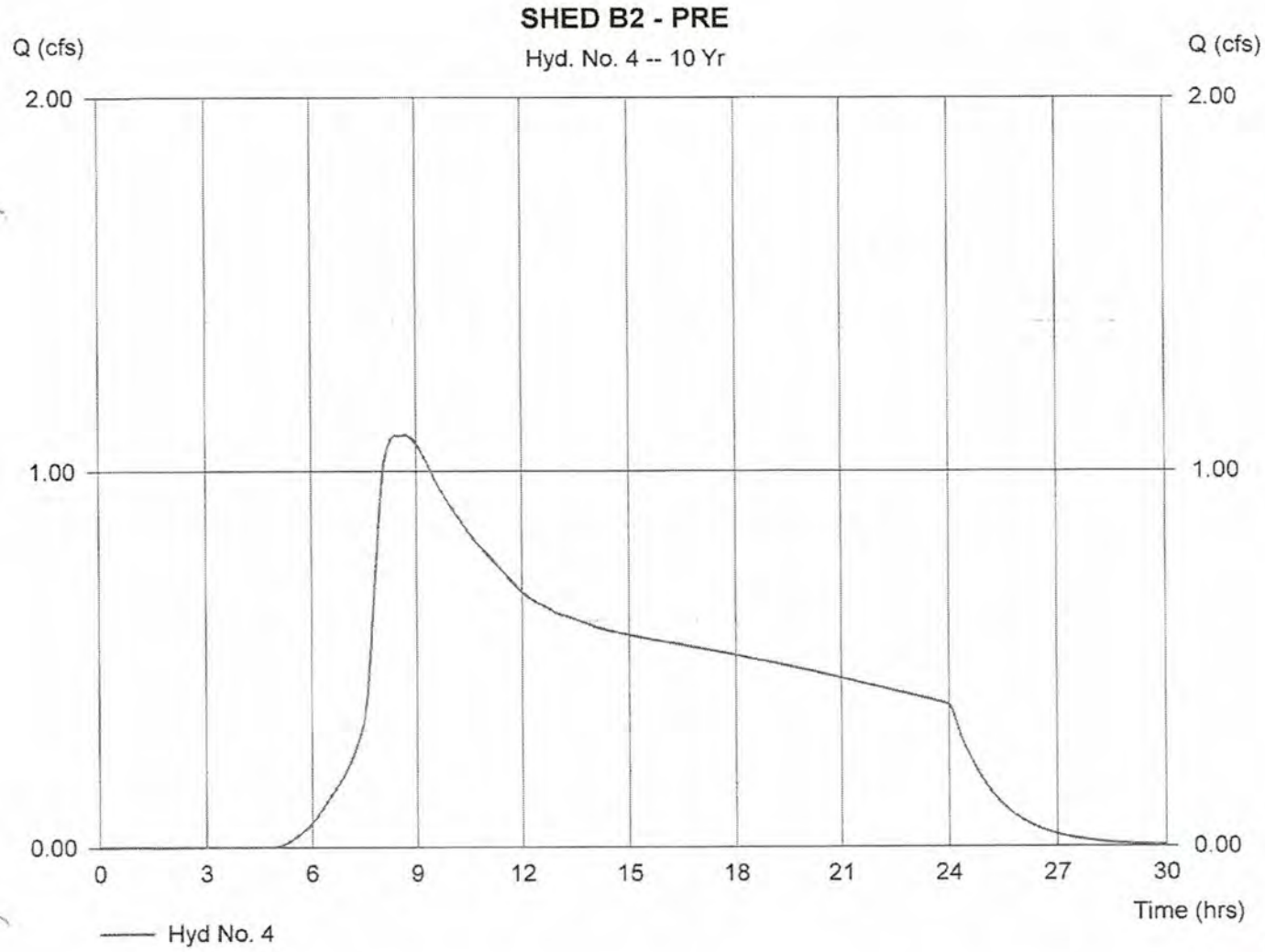
Hydrograph Plot

Hyd. No. 4

SHED B2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.10 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 6.70 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 71.4 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 38,835 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Jun 26 2013, 3:10 PM

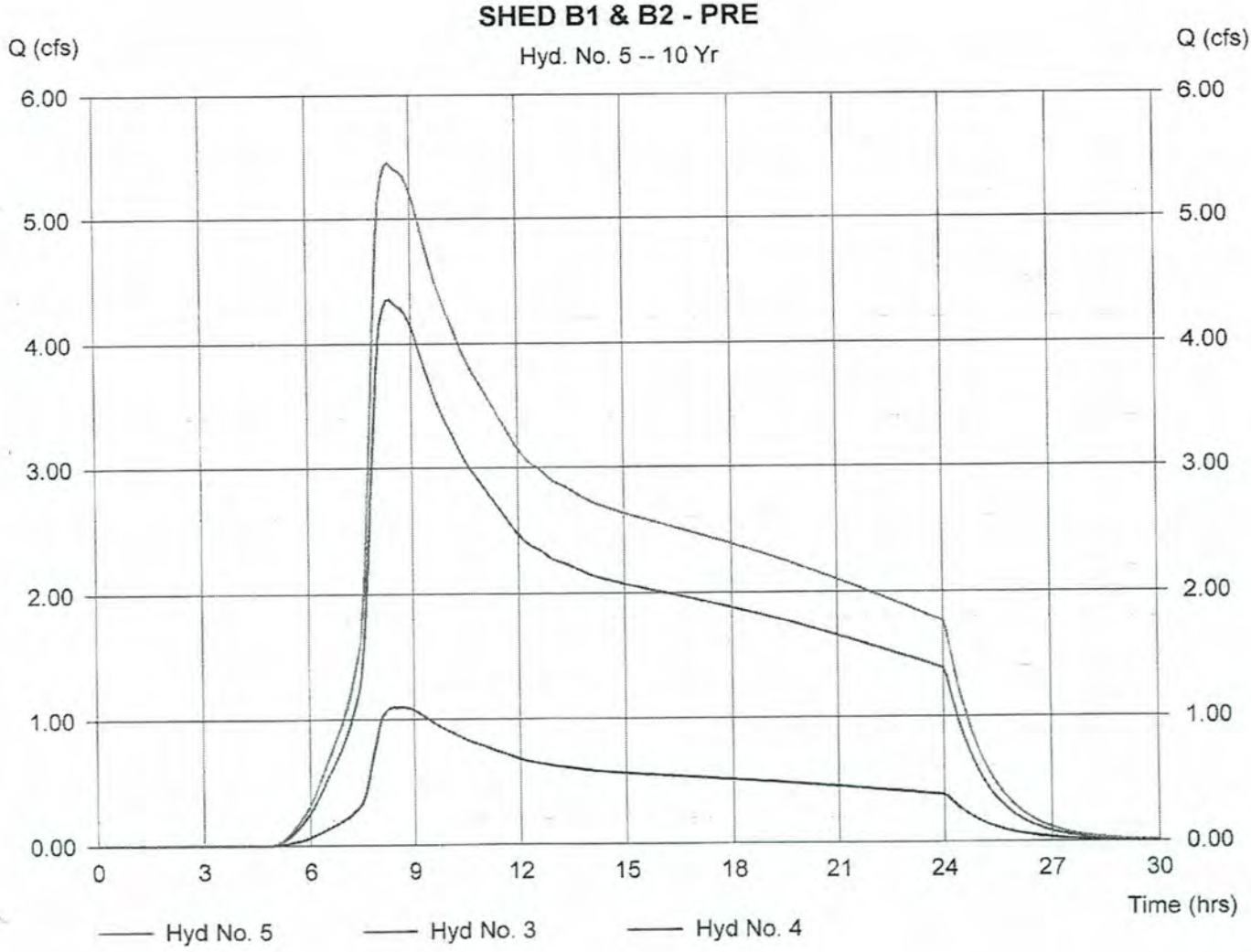
Hyd. No. 5

SHED B1 & B2 - PRE

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 3, 4

Peak discharge = 5.45 cfs
Time interval = 6 min

Hydrograph Volume = 183,049 cuft



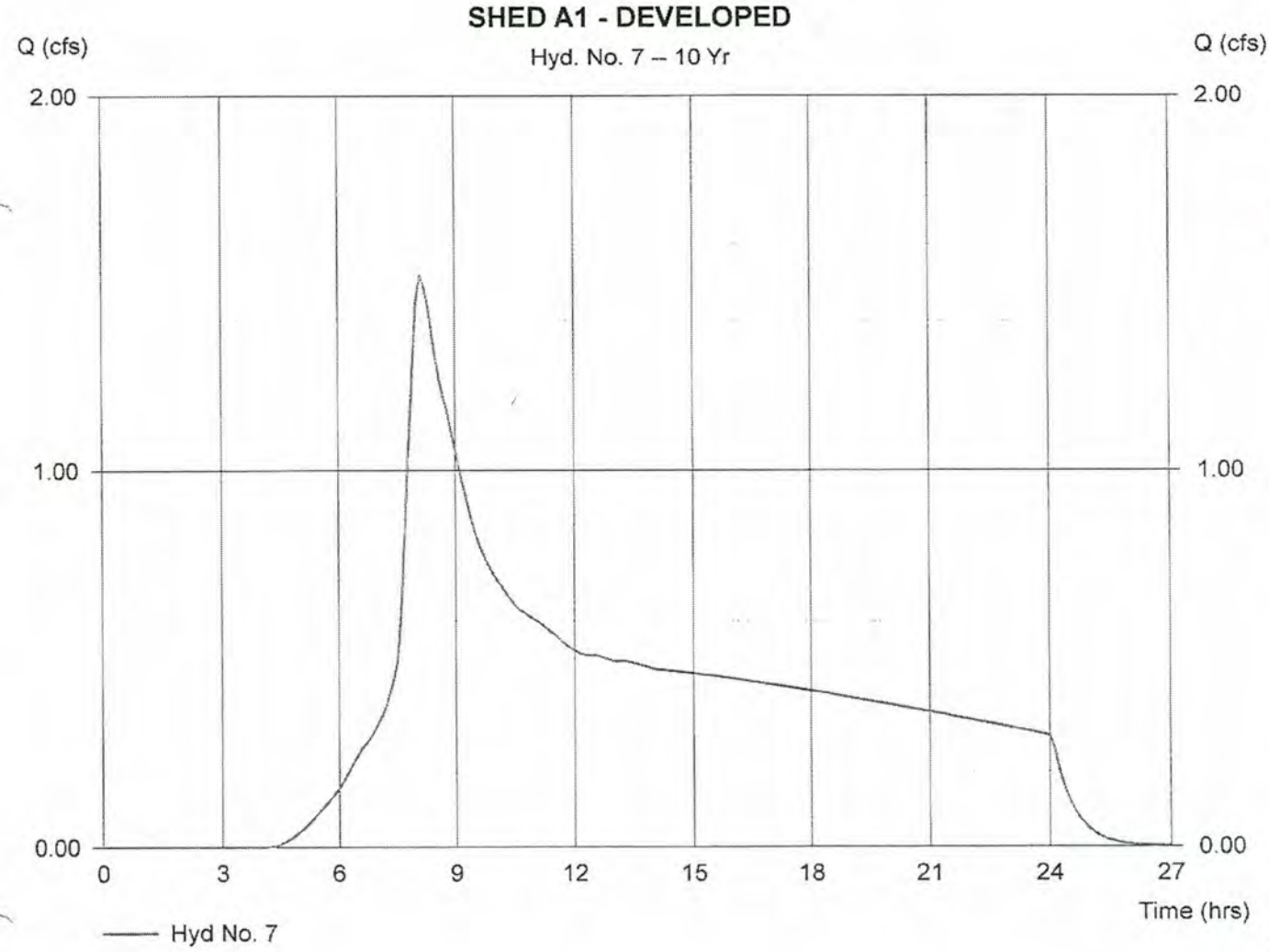
Hydrograph Plot

Hyd. No. 7

SHED A1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.52 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 5.19 ac	Curve number	= 82.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 30.3 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 34,081 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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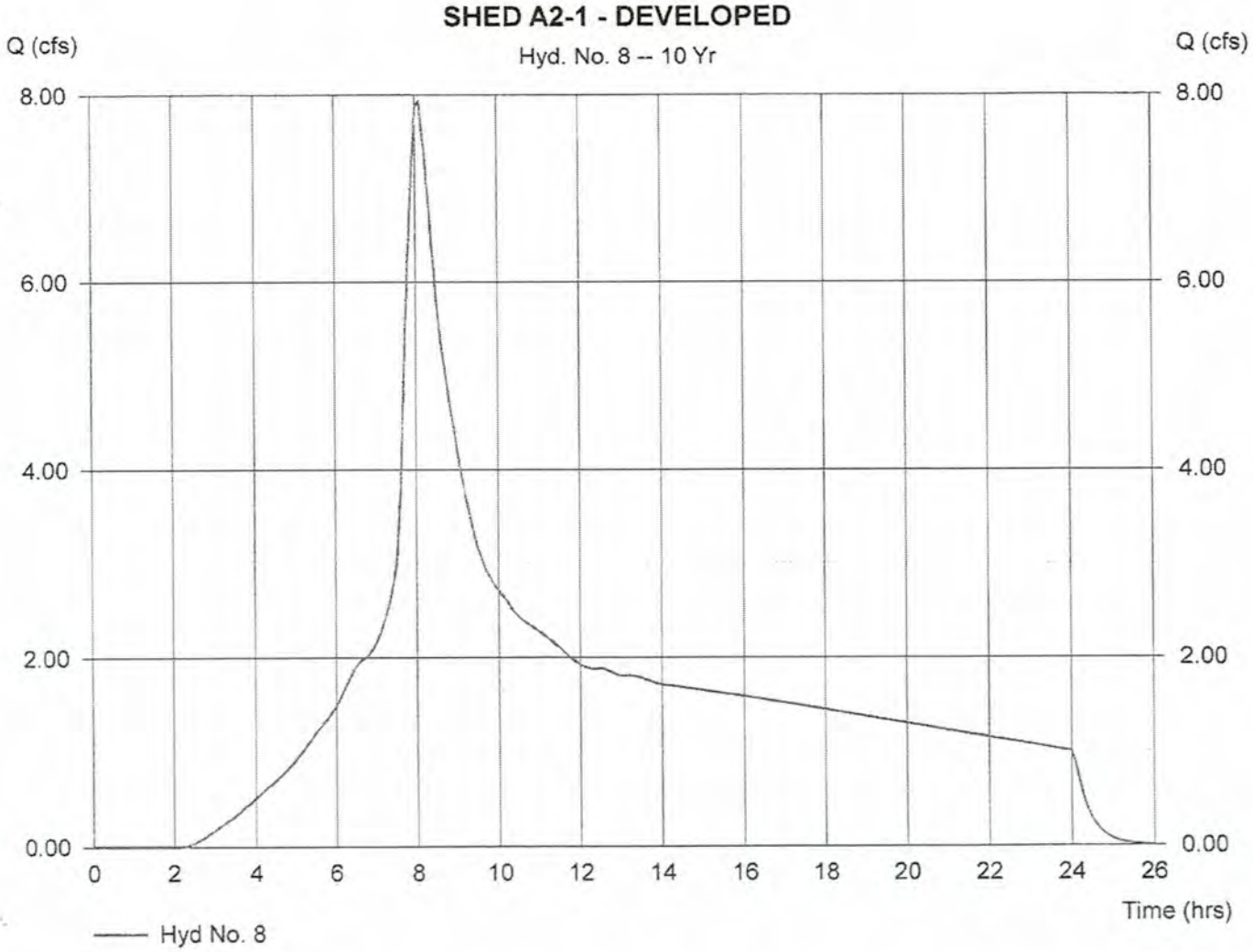
Hyd. No. 8

SHED A2-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 7.94 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 15.59 ac	Curve number	= 91.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 22.2 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 143,265 cuft



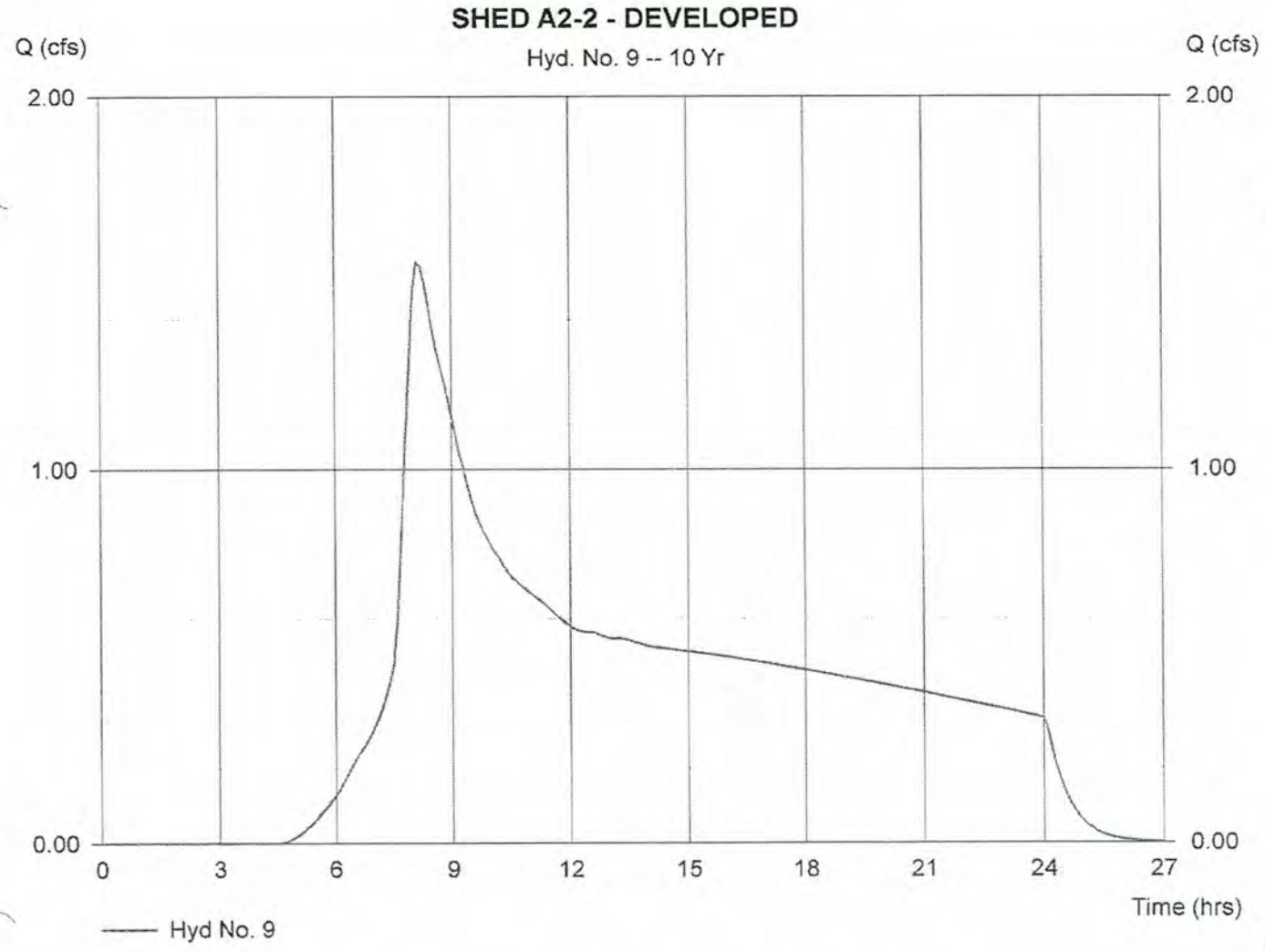
Hydrograph Plot

Hyd. No. 9

SHED A2-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.55 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 6.05 ac	Curve number	= 81.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 32.5 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 37,114 cuft



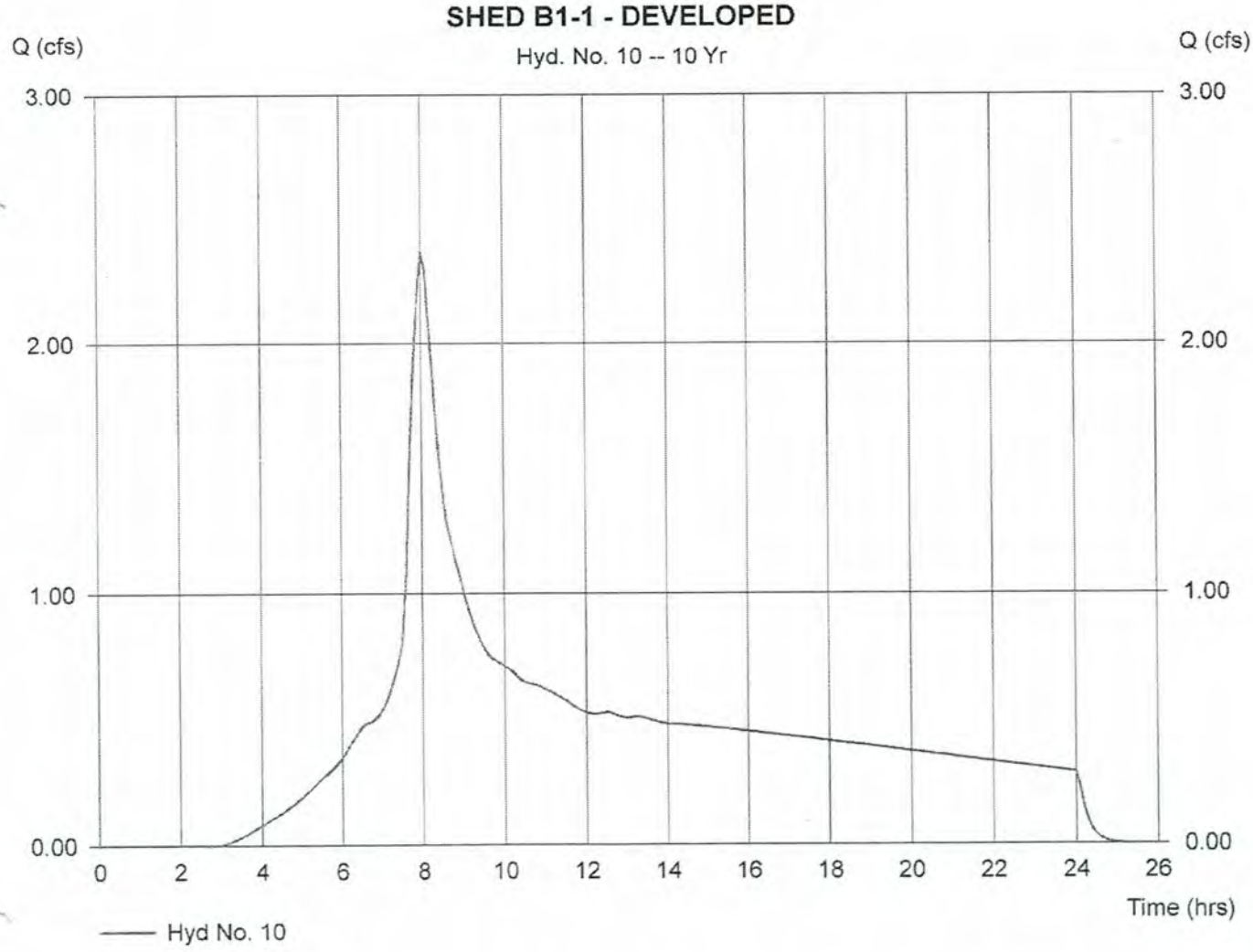
Hydrograph Plot

Hyd. No. 10

SHED B1-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.37 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 4.68 ac	Curve number	= 88.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 13.2 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 38,211 cuft



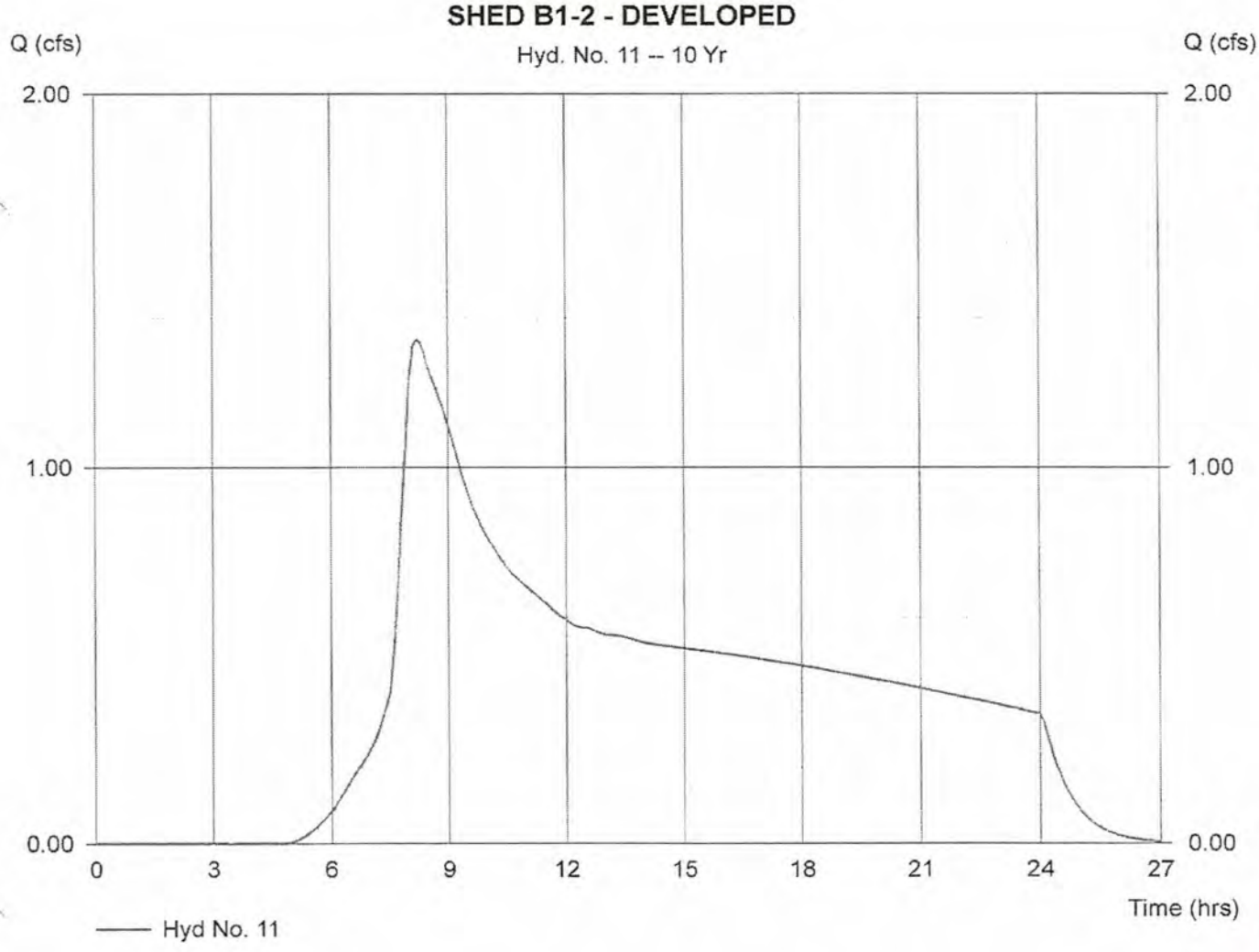
Hydrograph Plot

Hyd. No. 11

SHED B1-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.34 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 6.31 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 36,575 cuft



Hydrograph Plot

Hyd. No. 12

SHED B1-3 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.64 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 3.02 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 17,505 cuft

Hydrograph Plot

Hyd. No. 13

SHED B2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.69 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Drainage area	= 3.08 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 36.3 min
Total precip.	= 3.45 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 17,853 cuft

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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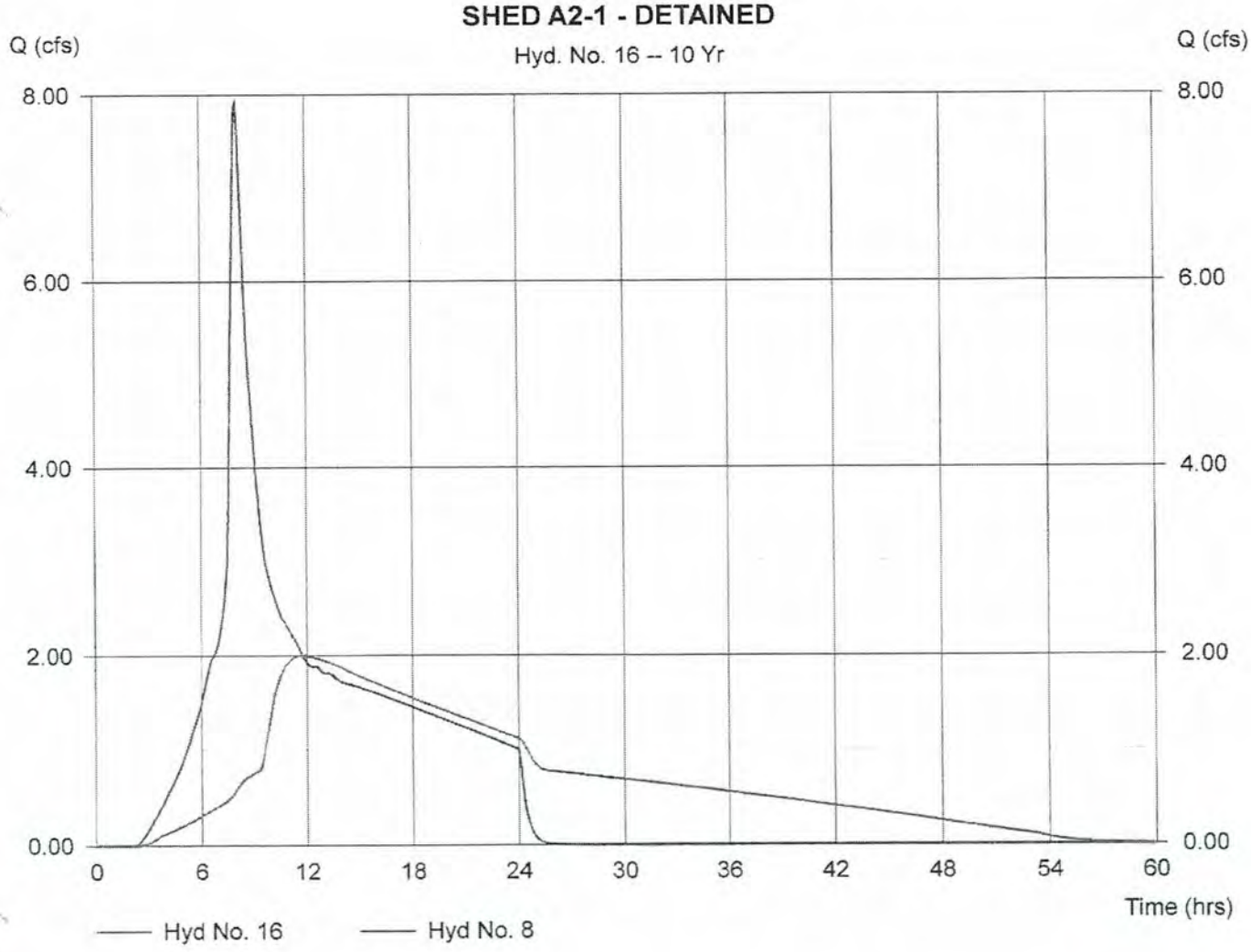
Hyd. No. 16

SHED A2-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 2.00 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Inflow hyd. No.	= 8	Max. Elevation	= 197.98 ft
Reservoir name	= POND A - WALLS	Max. Storage	= 54,999 cuft

Storage Indication method used.

Hydrograph Volume = 143,258 cuft



Pond Report

Pond No. 2 - POND A - WALLS

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	192.00	7,337	0	0
1.00	193.00	7,987	7,662	7,662
2.00	194.00	8,585	8,286	15,948
3.00	195.00	9,179	8,882	24,830
4.00	196.00	9,791	9,485	34,315
5.00	197.00	10,434	10,113	44,428
6.00	198.00	11,075	10,755	55,182
7.00	199.00	12,835	11,955	67,137
8.00	200.00	14,779	13,807	80,944

Culvert / Orifice Structures

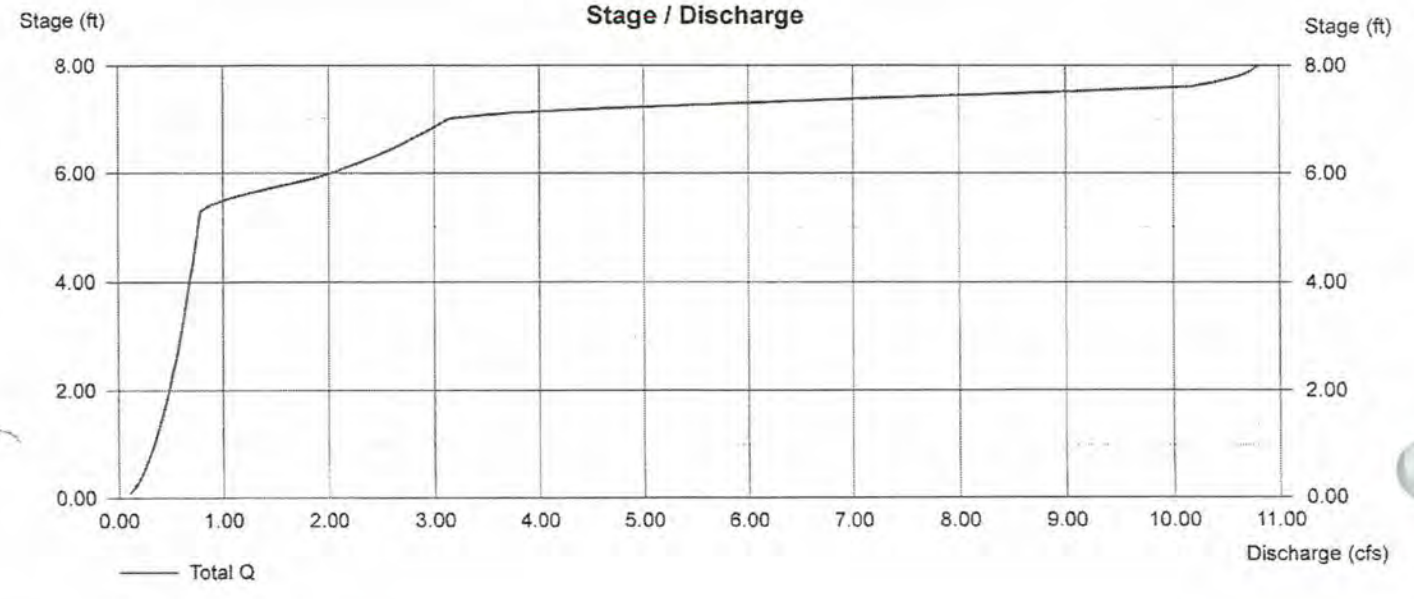
	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	3.60	8.50	0.00
Span (in)	= 12.00	3.60	8.50	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 187.00	187.10	197.25	0.00
Length (ft)	= 80.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.71	0.00	0.00	0.00
Crest El. (ft)	= 199.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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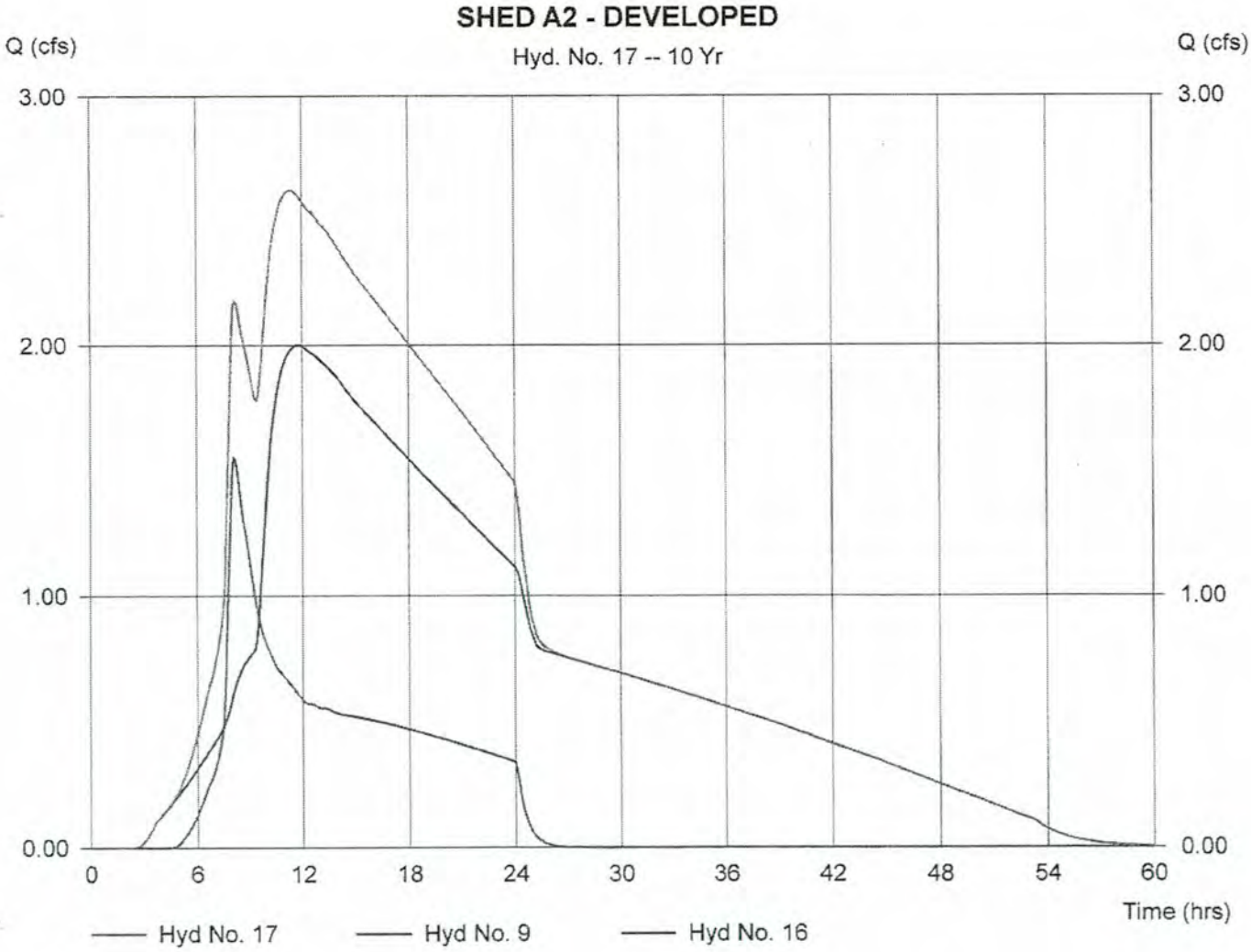
Hyd. No. 17

SHED A2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 9, 16

Peak discharge = 2.62 cfs
Time interval = 6 min

Hydrograph Volume = 180,371 cuft



Hydrograph Plot

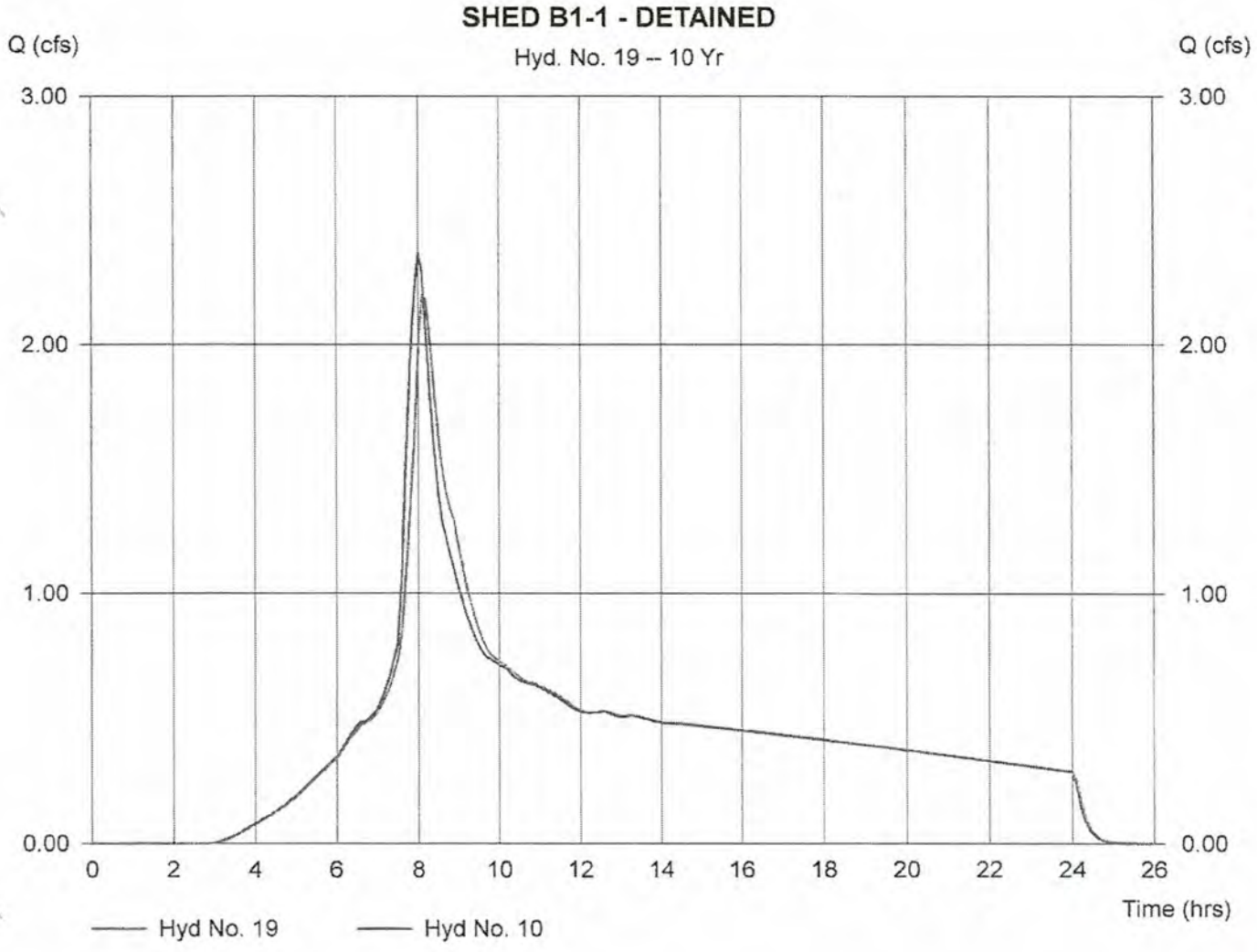
Hyd. No. 19

SHED B1-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 2.20 cfs
Storm frequency	= 10 yrs	Time interval	= 6 min
Inflow hyd. No.	= 10	Max. Elevation	= 196.52 ft
Reservoir name	= POND B	Max. Storage	= 994 cuft

Storage Indication method used.

Hydrograph Volume = 38,211 cuft



Pond Report

Pond No. 4 - POND B

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	195.00	165	0	0
1.00	196.00	770	468	468
2.00	197.00	1,256	1,013	1,481
3.00	198.00	1,773	1,515	2,995
4.00	199.00	2,309	2,041	5,036
5.00	200.00	2,861	2,585	7,621

Culvert / Orifice Structures

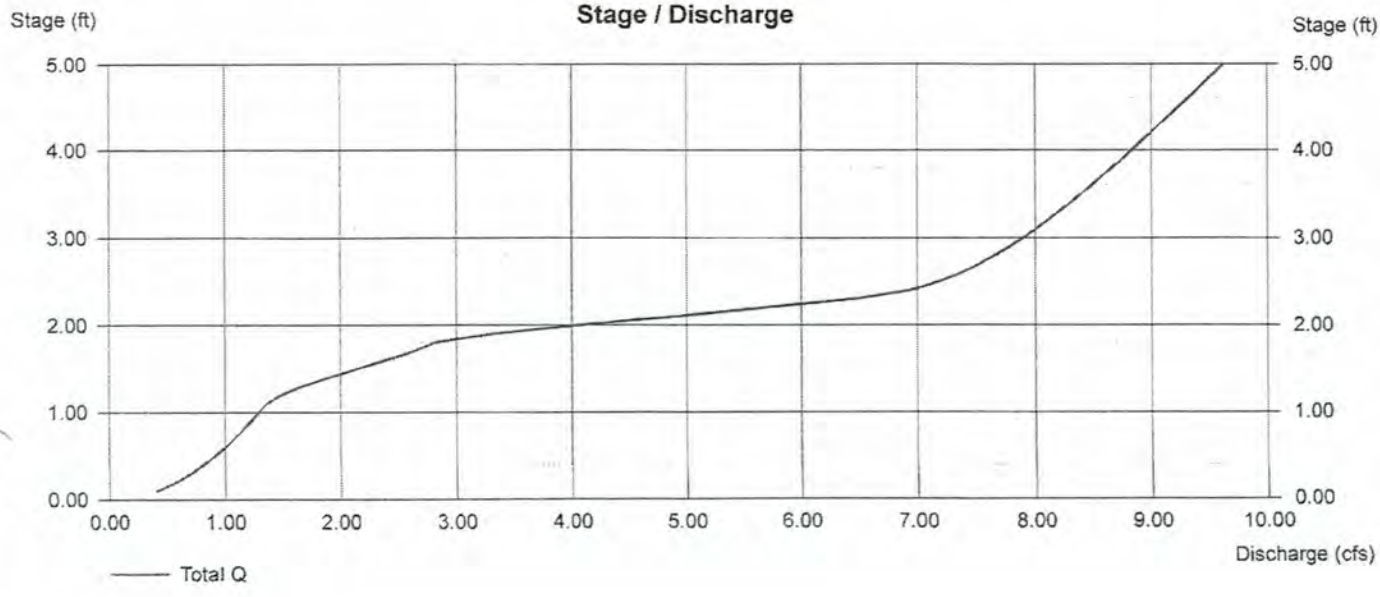
	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	7.00	8.00	0.00
Span (in)	= 12.00	7.00	8.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 193.00	193.10	196.05	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.000
Orif. Coeff.	= 0.60	0.60	0.60	0.00
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.14	0.00	0.00	0.00
Crest El. (ft)	= 196.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.



Hydrograph Plot

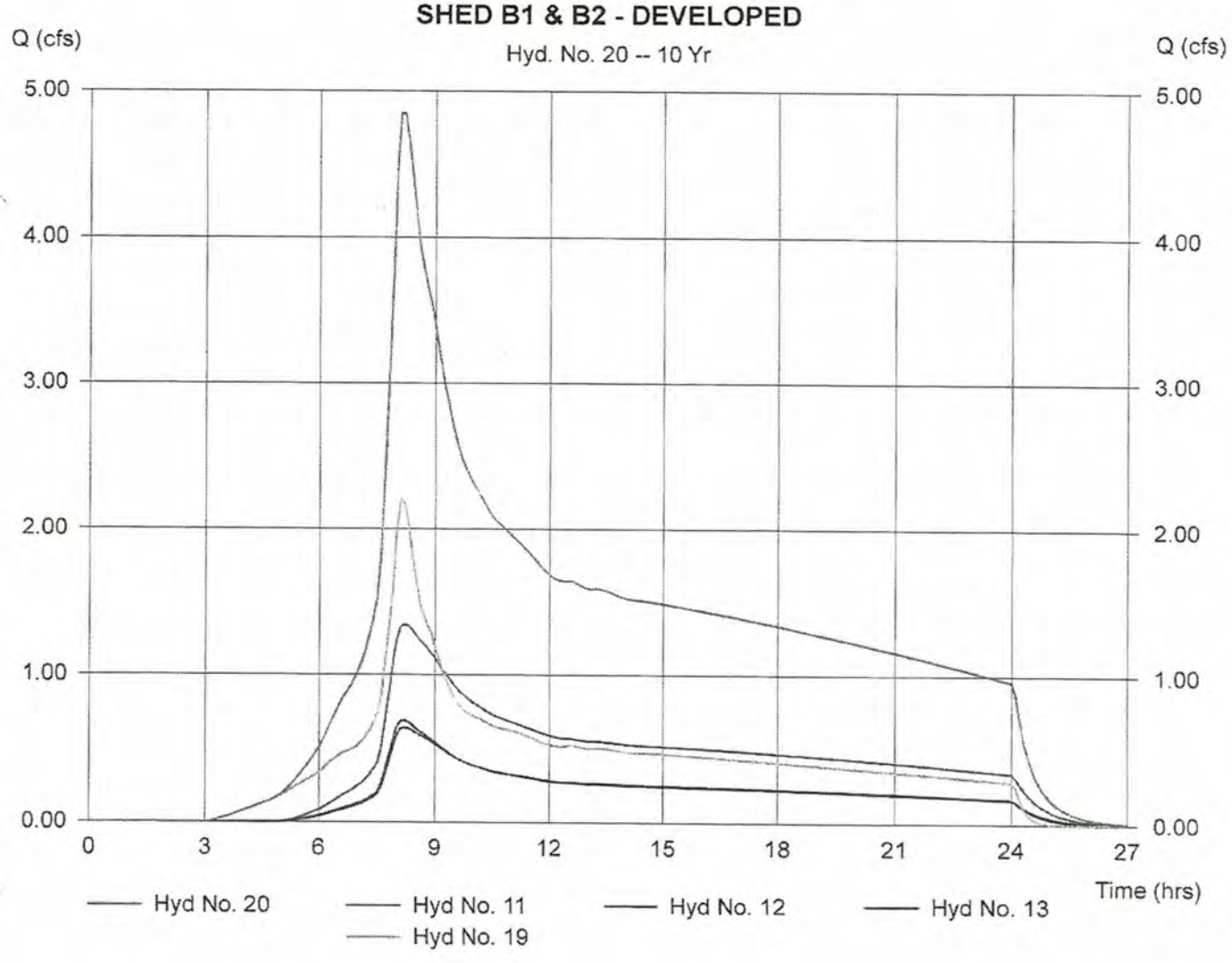
Hyd. No. 20

SHED B1 & B2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 11, 12, 13, 19

Peak discharge = 4.85 cfs
Time interval = 6 min

Hydrograph Volume = 110,144 cuft



Hydrograph Summary Report

Hyd.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SBUH Runoff	3.05	6	486	72,973	----	------	------	SHED A1 - PRE
2	SBUH Runoff	3.52	6	498	103,129	----	------	------	SHED A2 - PRE
3	SBUH Runoff	5.60	6	498	176,955	----	------	------	SHED B1 - PRE
4	SBUH Runoff	1.41	6	504	47,653	----	------	------	SHED B2 - PRE
5	Combine	7.00	6	504	224,608	3, 4	------	------	SHED B1 & B2 - PRE
7	SBUH Runoff	1.90	6	486	41,284	----	------	------	SHED A1 - DEVELOPED
8	SBUH Runoff	9.33	6	486	167,578	----	------	------	SHED A2-1 - DEVELOPED
9	SBUH Runoff	1.97	6	486	45,274	----	------	------	SHED A2-2 - DEVELOPED
10	SBUH Runoff	2.84	6	480	45,256	----	------	------	SHED B1-1 - DEVELOPED
11	SBUH Runoff	1.72	6	492	44,879	----	------	------	SHED B1-2 - DEVELOPED
12	SBUH Runoff	0.82	6	492	21,479	----	------	------	SHED B1-3 - DEVELOPED
13	SBUH Runoff	0.88	6	486	21,906	----	------	------	SHED B2 - DEVELOPED
16	Reservoir	2.55	6	672	167,571	8	198.40	59,921	SHED A2-1 - DETAINED
17	Combine	3.40	6	612	212,845	9, 16	------	------	SHED A2 - DEVELOPED
19	Reservoir	2.65	6	486	45,256	10	196.71	1,189	SHED B1-1 - DETAINED
20	Combine	6.06	6	486	133,520	11, 12, 13, 19	------	------	SHED B1 & B2 - DEVELOPED

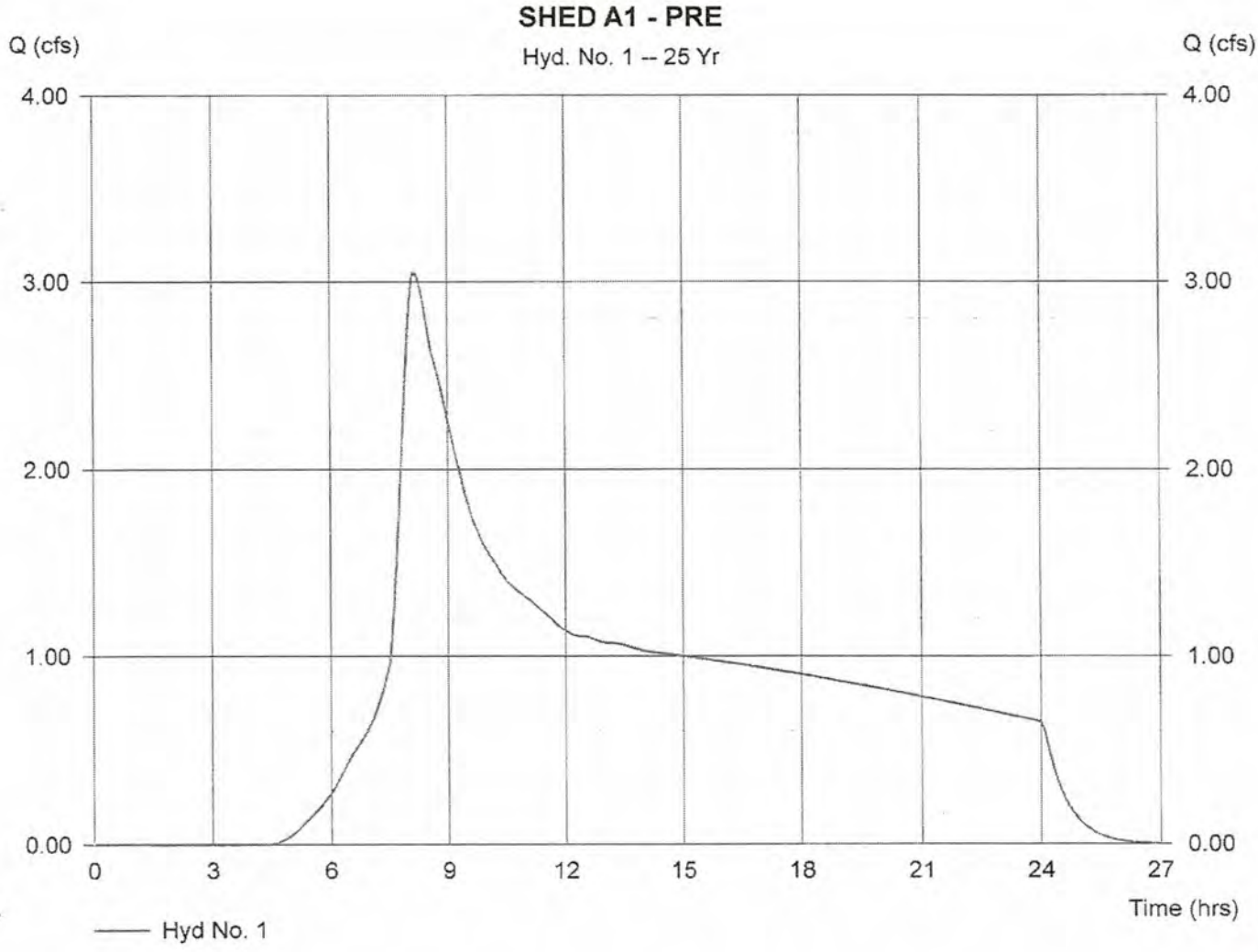
Hydrograph Plot

Hyd. No. 1

SHED A1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 3.05 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 10.26 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 33.6 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 72,973 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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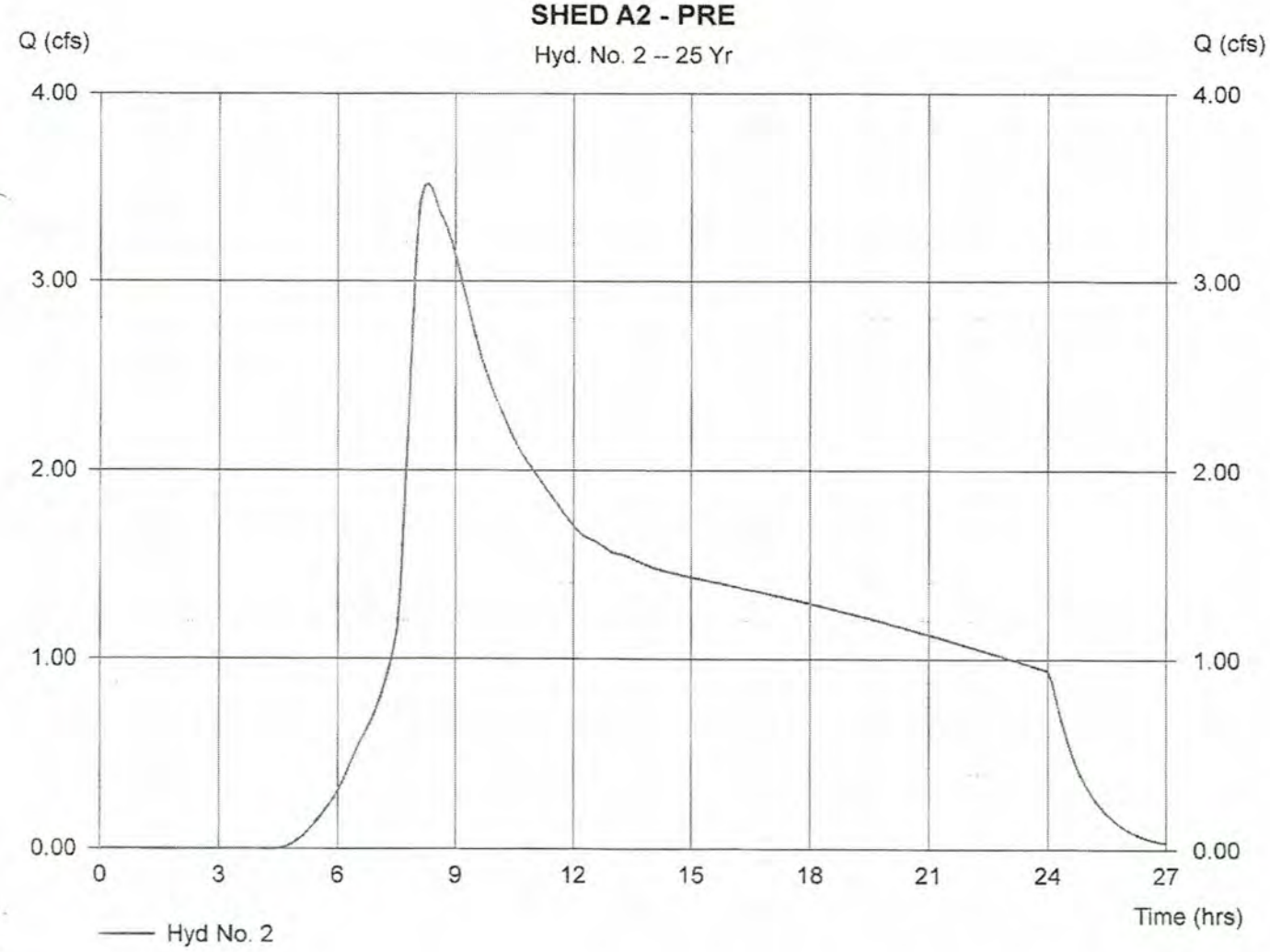
Hyd. No. 2

SHED A2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 3.52 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 14.50 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 53.2 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 103,129 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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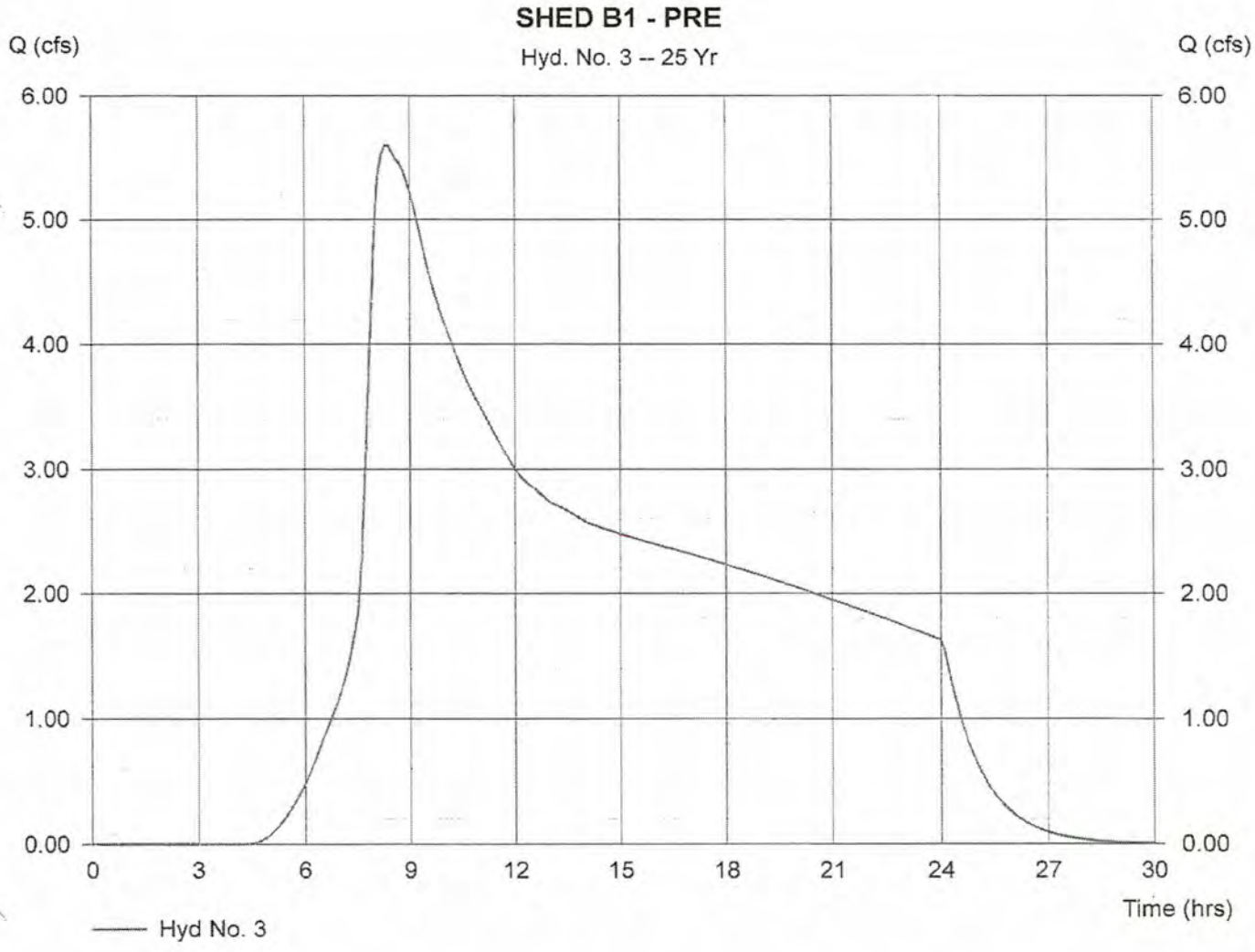
Hyd. No. 3

SHED B1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 5.60 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 24.88 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 62.3 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 176,955 cuft



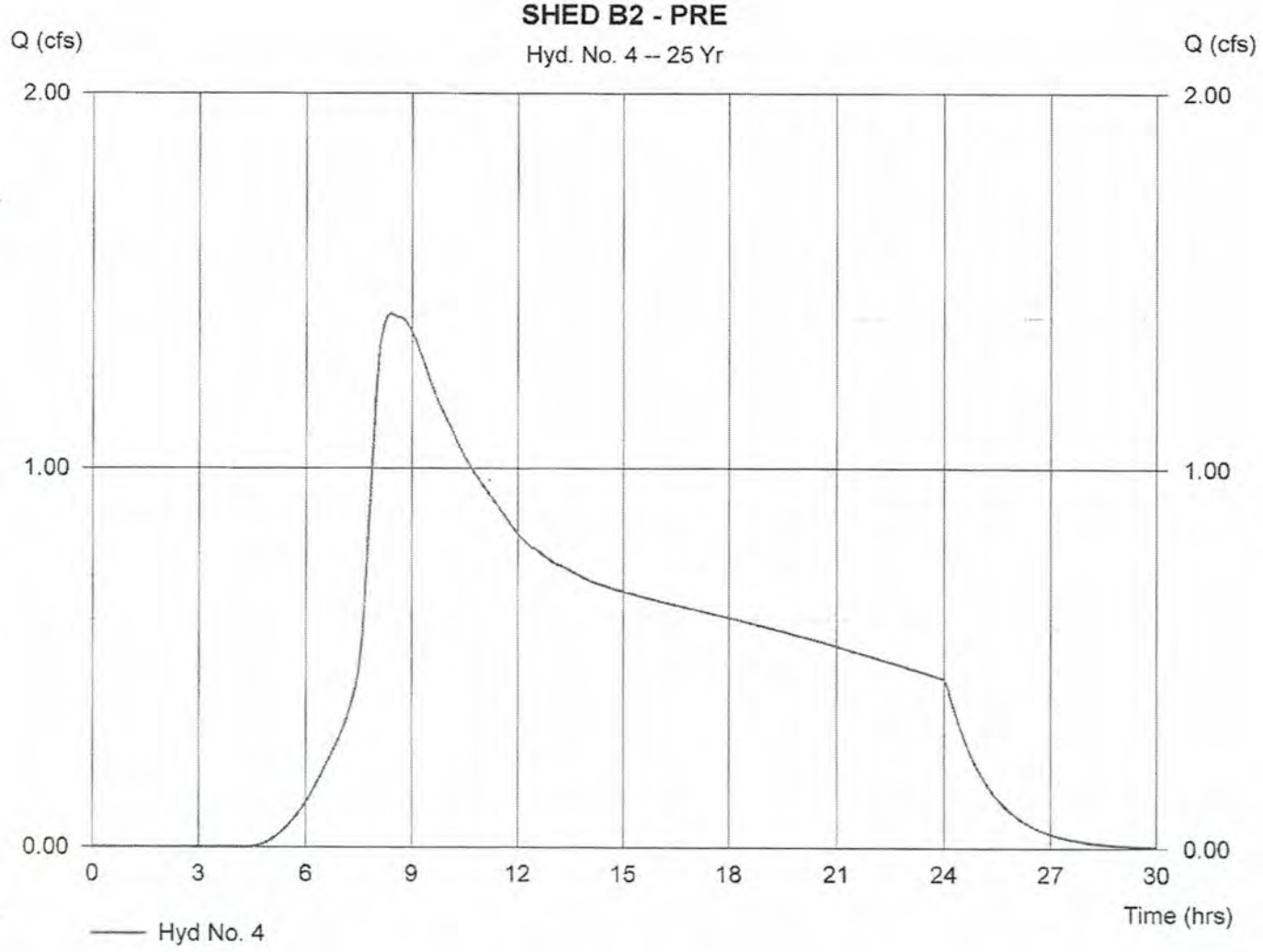
Hydrograph Plot

Hyd. No. 4

SHED B2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.41 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 6.70 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 71.4 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 47,653 cuft



Hydrograph Plot

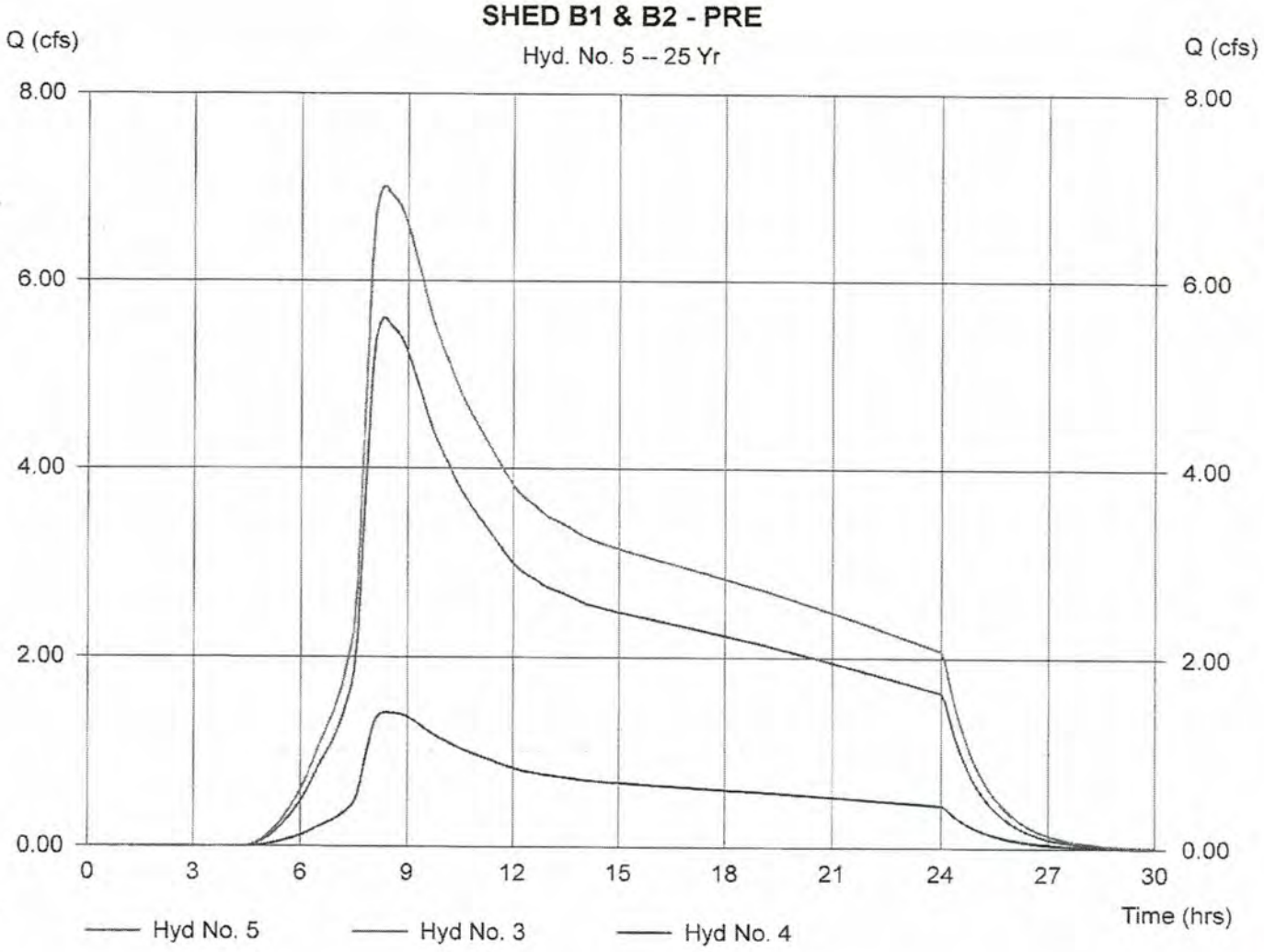
Hyd. No. 5

SHED B1 & B2 - PRE

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 3, 4

Peak discharge = 7.00 cfs
Time interval = 6 min

Hydrograph Volume = 224,608 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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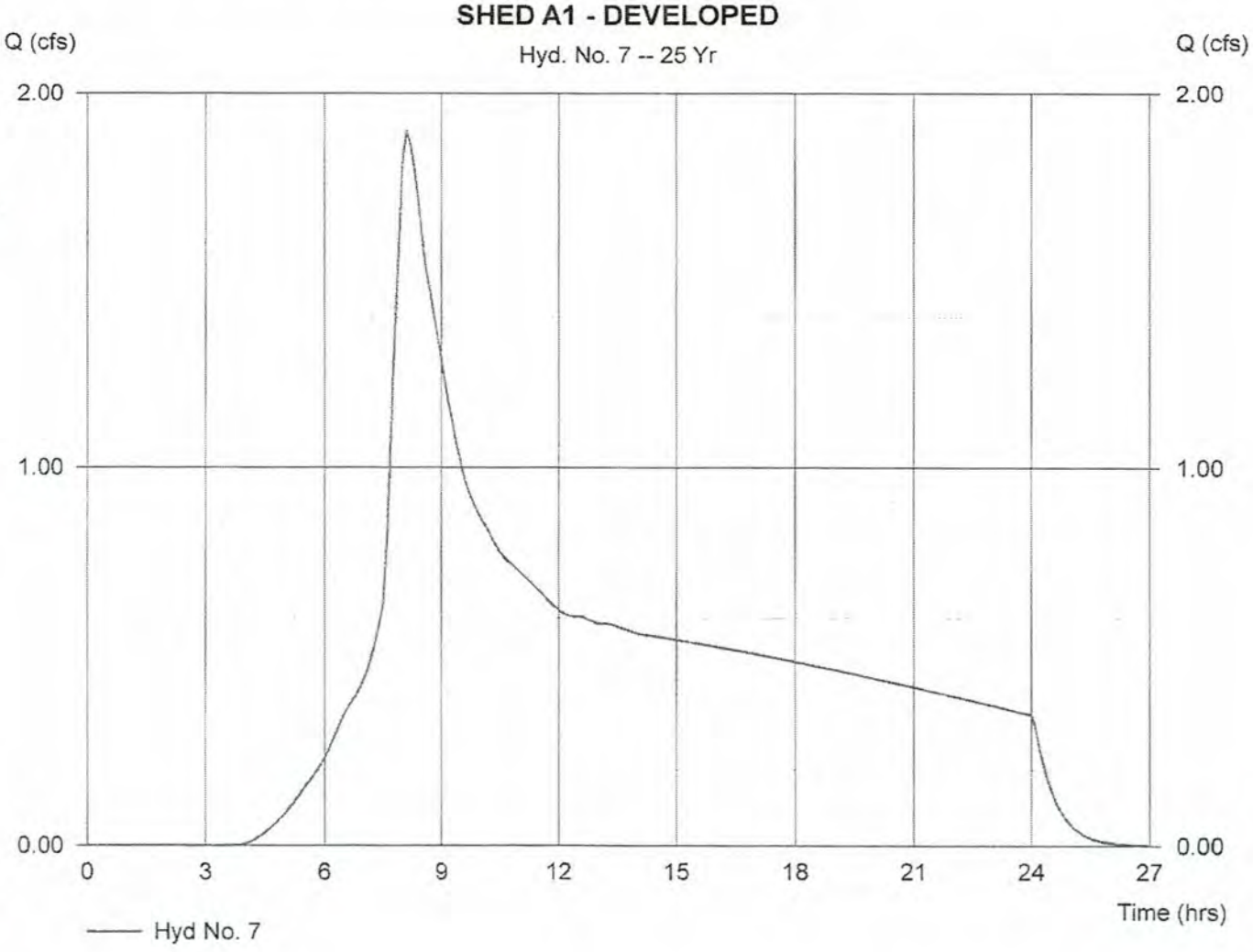
Hyd. No. 7

SHED A1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.90 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 5.19 ac	Curve number	= 82.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 30.3 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 41,284 cuft



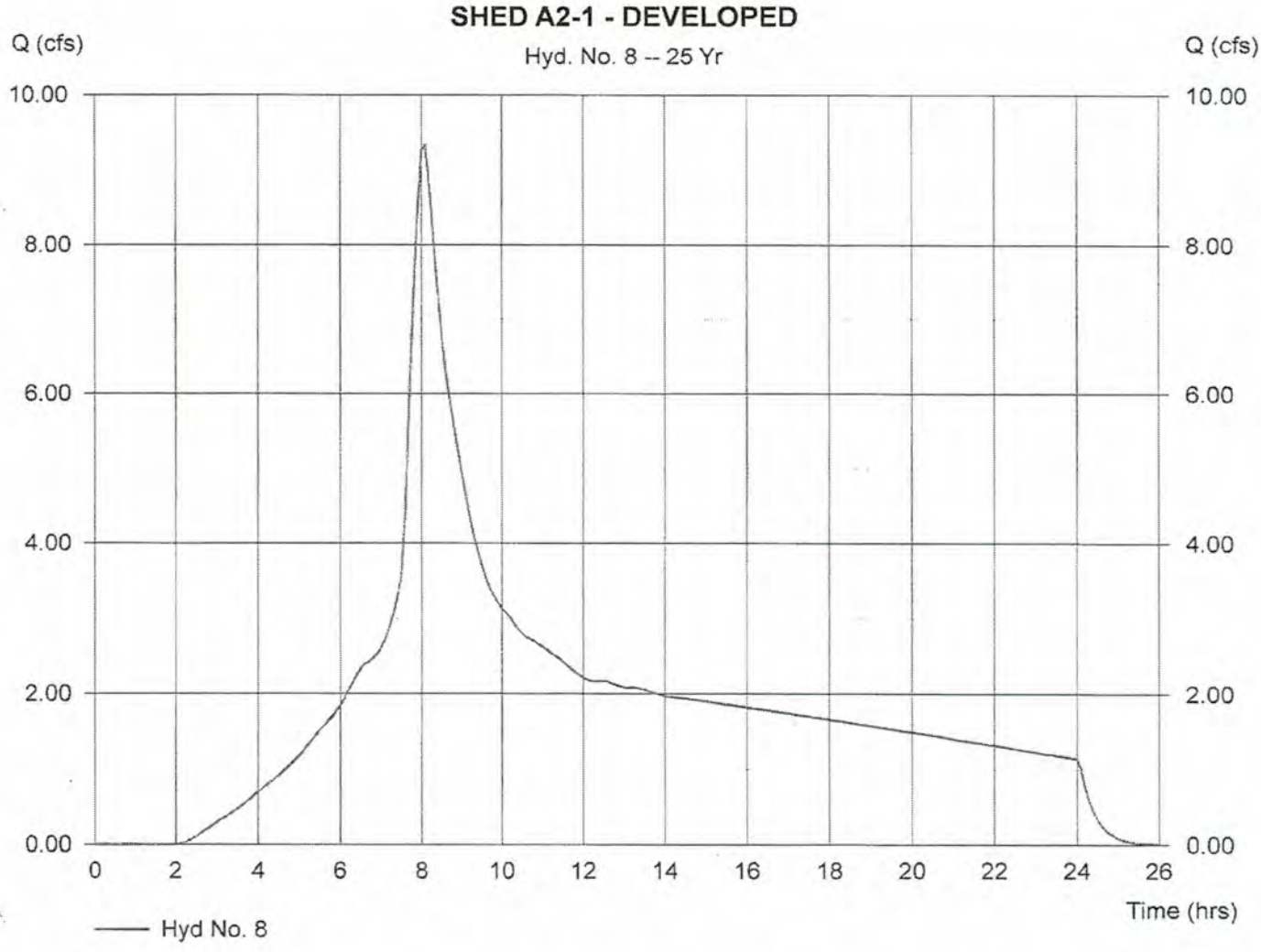
Hydrograph Plot

Hyd. No. 8

SHED A2-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 9.33 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 15.59 ac	Curve number	= 91.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 22.2 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 167,578 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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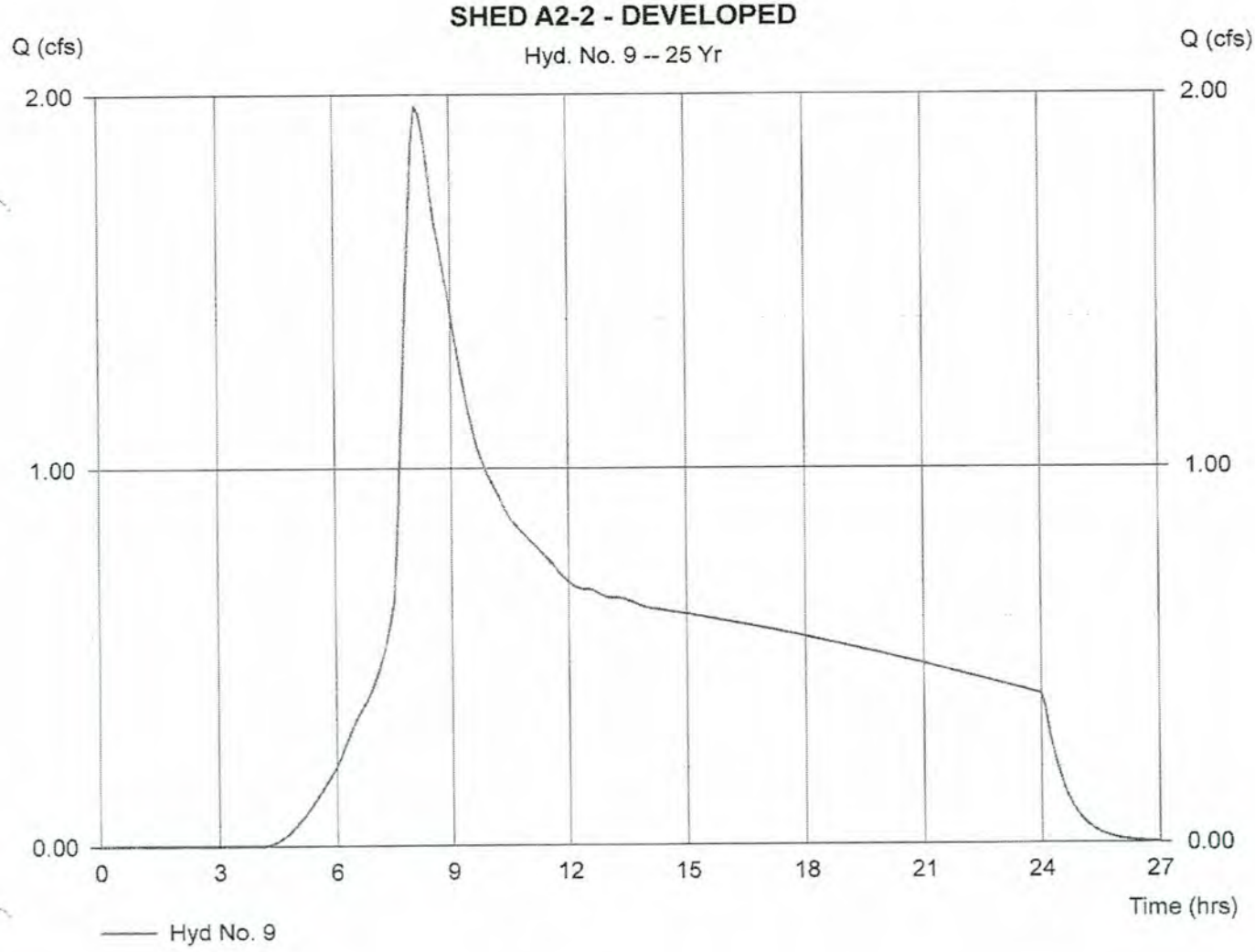
Hyd. No. 9

SHED A2-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.97 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 6.05 ac	Curve number	= 81.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 32.5 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 45,274 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

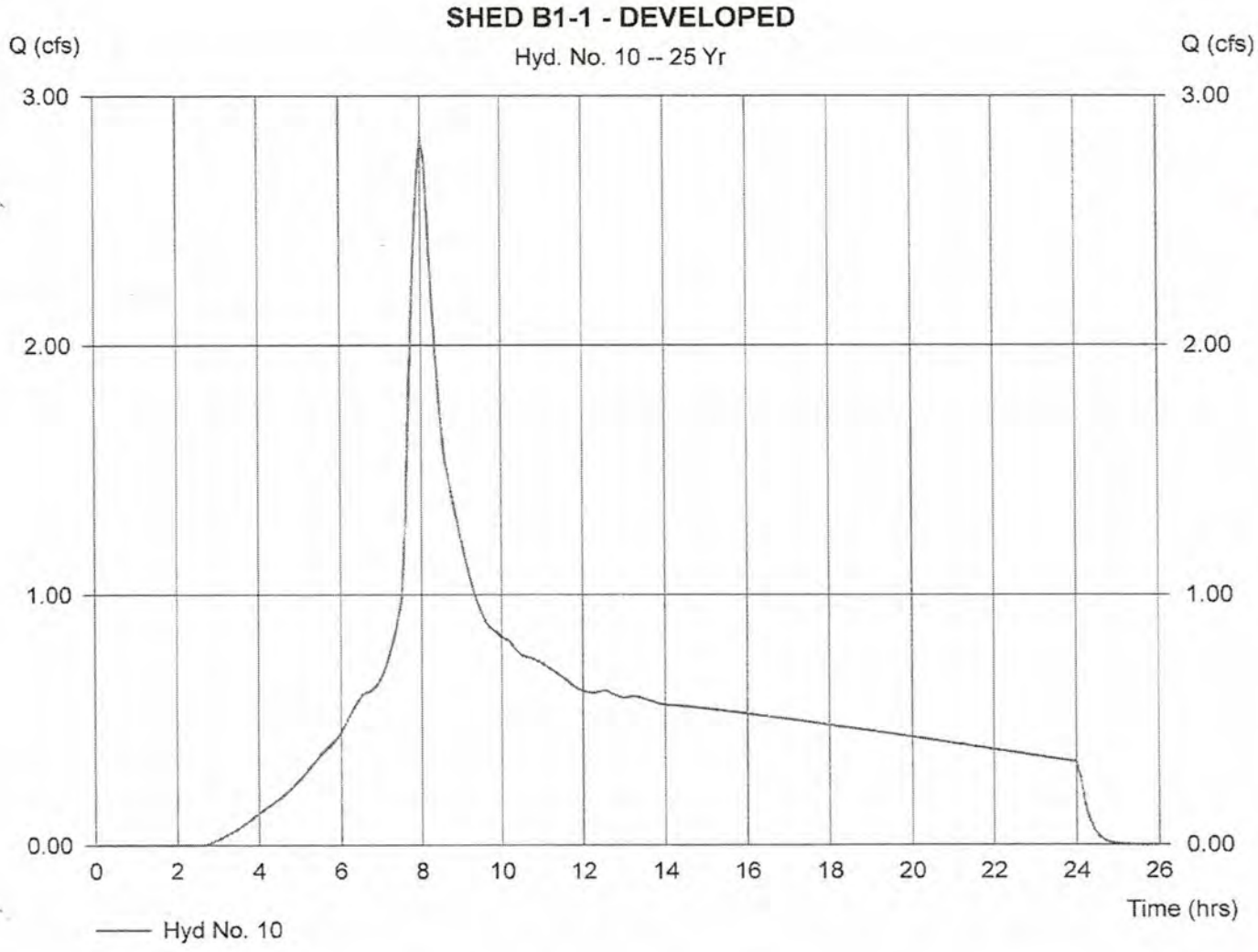
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 10

SHED B1-1 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.84 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 4.68 ac	Curve number	= 88.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 13.2 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 45,256 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

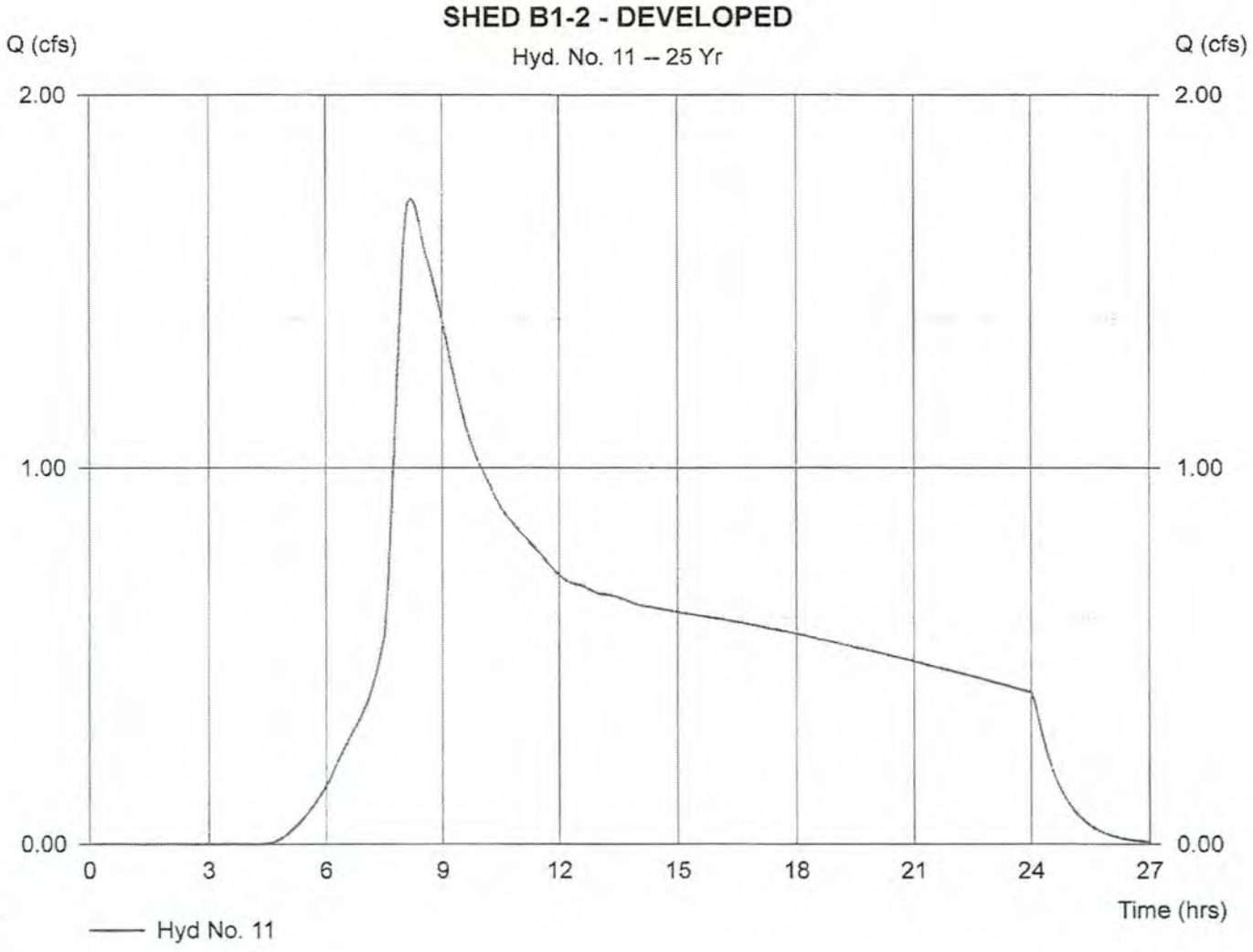
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 11

SHED B1-2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.72 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 6.31 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 44,879 cuft



Hydrograph Plot

Hyd. No. 12

SHED B1-3 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.82 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 3.02 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 41.09 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 21,479 cuft

Hydrograph Plot

Hyd. No. 13

SHED B2 - DEVELOPED

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.88 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Drainage area	= 3.08 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 36.3 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 21,906 cuft

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Jun 26 2013, 3:10 PM

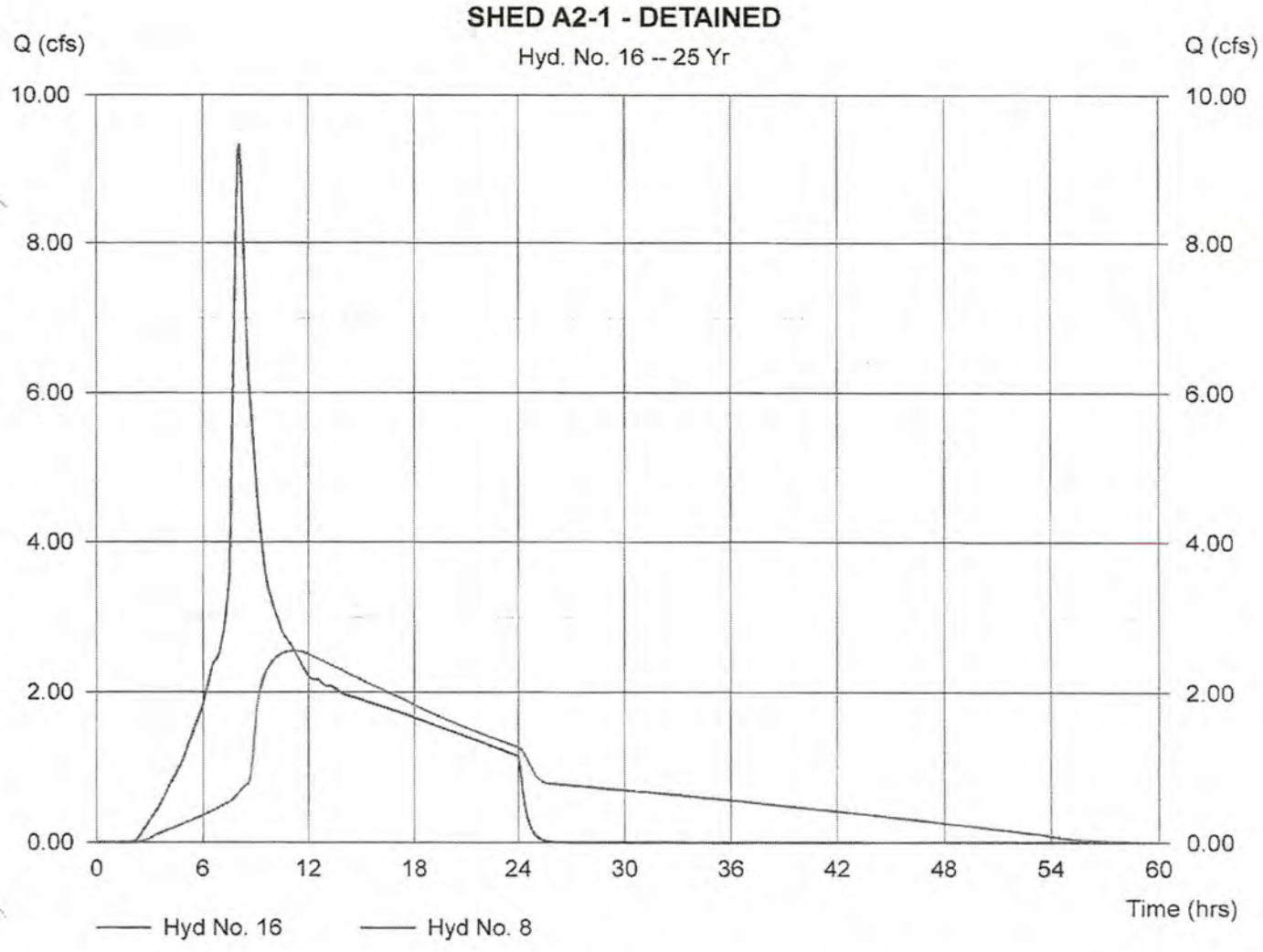
Hyd. No. 16

SHED A2-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 2.55 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Inflow hyd. No.	= 8	Max. Elevation	= 198.40 ft
Reservoir name	= POND A - WALLS	Max. Storage	= 59,921 cuft

Storage Indication method used.

Hydrograph Volume = 167,571 cuft



Pond Report

Pond No. 2 - POND A - WALLS

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	192.00	7,337	0	0
1.00	193.00	7,987	7,662	7,662
2.00	194.00	8,585	8,286	15,948
3.00	195.00	9,179	8,882	24,830
4.00	196.00	9,791	9,485	34,315
5.00	197.00	10,434	10,113	44,428
6.00	198.00	11,075	10,755	55,182
7.00	199.00	12,835	11,955	67,137
8.00	200.00	14,779	13,807	80,944

Culvert / Orifice Structures

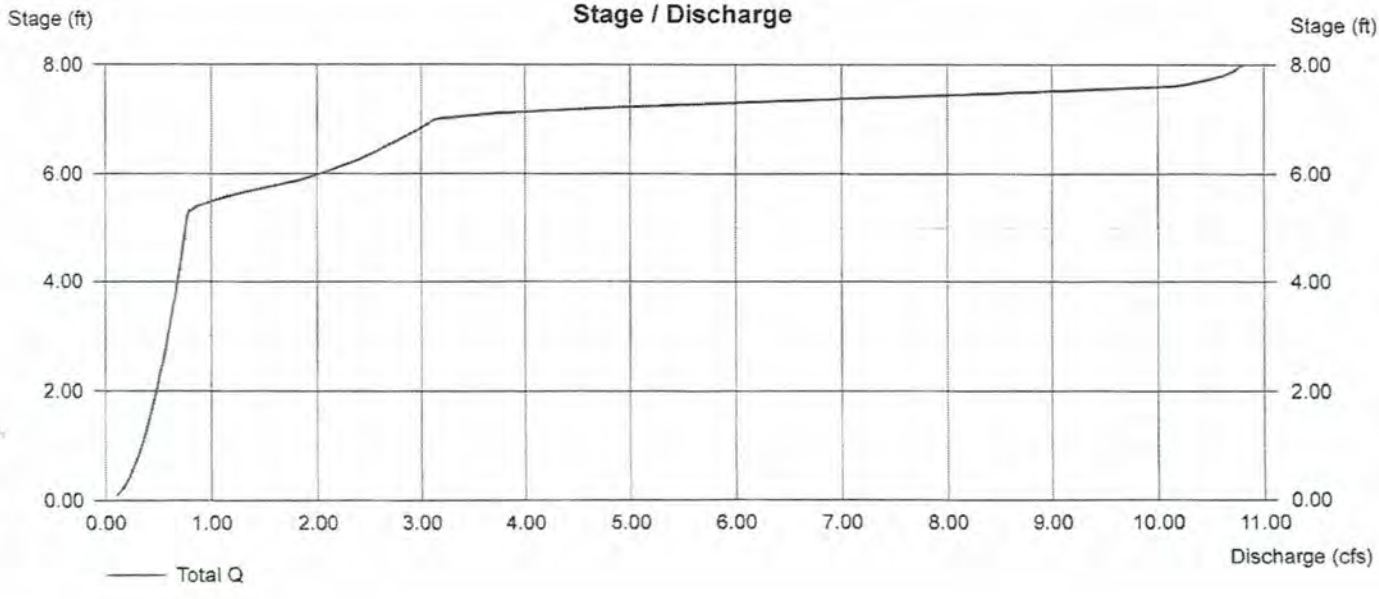
	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	3.60	8.50	0.00
Span (in)	= 12.00	3.60	8.50	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 187.00	187.10	197.25	0.00
Length (ft)	= 80.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.71	0.00	0.00	0.00
Crest El. (ft)	= 199.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



Hydrograph Plot

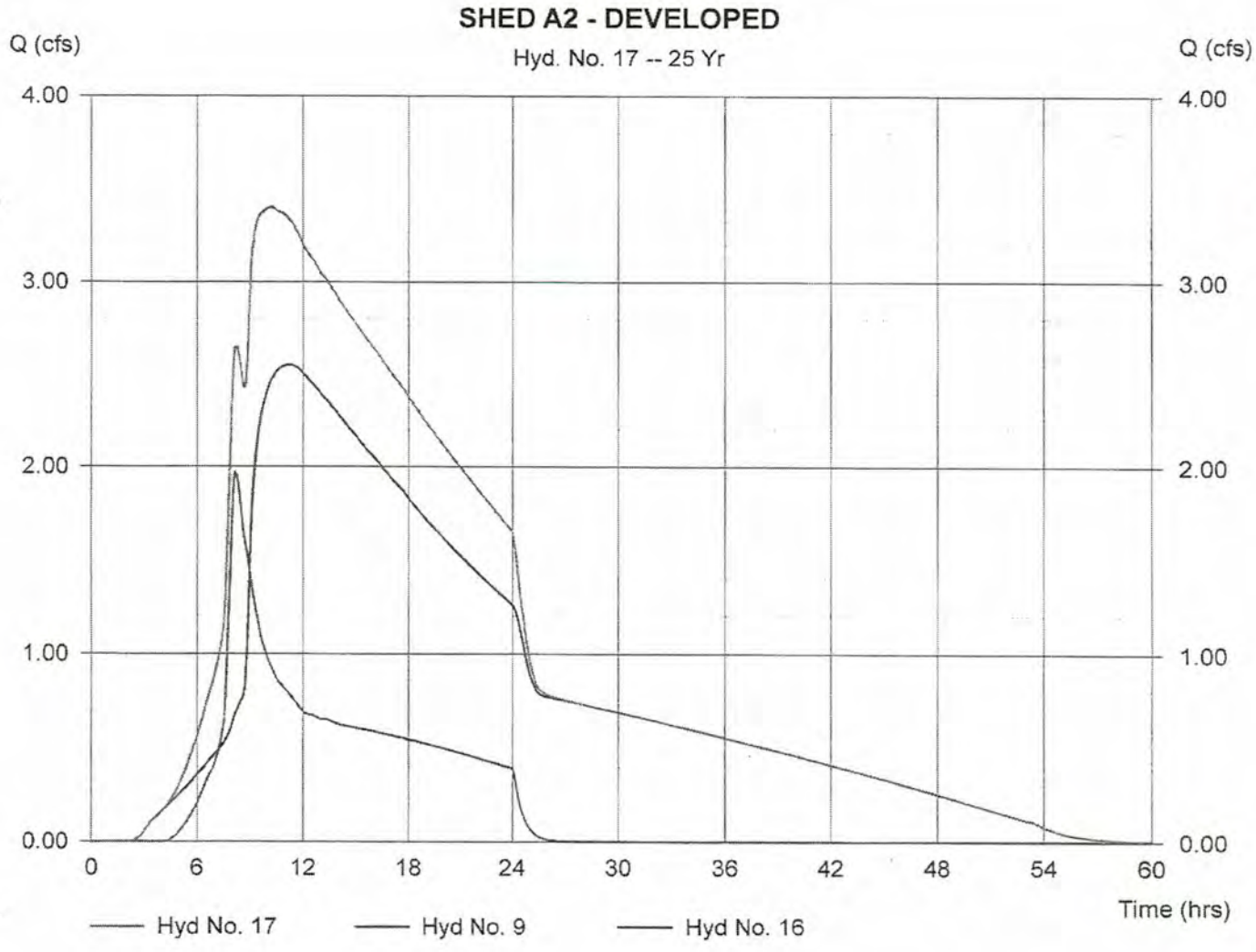
Hyd. No. 17

SHED A2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 9, 16

Peak discharge = 3.40 cfs
Time interval = 6 min

Hydrograph Volume = 212,845 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Jun 26 2013, 3:10 PM

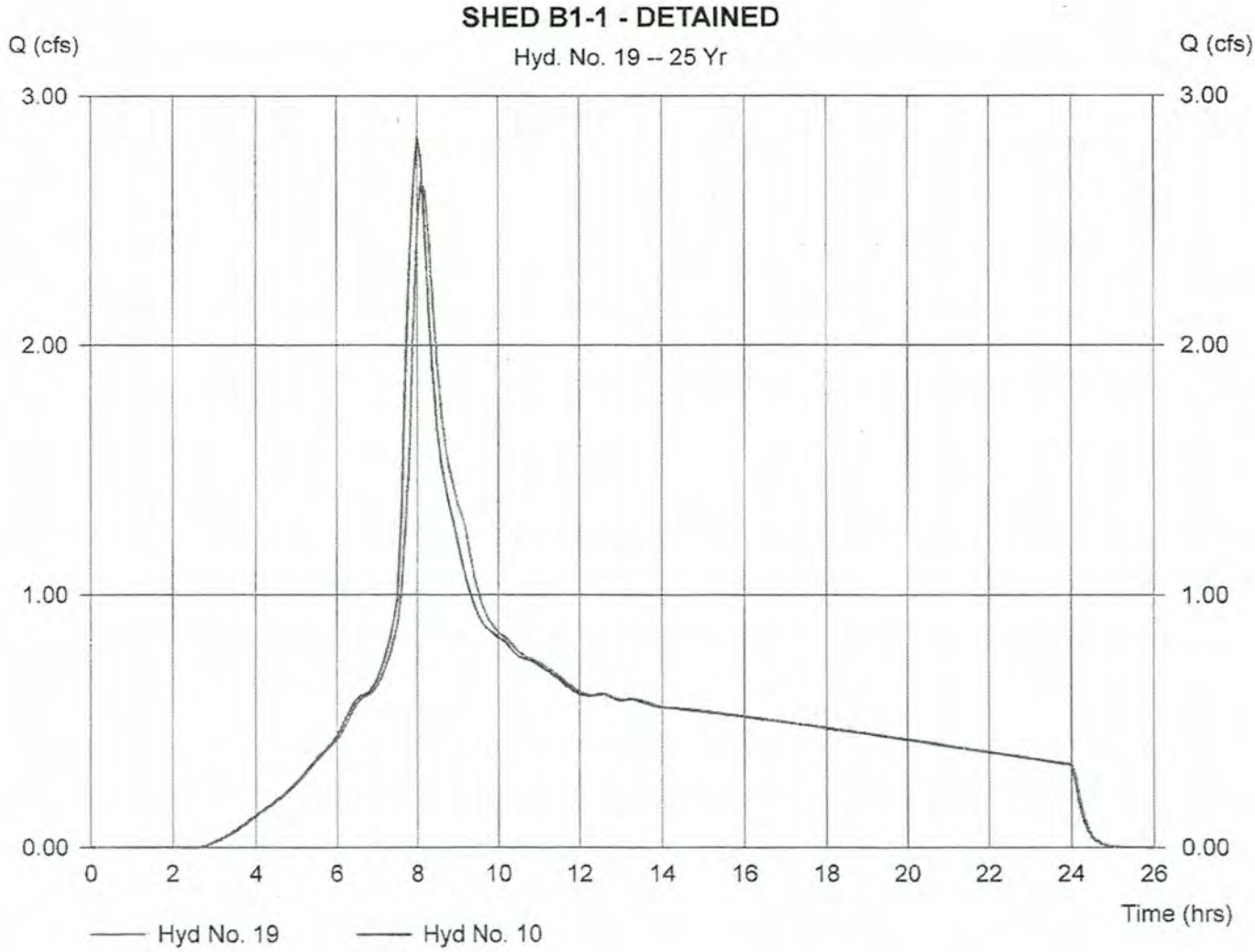
Hyd. No. 19

SHED B1-1 - DETAINED

Hydrograph type	= Reservoir	Peak discharge	= 2.65 cfs
Storm frequency	= 25 yrs	Time interval	= 6 min
Inflow hyd. No.	= 10	Max. Elevation	= 196.71 ft
Reservoir name	= POND B	Max. Storage	= 1,189 cuft

Storage Indication method used.

Hydrograph Volume = 45,256 cuft



Pond Report

Pond No. 4 - POND B

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	195.00	165	0	0
1.00	196.00	770	468	468
2.00	197.00	1,256	1,013	1,481
3.00	198.00	1,773	1,515	2,995
4.00	199.00	2,309	2,041	5,036
5.00	200.00	2,861	2,585	7,621

Culvert / Orifice Structures

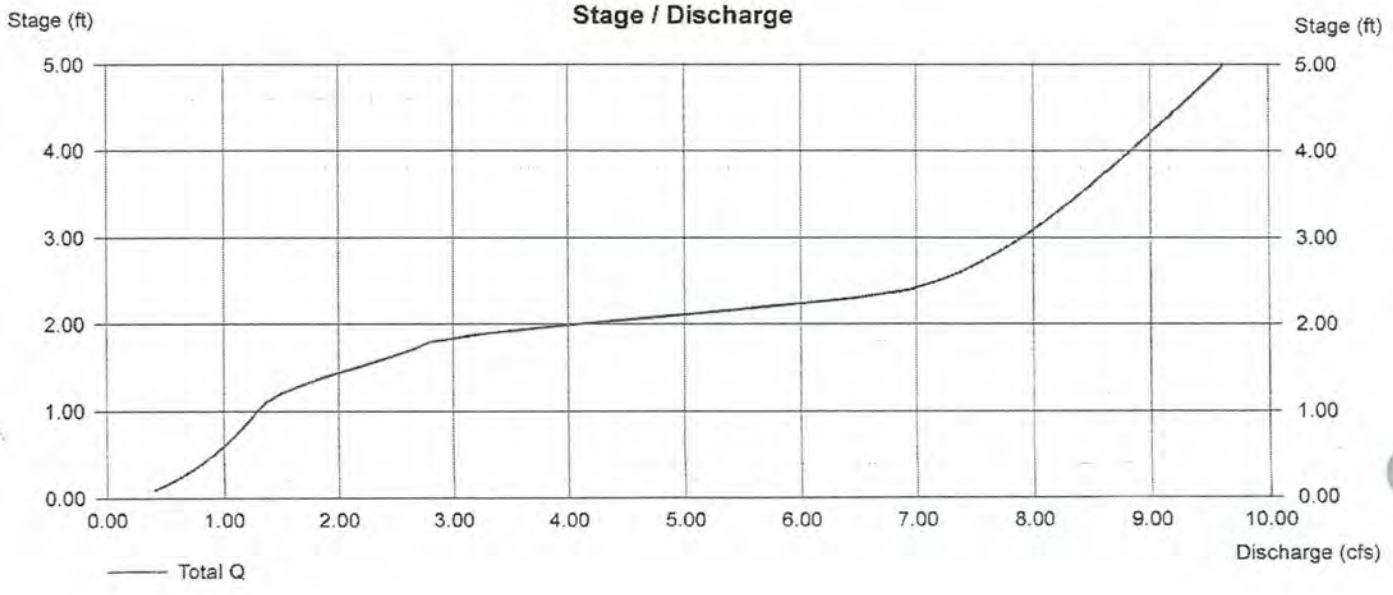
	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	7.00	8.00	0.00
Span (in)	= 12.00	7.00	8.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 193.00	193.10	196.05	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.000
Orif. Coeff.	= 0.60	0.60	0.60	0.00
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.14	0.00	0.00	0.00
Crest El. (ft)	= 196.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Jun 26 2013, 3:10 PM

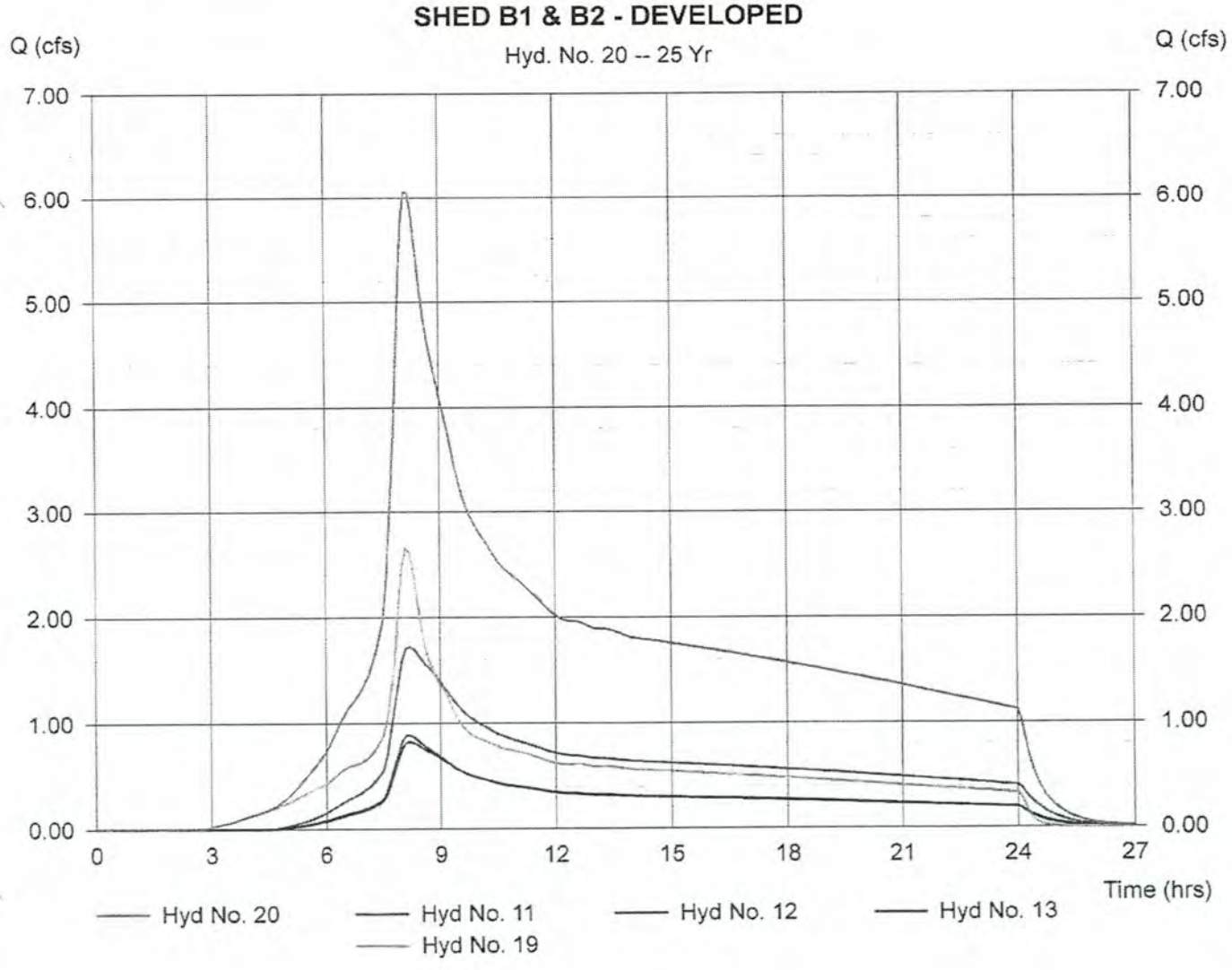
Hyd. No. 20

SHED B1 & B2 - DEVELOPED

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 11, 12, 13, 19

Peak discharge = 6.06 cfs
Time interval = 6 min

Hydrograph Volume = 133,520 cuft



Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SBUH Runoff	4.00	6	486	91,677	----	------	------	SHED A1 - PRE
2	SBUH Runoff	4.61	6	498	129,563	----	------	------	SHED A2 - PRE
3	SBUH Runoff	7.36	6	498	222,312	----	------	------	SHED B1 - PRE
4	SBUH Runoff	1.85	6	504	59,867	----	------	------	SHED B2 - PRE
5	Combine	9.21	6	498	282,180	3, 4	------	------	SHED B1 & B2 - PRE
7	SBUH Runoff	2.42	6	486	51,179	----	------	------	SHED A1 - DEVELOPED
8	SBUH Runoff	11.19	6	486	200,303	----	------	------	SHED A2-1 - DEVELOPED
9	SBUH Runoff	2.55	6	486	56,536	----	------	------	SHED A2-2 - DEVELOPED
10	SBUH Runoff	3.47	6	480	54,800	----	------	------	SHED B1-1 - DEVELOPED
11	SBUH Runoff	2.25	6	492	56,382	----	------	------	SHED B1-2 - DEVELOPED
12	SBUH Runoff	1.08	6	492	26,985	----	------	------	SHED B1-3 - DEVELOPED
13	SBUH Runoff	1.16	6	486	27,521	----	------	------	SHED B2 - DEVELOPED
16	Reservoir	3.50	6	618	200,296	8	199.06	67,986	SHED A2-1 - DETAINED
17	Combine	4.66	6	606	256,832	9, 16	------	------	SHED A2 - DEVELOPED
19	Reservoir	3.42	6	486	54,800	10	196.91	1,393	SHED B1-1 - DETAINED
20	Combine	7.89	6	486	165,688	11, 12, 13, 19	------	------	SHED B1 & B2 - DEVELOPED

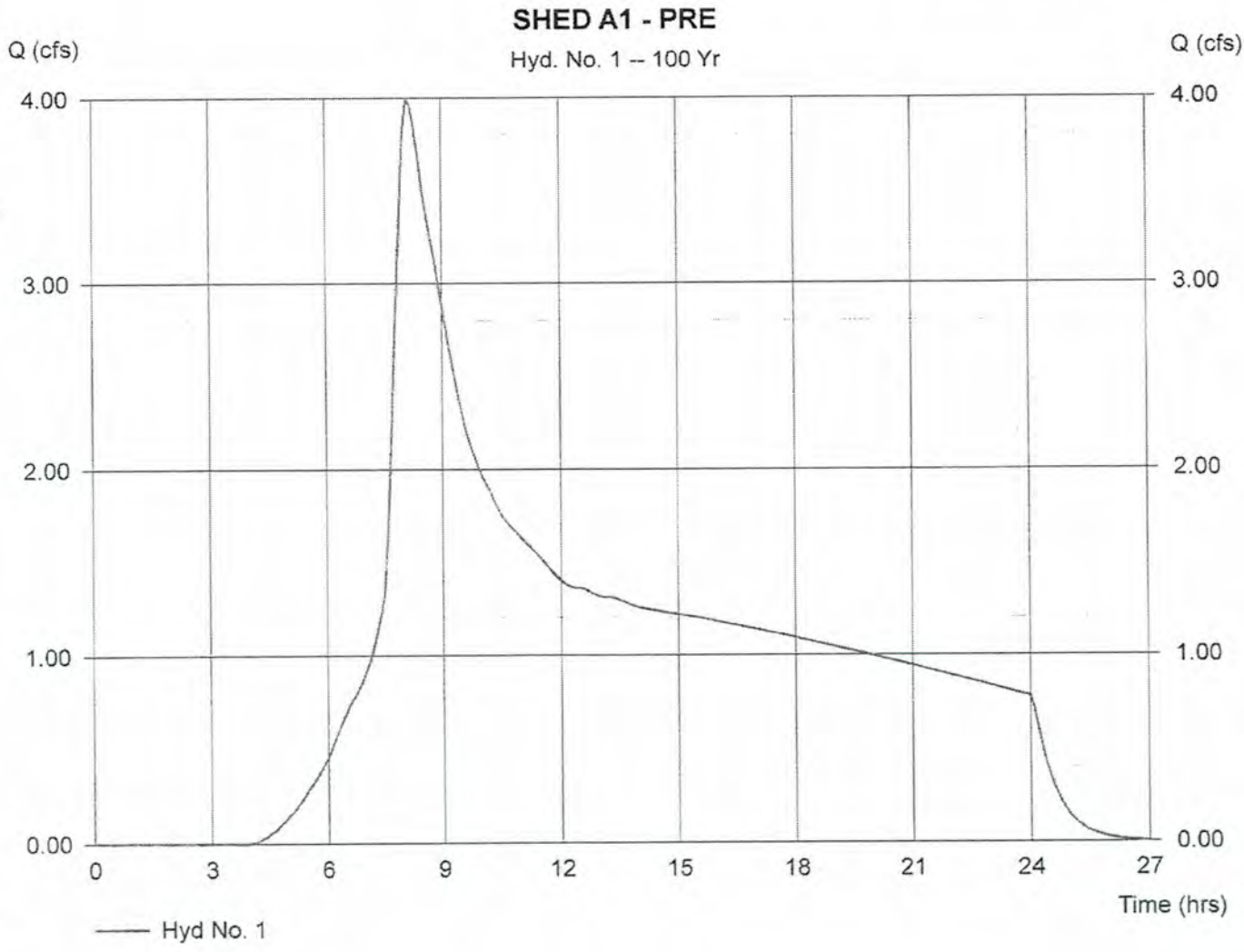
Hydrograph Plot

Hyd. No. 1

SHED A1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 4.00 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 10.26 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 33.6 min
Total precip.	= 4.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 91,677 cuft



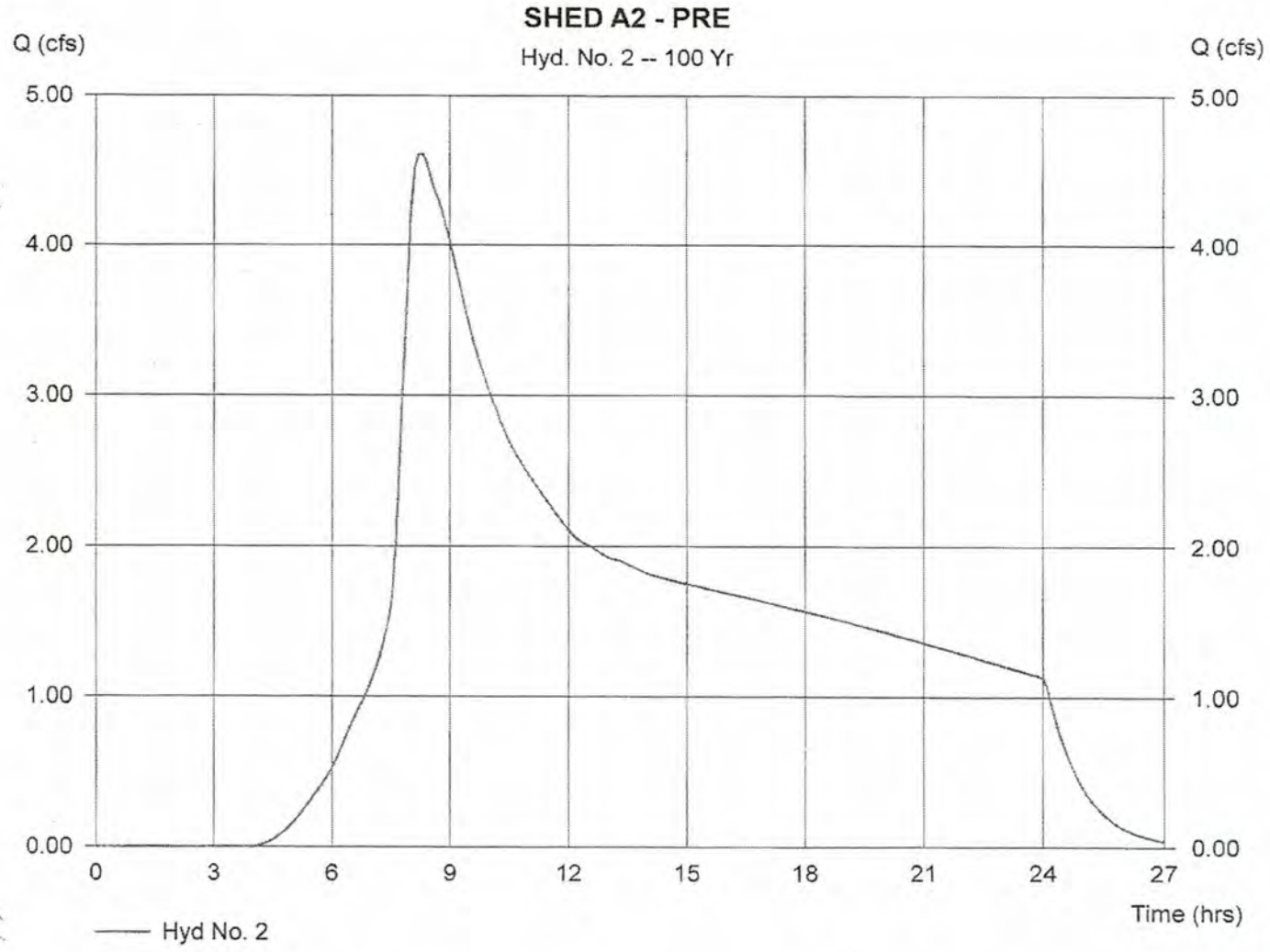
Hydrograph Plot

Hyd. No. 2

SHED A2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 4.61 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 14.50 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 53.2 min
Total precip.	= 4.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 129,563 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

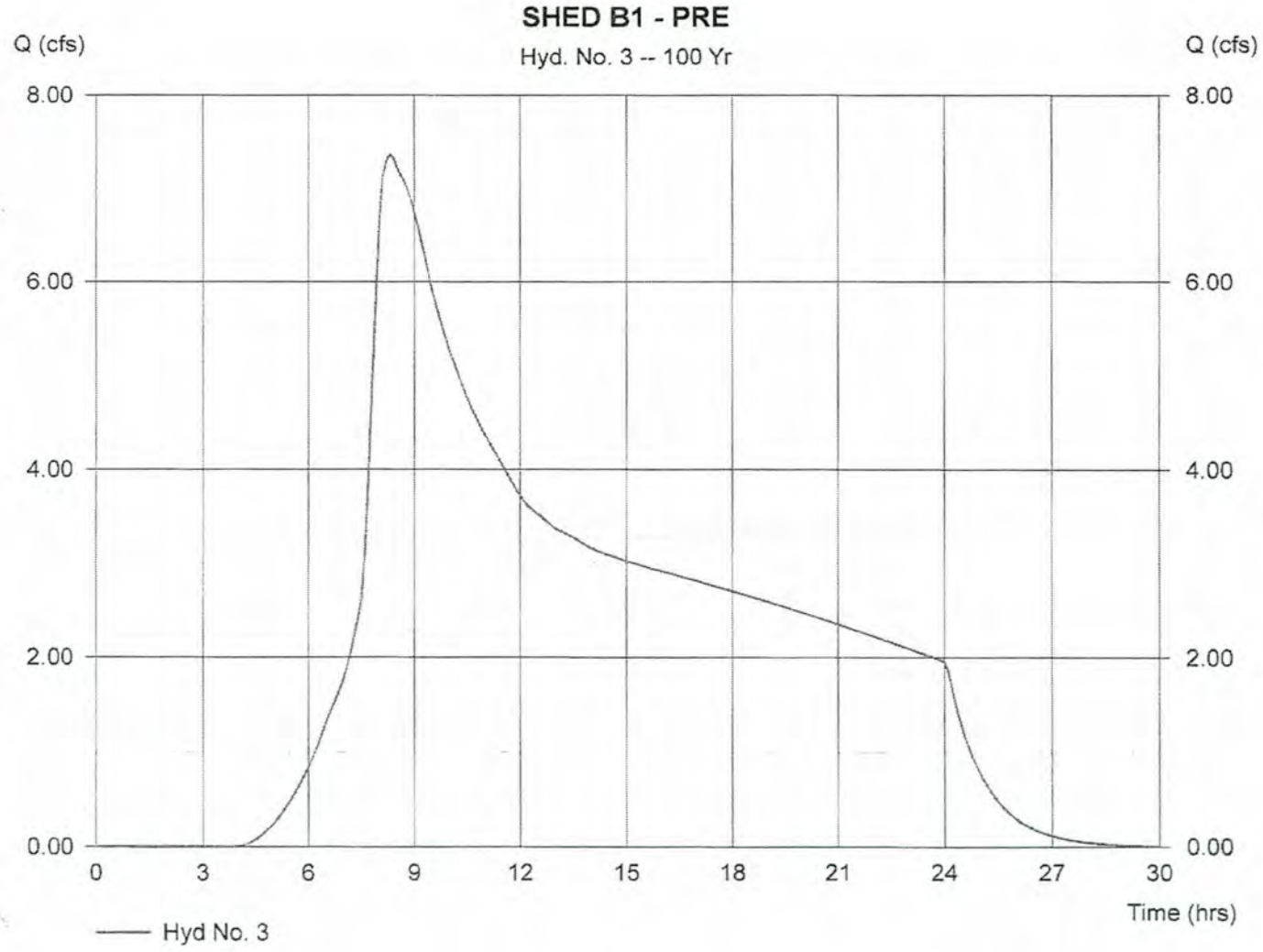
Wednesday, Jun 26 2013, 3:10 PM

Hyd. No. 3

SHED B1 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 7.36 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 24.88 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 62.3 min
Total precip.	= 4.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 222,312 cuft



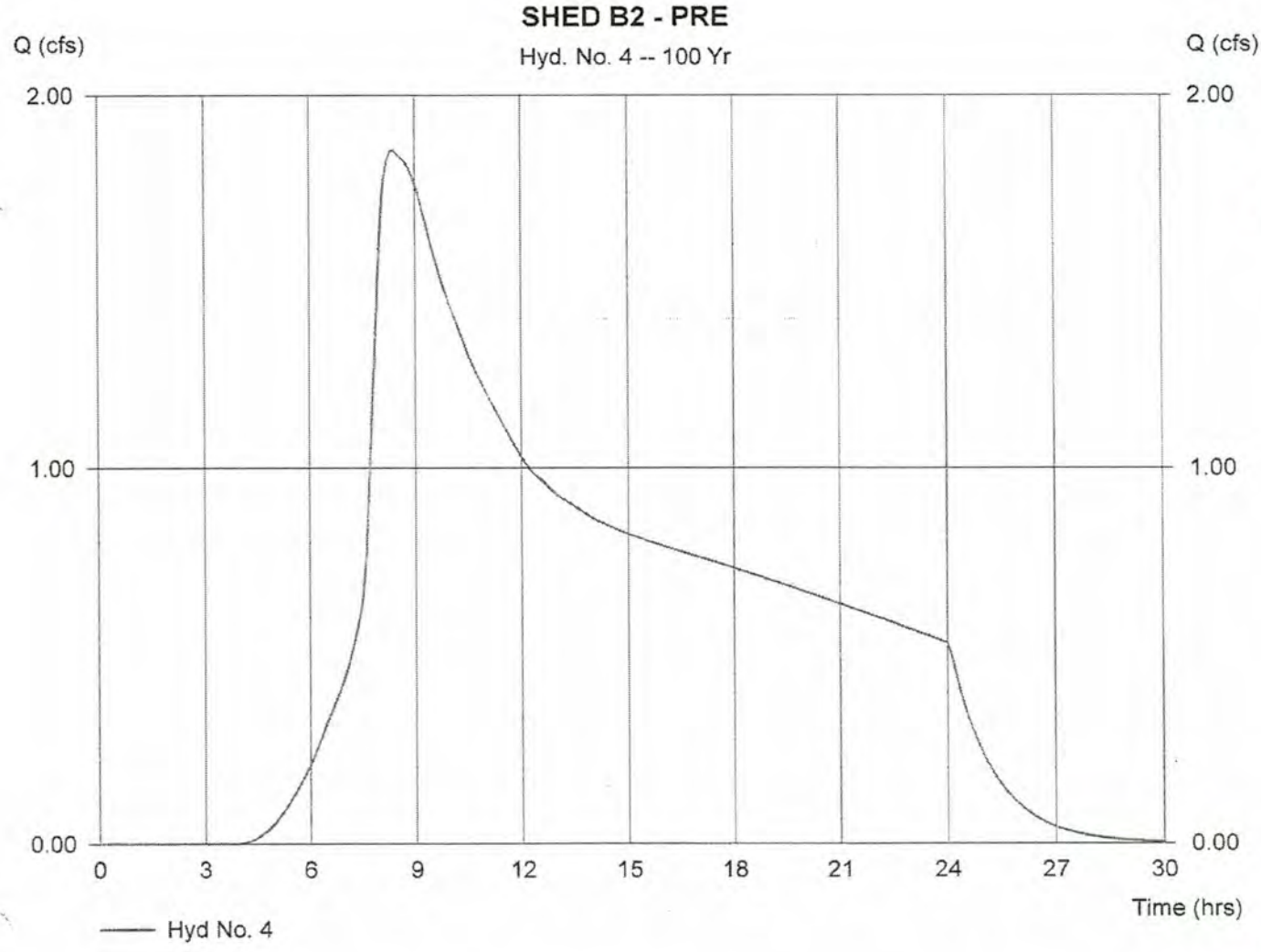
Hydrograph Plot

Hyd. No. 4

SHED B2 - PRE

Hydrograph type	= SBUH Runoff	Peak discharge	= 1.85 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 6.70 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 71.4 min
Total precip.	= 4.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= N/A

Hydrograph Volume = 59,867 cuft



APPENDIX D

Pacific Community Design

WATER QUALITY SWALE CALCULATIONS

SWALE A (SHED AREA A2-1)

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

REFERENCES:
1. City of Wilsonville Public Works Standards - 2006 Edition

REQUIRED WATER QUALITY TREATMENT: 70% Total Suspended Solids (TSS) Removal

PROPOSED TREATMENT METHODS:

1. Sumped Catch Basins	15%
2. Bio-Filtration Swale	55%
total	70%

DESIGN STORM:

Precipitation:	0.36 inches
Storm Duration:	4 hours
Storm Return Period:	96 hours
Storm Window:	2 weeks

IMPERVIOUS AREA:

Watershed Area:	15.59 acres
Percent imp:	66%
Impervious Area:	10.25 acres

Design Inflow = (10.25 ac)*(43560 ft^2/ac)*(0.36 in / 4.0 hrs) = **0.93 cfs**

BIOFILTRATION SWALE DESIGN CRITERIA:

Max Velocity:	0.9 ft/s
Side Slopes:	4 :1 (treatment area)
Base:	9 feet (2' min)
n Factor:	0.24 (plantings)

SWALE CHARACTERISTICS:

Q=	0.93 Design Storm Discharge (determined above)
N=	0.24 Plantings
B=	9 ft Base width of channel
Z=	4 :1 Side slopes
SLOPE=	0.005 ft/ft Slope of channel (0.005 minimum)
ASS. Y=	0.5 ft Assumed depth to begin analysis (0.5 ft maximum)

ITERATIVE SOLUTION OF MANNING'S EQUATION FOR NORMAL DEPTH:

ITERATION	Y (FT)	P (FT)	A(FT^2)	R	Q (CFS)	% ERROR	V (FPS)
1	0.50	13.12	5.50	0.42	1.35	45.40	0.25
2	0.39	12.21	4.11	0.34	0.87	-6.01	0.21
3	0.41	12.35	4.31	0.35	0.94	0.99	0.22
4	0.40	12.33	4.28	0.35	0.93	-0.16	0.22
5	0.40	12.33	4.29	0.35	0.93	0.03	0.22
6	0.40	12.33	4.29	0.35	0.93	0.00	0.22
7	0.40	12.33	4.29	0.35	0.93	0.00	0.22
8	0.40	12.33	4.29	0.35	0.93	0.00	0.22
9	0.40	12.33	4.29	0.35	0.93	0.00	0.22
10	0.40	12.33	4.29	0.35	0.93	0.00	0.22
11	0.40	12.33	4.29	0.35	0.93	0.00	0.22
12	0.40	12.33	4.29	0.35	0.93	0.00	0.22
13	0.40	12.33	4.29	0.35	0.93	0.00	0.22
14	0.40	12.33	4.29	0.35	0.93	0.00	0.22
15	0.40	12.33	4.29	0.35	0.93	0.00	0.22

NORMAL DEPTH =	0.40 ft
FLOW WIDTH =	12.23 ft
VELOCITY =	0.22 ft/s
TREATMENT TIME =	9.00 min
TREATMENT LENGTH =	**117.19 ft**

Pacific Community Design

WATER QUALITY SWALE CALCULATIONS

SWALE B (SHED AREA B1-1)

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

REFERENCES:
1. City of Wilsonville Public Works Standards - 2006 Edition

REQUIRED WATER QUALITY TREATMENT: 70% Total Suspended Solids (TSS) Removal

PROPOSED TREATMENT METHODS:

1. Sumped Catch Basins	15%
2. Bio-Filtration Swale	55%
total	70%

DESIGN STORM:

Precipitation:	0.36 inches
Storm Duration:	4 hours
Storm Return Period:	96 hours
Storm Window:	2 weeks

IMPERVIOUS AREA:

Watershed Area:	4.68 acres
Percent imp:	48%
Impervious Area:	2.27 acres

Design Inflow = (2.268 ac)*(43560 ft^2/ac)*(0.36 in / 4.0 hrs) = **0.21 cfs**

BIOFILTRATION SWALE DESIGN CRITERIA:

Max Velocity:	0.9 ft/s
Side Slopes:	4 :1 (treatment area)
Base:	2 feet (2' min)
n Factor:	0.24 (plantings)

SWALE CHARACTERISTICS:

Q=	0.21 Design Storm Discharge (determined above)
N=	0.24 Plantings
B=	2 ft Base width of channel
Z=	4 :1 Side slopes
SLOPE=	0.005 ft/ft Slope of channel (0.005 minimum)
ASS. Y=	0.5 ft Assumed depth to begin analysis (0.5 ft maximum)

ITERATIVE SOLUTION OF MANNING'S EQUATION FOR NORMAL DEPTH:

ITERATION	Y (FT)	P (FT)	A(FT^2)	R	Q (CFS)	% ERROR	V (FPS)
1	0.50	6.12	2.00	0.33	0.42	98.29	0.21
2	0.32	4.61	1.03	0.22	0.17	-20.11	0.16
3	0.37	5.03	1.28	0.25	0.22	7.02	0.18
4	0.35	4.90	1.20	0.24	0.21	-2.08	0.17
5	0.36	4.94	1.22	0.25	0.21	0.65	0.17
6	0.36	4.93	1.21	0.25	0.21	-0.20	0.17
7	0.36	4.93	1.22	0.25	0.21	0.06	0.17
8	0.36	4.93	1.22	0.25	0.21	-0.02	0.17
9	0.36	4.93	1.22	0.25	0.21	0.01	0.17
10	0.36	4.93	1.22	0.25	0.21	0.00	0.17
11	0.36	4.93	1.22	0.25	0.21	0.00	0.17
12	0.36	4.93	1.22	0.25	0.21	0.00	0.17
13	0.36	4.93	1.22	0.25	0.21	0.00	0.17
14	0.36	4.93	1.22	0.25	0.21	0.00	0.17
15	0.36	4.93	1.22	0.25	0.21	0.00	0.17

NORMAL DEPTH =	0.36 ft
FLOW WIDTH =	4.84 ft
VELOCITY =	0.17 ft/s
TREATMENT TIME =	9.00 min
TREATMENT LENGTH =	**93.24 ft**

Pacific Community Design

VILLEBOIS SAP SOUTH PLAN AREA 2

RAINWATER MANAGEMENT PLAN FOR MILL CREEK BASIN

BY: Jessie King, PE
DATE: 6/21/2013

Prepared By:
Pacific Community Design, Inc.
12564 SW Main Street
Tigard, OR 97223
Tele: 503-941-9484

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VII. APPENDIX C: RAINWATER MANAGEMENT CALCULATIONS

I: INTRODUCTION

The purpose of this Rainwater Management Plan is to demonstrate how the Rainwater Management Program will be applied to the Villebois SAP South Plan Area 2 development. The Rainwater Management Program is a valuable and significant component of sustainability for Villebois. It is important with each phase of development to continue to search for and create opportunities for rainwater management for the benefit of the community of Villebois and its neighbors.

II: PROPOSED SYSTEM

The rainwater management system described in this report is a compilation of several of the components from the Rainwater Management Program approved with SAP Central and SAP North. In an effort to provide diversity, there are 3 types of components utilized including bio-retention cells, vegetated swales, and street trees.

This report reflects those components that are envisioned for the SAP South Plan Area 2 development. While conceptual only, these components are intended to be implemented in concert with parks planning and infrastructure to provide a benefit to the watershed, and be complimentary to park and open space uses.

III: PROCEDURE

The SAP South Plan Area 2 development will create new impervious areas. The Water Quality and Detention Analysis Report for SAP South Plan Area 2, June 26, 2013, quantified the anticipated impervious area created for future land uses of SAP South. The Villebois Master Plan was used as a guide to determine future development patterns including street infrastructure and land use. These area calculations are copied into this report and included in Appendix B.

The second step was to determine the total area of proposed Rainwater Management Components. The total area for each component type was tabulated, and then divided by its sizing factor to determine the amount of impervious area mitigated. In order to determine the percent of created impervious area mitigated with rainwater components, this area was divided by the total impervious area for Plan Area 2.

IV: CONCLUSION

The Rainwater Management Plan for SAP South Plan Area 2, as presented with this report, will achieve 62% mitigation of created impervious area.

Additional opportunities exist within the Mill Creek Basin to provide rainwater management. Developers and builders are encouraged to continue efforts to exceed this plan and should drive to achieve the maximum mitigation practicable.

APPENDIX A: MAP FIGURES

N:\proj\395-021\09 Drawings\03 Planning\Exhibits - SAP Rainwater\395021-PRAIN.dwg - SHEET: RAIN Jun. 26, 13 - 2:26 PM pre

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC

Villebois
SAP South
Plan Area 2
Hydrology

Rainwater
Management Plan

DATE: 6/25/2013

A1

APPENDIX B: IMPERVIOUS AREA CALCULATION

Pacific Community Design

PERCENT IMPERVIOUS
SHED A1-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 5.19 acres 226,076 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	0
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	36,590
Total	36,590
% Impervious =	16%

FIGURE B1

Pacific Community Design

PERCENT IMPERVIOUS
SHED A2-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 15.59 acres 679,100 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	219,281
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	227,209
Total	446,490
% Impervious =	66%

FIGURE B2

Pacific Community Design

PERCENT IMPERVIOUS
SHED A2-2

JOB NUMBER: 395-021
PROJECT: SAP SOUTH PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area 6.05 acres 263,538 sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	0
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	18,469
Total	18,469
% Impervious =	7%

FIGURE B3

Pacific Community Design

PERCENT IMPERVIOUS
SHED B1-1

JOB NUMBER:	395-021
PROJECT:	SAP SOUTH PLAN AREA 2
FILE:	N:/PROJ/395-021/05-REPORTS/SAP-HYDROLOGY/395021.HYDRO.2013-06-20.XLS

Total Site Area	4.68	acres	203,861	sf

ON-SITE	Imp. Area (sf)
Row House Lot Impervious Area (85%)	0
Single Family Lot Impervious Area (60%)	64,295
Commercial Lot Impervious Area (90%)	0
ROW/Alley Impervious Area (80%)	34,500
Total	98,794
% Impervious =	48%

FIGURE B4

APPENDIX C: RAINWATER MANAGEMENT CALCULATIONS

Pacific Community Design

JOB NUMBER: 395-021
PROJECT: SAP SOUTH - PLAN AREA 2
FILE: N:/PROJ/395-021/05-REPORTS/RAINWATER MANAGEMENT/395021.PRAIN.2013-06-20.XLS

EXHIBIT C:
RAINWATER COMPLIANCE SUMMARY - SAP SOUTH - PLAN AREA 2

PHASE	DRAINAGE BASIN	BASIN ID	AREA (SF)	% IMPERVIOUS	IMPERVIOUS AREA (SF)	RAINWATER COMPONENT NO.	RAINWATER COMPONENT TYPE	RAINWATER COMPONENT AREA/ NO. OF TREES	SIZING FACTOR	IMPERVIOUS AREA TREATED			% IMPERVIOUS AREA TREATED
										ARROWHEAD CREEK	MILL CREEK	COFFEE LAKE CREEK	
1	MILL CREEK	A1-1	226,076	16%	36,590	-	-	-	-	-	1,500	-	-
							TREES	15	0.01		1,500		
1	MILL CREEK	A2-1	679,100	66%	446,490	-	-	-	-	-	363,332	-	-
							TREES	220	0.01		22,000		
						53	BIORETENTION CELL	159	0.03		5,300		
						54	BIORETENTION CELL	159	0.03		5,300		
						55	BIORETENTION CELL	104	0.03		3,467		
						56	BIORETENTION CELL	261	0.03		8,700		
						57	BIORETENTION CELL	103	0.03		3,433		
						58	BIORETENTION CELL	124	0.03		4,133		
						59	BIORETENTION CELL	156	0.03		5,200		
						60	BIORETENTION CELL	200	0.03		6,667		
						61	BIORETENTION CELL	239	0.03		7,967		
						62	BIORETENTION CELL	89	0.03		2,967		
						63	BIORETENTION CELL	88	0.03		2,933		
						64	VEGETATED SWALE[1]	1,780	0.06		12,326		
						65	VEGETATED SWALE[1]	1,650	0.06		8,870		
						66	VEGETATED SWALE[1]	1,060	0.06		6,336		
						67	BIORETENTION CELL	230	0.03		7,667		
						68	BIORETENTION CELL	230	0.03		7,667		
						69	BIORETENTION CELL	96	0.03		3,200		
						70	BIORETENTION CELL	52	0.03		1,733		
						71	BIORETENTION CELL	307	0.03		10,233		
						72	BIORETENTION CELL	153	0.03		5,100		
						73	BIORETENTION CELL	153	0.03		5,100		
						74	BIORETENTION CELL	121	0.03		4,033		
						75	BIORETENTION CELL	182	0.03		6,050		
						76	BIORETENTION CELL	182	0.03		6,050		
						77	BIORETENTION CELL	6,027	0.03		200,900		
1	MILL CREEK	A2-2	263,538	7%	18,469	-	-	-	-	-	0	-	-
							TREES	0	0.01		0		
1	MILL CREEK	B1-1	203,861	48%	98,794	-	-	-	-	-	8,950	-	-
							TREES	18	0.01		1,800		
						1A	VEGETATED SWALE	429	0.06		7,150		
SAP SOUTH - PLAN AREA 2			1,372,576	44%	600,344					-	373,782		62%

[1]COMPONENT IMPERVIOUS AREA TREATED REFLECTS ACTUAL COMPONENT CATCHMENT AREA AND MAY NOT REFLECT SIZING FACTOR

Pacific Community Design

MEMORANDUM

DATE: June 27, 2013

TO: City of Wilsonville

FROM: Patrick Espinosa, PE
Pacific Community Design

RE: SAP South - Plan Area 2 (Grande Pointe at Villebois)
Sanitary Sewer Capacity Analysis
Job No. 395-021

This memorandum report is to address the available downstream sanitary sewer capacity and the anticipated discharge locations for sanitary sewer flow from SAP South - Plan Area 2, otherwise known as Grande Pointe at Villebois. Plan Area 2 is located south of Villebois PDP 4 South and east of Grahams Ferry Road and will discharge to the Barber main. This main will then discharge to the Kinsman main via the connection installed in 2007.

The Sewer Capacity Analysis for SAP South, dated August 21, 2003, and completed by Alpha Community Development analyzed the downstream capacity of the sewer trunk lines and identified the flows contributed by each area within the Villebois development. SAP South - Plan Area 2 was identified as the L.E.C. area (See Figure B for original Sanitary Sewer Master Plan).

Based on the City of Wilsonville Sanitary Sewer Master Plan design criteria for wastewater generation and the Villebois Village Master Plan land use, the peak flow of the L.E.C. area was calculated. Unit Flow Factors used in the study were from Table 4.4 of the City Master Plan. The Peaking Factor was calculated from the equation on pg. 5-6 of the City Master Plan.

Unit Flow Factors

Residential:	213 gal/day/unit
Infiltration (I/T):	800 gal/day/acre
Peaking Factor:	3

The resulting peak flow from the L.E.C. property was calculated as 152.7 gallons per minute (gpm).

12564 SW Main Street Tigard, OR 97223 ♦ [T] 503-941-9484 [F] 503-941-9485

The current Plan Area 2 layout consists of 42.75 acres with 121 single-family homes bordered by Grahams Ferry Road to the west and PDP 4S to the North. The original SAP South analysis assumed 47 acres of area west of Grahams Ferry Road, including 215 residential units, would be serviced through the Villebois Village. A portion of this area will be serviced by a sewer connection along Grenoble Street with the remaining area being serviced through Plan Area 2. For the purposes of this study the area west of Grahams Ferry Road to be serviced through Plan Area 2 will include 18 acres of land with 83 residential units.

Using the Sanitary Sewer Master Plan design criteria the peak flows for these two areas were calculated. The attached spreadsheet provides the calculations for the total peak flow from Plan Area 2 and the area west of Grahams Ferry Road, which is as follows:

1. Plan Area 2 - 77.44 gpm

2. West of Grahams Ferry - 46.83 gpm

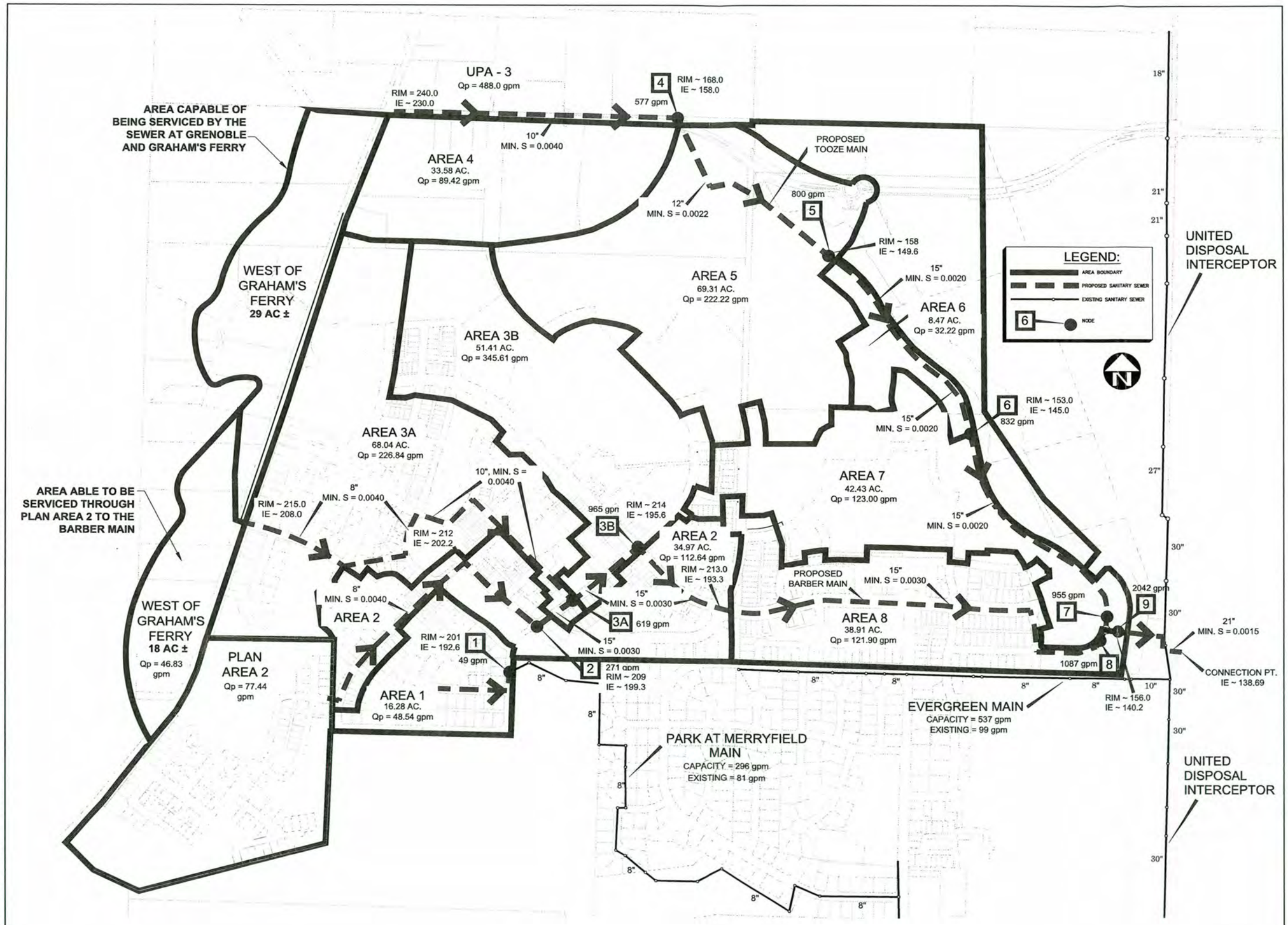
   Total - 124.27 gpm

The proposed phase is located at the upper end of the Barber main sanitary sewer collection system and therefore, based on the calculated peak flows, the sanitary sewer lines within this phase are proposed to be eight inches. A pump station and force main will be utilized to convey the sewage flows from the site to the existing sewer connection located on SW Villebois Drive at the northeast corner of the site. The resulting flows from Plan Area 2 and the area west of Grahams Ferry Road are less than the peak flows from this area outlined in the original SAP South analysis. Therefore, the Barber main, as illustrated in the Sewer Capacity Analysis Report, has been designed to provide the necessary capacity for this phase.

Thank you.

Attachments

1. Figure A – Sanitary Sewer Master Plan, Dated June 27, 2013, Prepared by Pacific Community Design
2. Figure B – Sanitary Sewer Master Plan, Dated August 1, 2003, Prepared by Alpha Community Development
3. SAP South Sanitary Peak Flow Calculations - Plan Area 2 & West of Grahams Ferry Road



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Villebois

POLYGON NW COMPANY

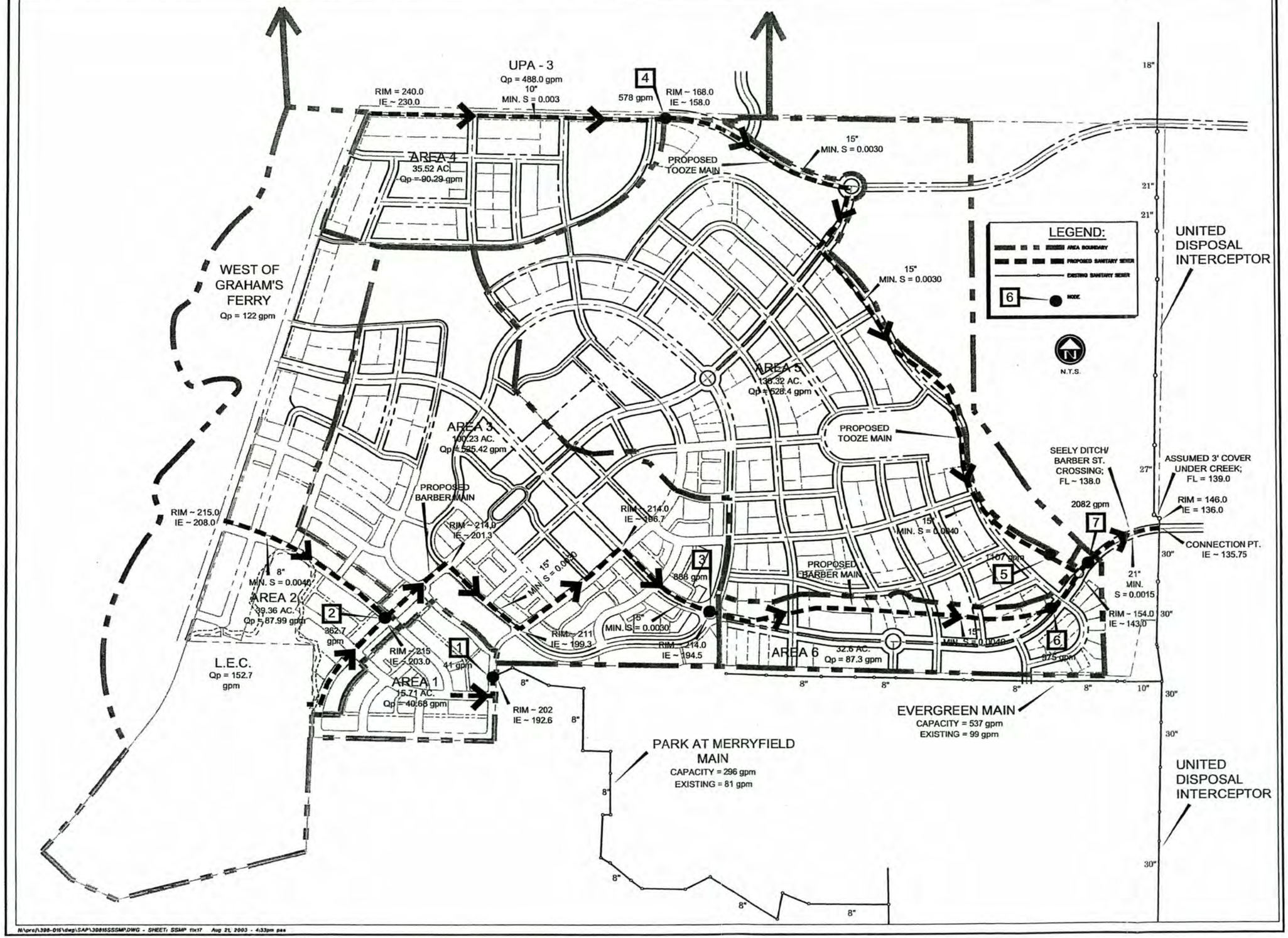
Pacific Community Design

Villebois
SAP South
Plan Area 2

Sanitary Sewer
Master Plan

DATE: 6/27/2013

A



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Villebois

COSTA PACIFIC COMMUNITIES

ALPHA ENGINEERING, INC
FLETCHER FARR AYOTTE
GEOTECHNICAL RESOURCES, INC.
IVERSON ASSOCIATES
KITTELSON & ASSOCIATES
PACIFIC HABITAT SERVICES, INC.
WALKER MACY

VILLEBOIS

SANITARY SEWER
MASTER PLAN

DATE 8-01-03

FIGURE B

Pacific Community Design

JOB: 395-021
PROJECT: SAP South - Plan Area 2
FILE: N:/PROJ/395-021/05 Reports/Sanitary Sewer/395021.Sanitary Conveyance.2013-06-27.xls

SAP SOUTH - SANITARY PEAK FLOW CALCULATIONS

PLAN AREA 2

UNIT FLOW FACTORS

Residential:	213	gal/day/unit
Commercial:	1500	gal/day/acre
Infiltration (I/I):	800	gal/day/acre
Peaking Factor:	3, or Fig. 3-11	

Residential (R): 121 units

Qr = R x 213 gal/day/unit = 25,773 gal/day

Qr = 17.90 gal/min

Commercial (C): 0 acres

Qc = C x 1500 gal/day/acre = 0.00 gal/day

Qc = 0.00 gal/min

Developed Flow (Qf):

Qf = Qr + Qc = 17.90 gal/min 25773 gal/day
0.02577 MGD

Peak Flow (Qp):

Peaking Factor = -0.284ln(Q)+2.33
3.00

Qp = Qf x Peak F = 53.69 gal/min

Total Area (A): 42.75 acres

Qi = A x 800 gal/day/acre = 34,200 gal/day

Qi = 23.75 gal/min

Qt = Qp + Qi = 77.44 gal/min

WEST OF GRAHAMS FERRY ROAD

UNIT FLOW FACTORS

Residential:	213	gal/day/unit
Commercial:	1500	gal/day/acre
Infiltration (I/I):	800	gal/day/acre
Peaking Factor:	3, or Fig. 3-11	

Residential (R): 83 units

Qr = R x 213 gal/day/unit = 17,679 gal/day

Qr = 12.28 gal/min

Commercial (C): 0 acres

Qc = C x 1500 gal/day/acre = 0.00 gal/day

Qc = 0.00 gal/min

Developed Flow (Qf):

Qf = Qr + Qc = 12.28 gal/min 17679 gal/day

0.01768 MGD

Peak Flow (Qp):

Peaking Factor = -0.284ln(Q)+2.33

3.00

Qp = Qf x Peak F = 36.83 gal/min

Total Area (A): 18 acres

Qi = A x 800 gal/day/acre = 14,400 gal/day

Qi = 10.00 gal/min

Qt = Qp + Qi = 46.83 gal/min

DKS

117 Commercial Street NE
Suite 310
Salem, OR 97301
503.391.8773
www.dksassociates.com

October 21, 2013

Steve Adams
City of Wilsonville
29799 Town Center Loop East
Wilsonville, OR 97070

Subject: Villebois Future Study Area Transportation Impact Analysis

Dear Steve:

DKS Associates is pleased to submit this traffic impact study for the Villebois Future Study Area, which is located on the southwest corner of the Villebois Village Master Plan area. Please feel free to call if you have any questions or comments regarding this study.

Sincerely,
DKS Associates

Scott M. Mansur

Scott Mansur, P.E., P.T.O.E.
Transportation Engineer

P13003-013-000

DKS

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APPENDIX

DKS

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CHAPTER 1: INTRODUCTION AND SUMMARY

This study evaluates the transportation impacts associated with the proposed development of the Villebois Future Study Area, which is located on the southwest corner of the Villebois Village Master Plan area and is proposed to include a total of 113 residential units. This area was not included in the prior Villebois Village transportation impact study,[1] therefore a new transportation impact study is required to estimate impacts on the surrounding roadway network. In addition, a memorandum has been prepared to address needed changes to the Villebois Village Master Plan due to this addition of the Future Study Area as part of Specific Area Plan (SAP) South. This memorandum is attached in the appendix.

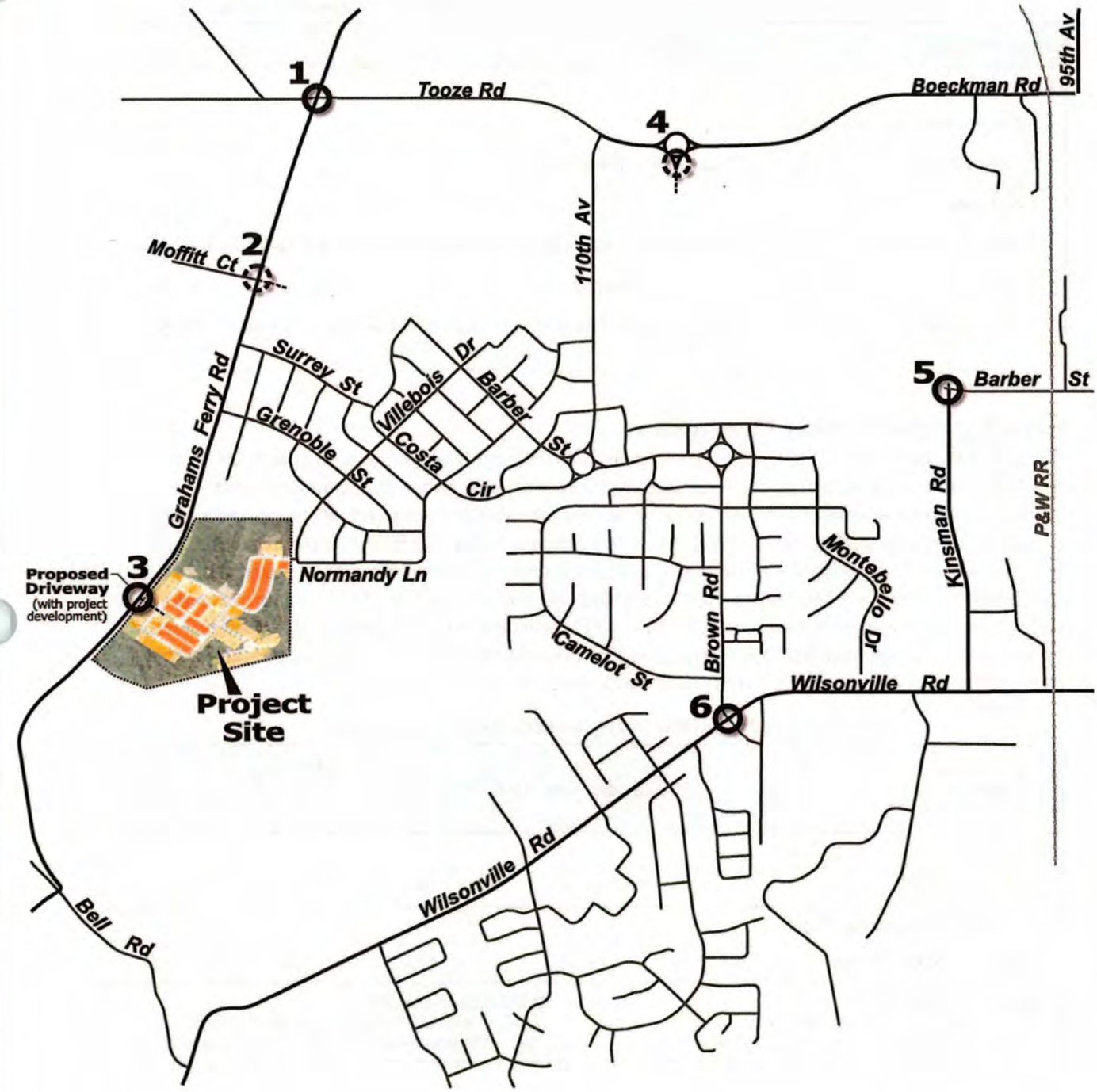
In addition, based on recent land use estimates provided by the applicant for the entire Villebois Village Master Plan, trip levels are expected to exceed those assumed in the approved Master Plan by approximately 190 p.m. peak hour trips. Therefore, in addition to evaluating the new Future Study Area traffic, this report also documents a future scenario that accounts for these additional 190 trips. These additional trips are not directly associated with the proposed Future Study Area; however, they are the result of land use changes that have been made to the other Villebois SAPs.

The purpose of this transportation impact analysis (TIA) is to identify potential mitigation measures needed to offset transportation impacts that the proposed development (and other estimated land use changes in Villebois) may have on the nearby transportation network. The impact analysis is focused on the following study intersections, which are shown in Figure 1 on the next page:

1. Grahams Ferry Road/Tooze Road
2. Grahams Ferry Road/Barber Street/Moffitt Drive (future intersection associated with Villebois)
3. Grahams Ferry Road/New Site Access (future intersection proposed by new development)
4. Boeckman Road/Tooze Road/Villebois Drive (future intersection associated with Villebois)
5. Barber Street/Kinsman Road (north and west legs currently closed)
6. Wilsonville Road/Brown Road

This chapter provides an introduction to the proposed development and the steps taken to analyze the associated impacts on the transportation network. It highlights important elements of the remaining chapters, including a description of the project site and development and the findings of the transportation analysis. Table 1 (which is provided after Figure 1) lists important characteristics of the study area and proposed project.

[1] *Villebois Urban Village Master Plan Amendment Transportation Study*, DKS Associates, June 2005



LEGEND

- Study Intersection
- Future Villebois Access

DKS

No Scale

Figure **1**

STUDY AREA

Table 1: Key Study Area and Proposed Development Characteristics

Characteristics	Information
Study Area	
Number of Study Intersections	Six
Analysis Period	Weekday PM Peak Hour
Project Site	
Existing Land Use	Vacant with an abandoned building previously used as a learning center
Proposed Development	113 residential units
Project Access	Two proposed access points, one from both Grahams Ferry Road and Villebois Drive.

Existing Intersection Operations

Existing traffic operations at the study intersections were determined for the p.m. peak hour based on the 2000 Highway Capacity Manual methodology.[2] Currently, only two of the identified study intersections are fully operational, while the remaining intersections are partially operational or not yet complete. The estimated delay, LOS, and V/C ratio of each study intersection is shown in Table 2. As shown, both existing study intersections currently meet operating standards. These operations are based on traffic counts taken before Boeckman Road was temporarily closed for repairs. Because Boeckman Road is still closed, temporary congestion (particularly at the Brown Road/Wilsonville Road intersection) is expected until the reopening of Boeckman Road in late 2013. In addition, the planned Barber Street Extension will also help reduce traffic delay at this intersection.

Table 2: Existing Study Intersection Operations

Intersection	Operating Standard	Existing		
		Delay	*LOS*	*V/C*
Signalized				
Wilsonville Rd/Brown Rd	LOS D	14.9	B	0.64
Two-Way Stop Controlled				
Grahams Ferry Rd/Tooze Rd	LOS D	17.0	A/C	0.36

Signalized Intersections:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

Proposed Development

Development of the Villebois Future Study Area is proposed to consist of 113 residential units. Site access will be provided from Grahams Ferry Road to the west and Villebois Drive to the east.

[2] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2000.

Project Traffic Impact

Project traffic impacts were evaluated at the study intersections (assumed to be constructed) for the weekday p.m. peak hour. The impact analysis includes trip generation, trip distribution, p.m. peak hour project trips through the two City of Wilsonville I-5 interchange areas, and future traffic operating conditions at the study intersections. The analysis also includes scenarios that account for Stage II approved developments in the area, including those under construction or built but not yet occupied.

To determine project impact at the study intersections, traffic operating conditions were analyzed during the weekday p.m. peak hour. The analysis was performed using *2000 Highway Capacity Manual (HCM)* methodology[3] for signalized and unsignalized intersections for the following scenarios:

- Existing + Project
- Existing + Stage II (includes traffic from other developments that have Stage II approval or are under construction)
- Existing + Project + Stage II

With the road network completed, the intersection operating conditions for the three future scenarios are listed in Table 3. As shown, Grahams Ferry Road/Tooze Road is the only study intersection that is not expected to meet the City's applicable operating standards. This intersection fails due to the addition of Stage II traffic, which includes build-out of most of the Villebois Area. Although much of Villebois has received Stage II approvals, the developer has chosen to phase the construction and home building work over the next 4 to 5 years. To improve this intersection, the City has plans to convert it to a roundabout within the next few years. This roundabout will allow it to meet City standards.

Table 3: Future Project and Stage II Intersection Operations Comparison

Intersection	Operating Standard	Existing + Project			Existing + Stage II			Existing + Stage II + Project		
		Delay	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*
Signalized										
Wilsonville Rd/Brown Rd	LOS D	15.2	B	0.65	23.1	C	0.78	24.3	C	0.80
Barber St/Kinsman Rd	LOS D	7.0	A	0.40	14.7	B	0.45	14.8	B	0.46
Two-Way Stop Controlled										
Grahams Ferry Rd/Tooze Rd	LOS D	19.2	A/C	0.42	>50	A/F	>1.0	>50	A/F	>1.0
Grahams Ferry Rd/Project Access	LOS D	9.0	A/A	0.04				9.0	A/A	0.04
Roundabout										
Grahams Ferry Rd/Barber St	LOS D	4.7	A	0.17	5.1	A	0.21	5.5	A	0.24
Boeckman Rd/Villebois Drive	LOS D	7.8	A	0.39	13.1	B	0.64	14.1	B	0.67

Signalized Intersections/Roundabouts:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

[3] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2000.

Additional Needs for Full Villebois Build-Out

In addition to analyzing the transportation impacts associated with development of the Future Study Area, analysis was performed to estimate the impact related to an additional 190 p.m. peak hour trips that are not accounted for in the Stage II traffic and are expected to be generated by the remaining Villebois area once it builds out. These trips are above and beyond the vested trips originally estimated for the Villebois area and are based on the most recent land use assumptions, which assume more single-family dwelling units than originally planned. This scenario will facilitate the full development of the Villebois area and was evaluated concurrently with the Future Study Area to avoid the need to prepare another full transportation impact study in the future, which will save time and reduce analysis costs by combining traffic analysis effort. A previous memorandum[4] documents historic and current trip generation assumptions for the entire Villebois Urban Village and is provided in the appendix.

Table 4 shows the intersection operations for the future scenario that accounts for existing, project, Stage II, and the additional 190 trips. As shown, Grahams Ferry Road/Tooze Road is still the only study intersection that is not expected to meet the City's applicable operating standards. As indicated previously, this intersection fails due to the addition of Stage II traffic, particularly the traffic associated with Villebois build out. To improve this intersection, the City has plans to convert it to a roundabout within the next few years. This roundabout will allow it to meet City standards even 190 additional p.m. peak hour trips.

Table 4: Intersection Operation for Full Build-Out of the Villebois Area

Intersection	Operating Standard	Existing + Stage II + Project + Additional Villebois Traffic		
		Delay	*LOS*	*V/C*
Signalized				
Wilsonville Rd/Brown Rd	LOS D	26.7	C	0.81
Barber St/Kinsman Rd	LOS D	15.5	B	0.49
Two-Way Stop Controlled				
Grahams Ferry Rd/Tooze Rd	LOS D	>50	A/F	>1.0
Grahams Ferry Rd/Project Access	LOS D	9.0	A/A	0.04
Roundabout				
Grahams Ferry Rd/Barber St	LOS D	5.6	A	0.25
Boeckman Rd/Villebois Drive	LOS D	15.4	C	0.71

Signalized Intersections/Roundabouts:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

Site Plan Evaluation

A site plan showing the proposed residential lots and site layout was provided by the project sponsor and is included in the appendix. This site plan was evaluated with consideration for pedestrian and

[4] *Villebois Urban Village SAP North Area 1B Transportation Study*, DKS Associates, July 31, 2013

bicycle needs (including multi-use trails), vehicular access and circulation, connectivity, safety and alignment of streets and alleys.

Pedestrian and Bicycle Facilities

The proposed site plan shows a network of trails through the Future Study Area, including connections to the regional trails adjacent to the project site. It is recommended that an additional trail connection be provided at Normandy Lane and that a trail connection also be provided to the Coyote Way Trail, which is a nature trail in the Graham Oaks Nature Park that abuts the development parcel. The site plan also shows frontage improvements along Grahams Ferry Road, which should be coordinated with City staff. In addition, the road providing access to the Future Study Area from Grahams Ferry Road (currently proposed to be named SW Athens Lane) is proposed to include bike lanes in both directions.

Vehicular Circulation/Connectivity

It is important for the site to have roadway and pedestrian connections to both Grahams Ferry Road and Villebois Drive. Connectivity is one of the guiding principles of the Villebois Village Master Plan because it provides travel choices, reduces out-of-direction travel, and contributes to the cohesiveness of the community. In addition, frontage improvements are needed along Grahams Ferry Road to upgrade it to urban standards.

Site Access

Based on the 85th percentile speed of approximately 50 miles per hour (mph) on Grahams Ferry Road, 555 feet of sight distance is needed for the project access.[5] Preliminary observations suggest there is sufficient sight distance. At the time that the project site is built, sight distance at all proposed project access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon prior to occupancy.

Project Impact Summary

The following list summarizes the key transportation impact findings associated with the proposed development of the Villebois Future Study Area:

Trip Generation

- The project site would generate approximately 114 (72 in, 42 out) p.m. peak hour trips and 1,081 daily trips.
- Of the project trips, 40 p.m. peak hour trips would pass through the I-5/Wilsonville Road interchange area and 34 p.m. peak hour trips would pass through the I-5/Elligsen Road interchange area.

Study Intersection Operations

- Grahams Ferry Road/Tooze Road is still the only study intersection that is not expected to meet the City's applicable operating standards under a future scenario. This intersection fails due to the addition of Stage II traffic and the traffic associated with Villebois build out. To improve this intersection, the City has plans to convert it to a roundabout within the next few years. This

[5] *Geometric Design of Highways and Streets,* AASHTO, 2004; Case B1, p. 661.

roundabout will allow it to meet City standards even with the addition of the 190 additional p.m. peak hour trips from full Villebois build-out.

On-Site and Frontage Improvements

- Additional trail connections should be provided at Normandy Lane and at the southeast corner of the parcel to connect to the Coyote Way Trail, which is a nature trail in the Graham Oaks Nature Park that abuts the development parcel.
- Frontage improvements along Grahams Ferry Road should be coordinated with City staff in order to upgrade the roadway to urban standards.
- A left-turn on Grahams Ferry Road is not needed at the project access. Therefore, Grahams Ferry Road can remain a two-lane roadway along the project frontage.
- At the time that the project site is built, sight distance at all proposed project access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon prior to occupancy.
- In an effort to reduce speeds along Grahams Ferry Road, the City should consider installing traffic calming features. Potential speed reduction countermeasures could include raised center medians, curb extensions, speed feedback signs, or additional landscaping such as street trees that have been shown to reduce travel speeds.

CHAPTER 2: EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the project site, study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations. Supporting details are provided in the appendix.

Project Site

The Villebois Future Study Area is located on the southwest corner of the Villebois Urban Village development area. This area, which is now proposed to include 113 residential units, was not previously included in the Villebois Urban Village transportation study.

Study Area Roadway Network

The project site is located along the east side of Grahams Ferry Road with an additional connection to Villebois Drive (see appendix for site plan). The study area was selected in conjunction with City staff[6] and is intended to capture transportation impacts related to development of the Future Study Area as well as the additional trips associated with build-out of the previously identified Villebois Area. Analysis of future scenarios is based on the assumption that planned roadways in the Villebois area will be constructed, including missing segments of Barber Street, Kinsman Road and Villebois Drive. Key roadways in the study area are summarized in Table 5 along with their existing (or proposed) roadway characteristics.

Table 5: Study Area Roadway Characteristics

Roadway	Classification	Number of Lanes	Posted Speed	Sidewalks	Bike Lanes	On-Street Parking
Grahams Ferry Road	Minor Arterial	2	40 mph	Some	No	No
Boeckman/Tooze Road	Minor Arterial	2	40 mph	Some	Some	No
Wilsonville Road	Minor Arterial	Varies (2-5)	25-45 mph	Yes	Yes	No
Kinsman Road	Minor Arterial	2	40 mph	Yes	Yes	No
Barber Street	Collector	2	25 mph	Yes	Yes	Yes
Villebois Drive	Future Collector	2	25 mph	Yes	Some	Yes

Pedestrian and Bicycle Facilities

Near the project site, Grahams Ferry Road does not have bike lanes, curbs or sidewalks. A segment to the north, adjacent to other areas of the Villebois development, has been improved to include street lighting and sidewalks. The proposed site plan shows similar improvements along Grahams Ferry Road Adjacent to the Future Study Area.

[6] Email from Steve Adams, City of Wilsonville, June 10, 2013

Tooze Road has sidewalks and bike lanes extending west approximately 1,600 feet from the roundabout. A project is planned to extend these improvements west on Grahams Ferry Road as development in the area continues. The majority of Wilsonville Road, Kinsman Road, and Barber Street have bike lanes and sidewalks.

Existing Traffic Volumes and Operations

Existing p.m. peak hour traffic operations were analyzed at the following study intersections:

- Grahams Ferry Road/Tooze Road
- Wilsonville Road/Brown Road

To perform the intersection analysis, historical p.m. peak hour traffic counts were used due to the current closure of Boeckman Road, which significantly affects the study area traffic patterns. However, to ensure that overall volumes have not changed significantly over the past few years, new traffic counts were collected during the peak period on Thursday, August 1, 2013. The peak hour traffic volumes analyzed under existing conditions are shown on the following page in Figure 2, with the detailed two-hour traffic counts are included in the appendix.

The purpose of intersection analysis is to ensure that the transportation network remains within desired performance levels as required by City code. Intersections are the focus of the analysis because they are the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is nearly always diminished in their vicinity.

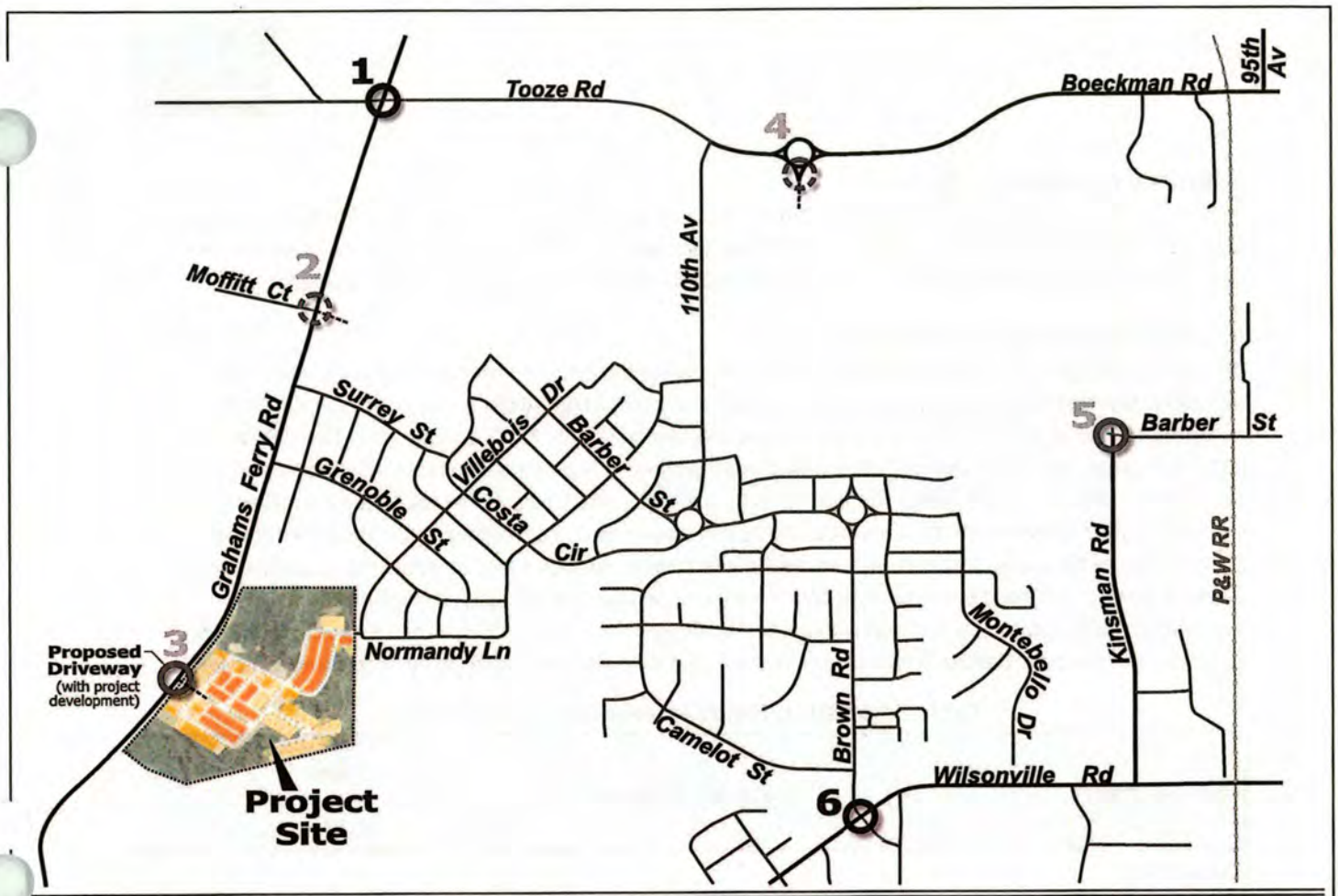
Before the analysis results of the study intersections are presented, discussion is provided for two important analysis issues: intersection performance measures (definitions of typical measures) and required operating standards (as specified by the agency with roadway jurisdiction).

Intersection Performance Measures

Level of service (LOS) ratings and volume-to-capacity (V/C) ratios are two commonly used performance measures that provide a good picture of intersection operations. In addition, they are often incorporated into agency mobility standards.

- **Level of service (LOS):** A "report card" rating (A through F) based on the average delay experienced by vehicles at the intersection.[7] LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity.
- **Volume-to-capacity (V/C) ratio:** A decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

[7] A description of Level of Service (LOS) is provided in the appendix and includes a list of the delay values (in seconds) that correspond to each LOS designation.



1. Grahams Ferry Rd. @ Tooze Rd.

2. Grahams Ferry Rd. @ Barber St./Moffitt Ct.

Future Study Intersection

3. Grahams Ferry Rd. @ Future Site Driveway

Future Study Intersection

4. Boeckman Rd./Tooze Rd. @ Villebois Dr.

Future Study Intersection

5. Kinsman Rd. @ Barber St.

Future Study Intersection

6. Wilsonville Rd. @ Brown Rd.

LEGEND

- Existing Study Intersection
- Future Study Intersection
- Future Villebois Access
- STOP - Stop Sign
- Traffic Signal
- Lane Configuration
- 000 - PM Peak Hour Traffic Volumes
- LT TH RT - Volume Turn Movement (Left•Thru•Right)

DKS

No Scale

Figure **2**

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

Required Operating Standards

The City of Wilsonville requires all study intersections of public streets to meet its minimum acceptable level of service (LOS) standard, which is LOS D for peak periods.[8] While private driveway approaches are not required by City code to meet the City's LOS standard, lower congestion levels are preferred.

Existing Operating Conditions

Existing traffic operations at the study intersections were determined for the p.m. peak hour based on the 2000 Highway Capacity Manual methodology[9] and compared with the City of Wilsonville's minimum acceptable level of service (LOS) operating standard, which is LOS D.[10] Currently, only two of the identified study intersections are fully operational, while the remaining intersections are partially operational or not yet complete. The estimated delay, LOS, and V/C ratio of each study intersection is shown in Table 6. As shown, both existing study intersections currently meet operating standards. These operations are based on traffic counts taken before Boeckman Road was temporarily closed for repairs. Because Boeckman Road is still closed, temporary congestion (particularly at the Brown Road/Wilsonville Road intersection) is expected until the reopening of Boeckman Road in late 2013. In addition, the planned Barber Street Extension will also help reduce traffic delay at this intersection.

Table 6: Existing Study Intersection Operations

Intersection	Operating Standard	Existing		
		Delay	*LOS*	*V/C*
Signalized				
Wilsonville Rd/Brown Rd	LOS D	14.9	B	0.64
Two-Way Stop Controlled				
Grahams Ferry Rd/Tooze Rd	LOS D	17.0	A/C	0.36

Signalized Intersections:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

Field Observations

The project area was observed during peak conditions to identify unique intersection characteristics and to verify intersection operations are consistent with model outputs. No significant congestions was observed, and the levels of delay at study intersections were consistent with existing intersection operations reported previously in Table 6.

Collision Analysis

Three years of collision records (2010-2012) for the study area were obtained from Oregon Department of Transportation (ODOT)'s online database. As shown in Table 7, there was a total of 13 collisions

[8] *City of Wilsonville Code*, City of Wilsonville Section 4.140, p.163.

[9] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2000.

[10] *City of Wilsonville Code*, City of Wilsonville Section 4.140, p.163.

reported at the three existing study intersections, including 7 injury collisions, 6 property damage only (PDO) collisions, and no fatalities.

For intersections, a collision rate greater than or equal to 1.0 collision per million entering vehicles (MEV) generally indicates a higher than average collision rate and that additional collision analysis should be performed. The highest number of collisions occurred at the intersection of Grahams Ferry Road and Tooze Road, which had a collision rate of 1.45. The City of Wilsonville has plans to improve this intersection with a new roundabout, which will address the safety concerns at this location (i.e. reduce travel speeds and eliminate left turn conflicts). The collision rates at the other existing study intersections are well below the 1.0 threshold, and there do not appear to be safety concerns at these locations.

Table 7: Collision History

Intersection	Collisions (by Severity)				Collision Rate[b]
	Fatal	*Injury*	*PDO*[a]	***Total***	
Grahams Ferry Road/Tooze Road	0	5	4	9	1.45
Wilsonville Road/Brown Road	0	2	1	3	0.37
Barber Street/Kinsman Road	0	0	1	1	0.17

[a] PDO = Property damage only.

[b] Collision rate for intersections= average annual collisions per million entering vehicles (MEV); MEV estimates based on p.m. peak-hour traffic count and applicable factors.

CHAPTER 3: PROJECT IMPACTS

This chapter reviews the impacts that the proposed residential development would have on the study area transportation system. This analysis includes trip generation, trip distribution, and future year traffic volumes and operating conditions. The focus of the impact analysis is on the study intersections identified by City of Wilsonville staff.[11] These study intersections include the following:

1. Grahams Ferry Road/Tooze Road
2. Grahams Ferry Road/Barber Street/Moffitt Drive (future intersection associated with Villebois)
3. Grahams Ferry Road/New Site Access (future intersection proposed by new development)
4. Boeckman Road/Tooze Road/Villebois Drive (future intersection associated with Villebois)
5. Barber Street/Kinsman Road
6. Wilsonville Road/Brown Road

Proposed Development

Development of the Villebois Future Study Area is proposed to consist of 113 residential units. Site access will be provided from Grahams Ferry Road to the west and Villebois Drive to the east.

Trip Generation

Trip generation is the method used to estimate the number of vehicles added to site driveways and the adjacent roadway network by a development during a specified period (i.e., such as the p.m. peak hour). The number of peak hour trips associated with the proposed residential development were based on trip rates surveyed at similar land uses, as provided by the Institute of Transportation Engineers (ITE).[12]

Table 8 lists the vehicle trip generation estimates for the project site. It is estimated that the project site would generate 1,080 daily trips including 114 (72 in, 42 out) p.m. peak hour trips. These p.m. peak hour trips were added to the roadway network for the future operations analysis to determine whether traffic from the proposed site would impact the study intersections.

Table 8: Future Study Area Trip Generation Summary

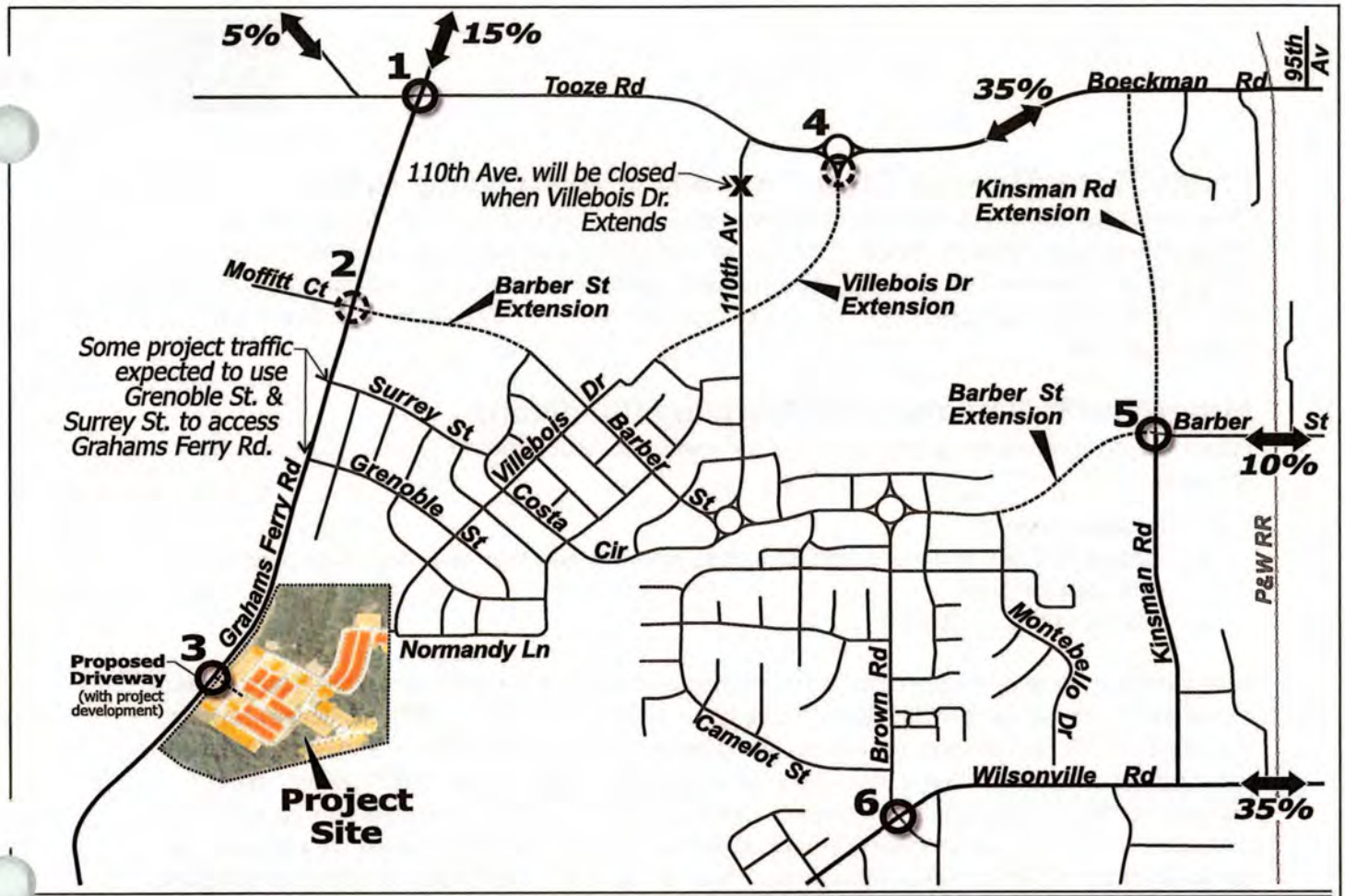
Land Use (ITE Code)	Size	P.M. Peak Trip Rate	P.M. Peak Hr. Trips			Daily Trips
			In	Out	Total	
Residential (Single Family Detached Housing – Code 210)	113 units	1.01 trips/ unit	72	42	114	1,080

Trip Distribution

Trip distribution provides an estimation of where project trips would be coming from and going to. It is given as percentages at key gateways to the study area and is used to route project trips through the study intersections. The trip distribution for the proposed project site was estimated based on existing traffic patterns in the area and the anticipated build out of the Villebois area. The trip distribution percentages and resulting project volumes are shown in Figure 3. Roughly half of the new trips are expected to access the site from Grahams Ferry Road, while the remaining 50% will use Villebois Drive.

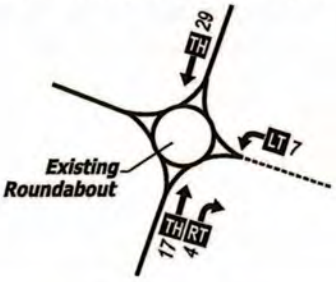
[11] Email from Steve Adams, June 10, 2013

[12] *Trip Generation, 9th Edition*, Institute of Transportation Engineers, 2012.



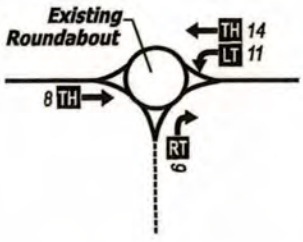
1. Grahams Ferry Rd. @ Tooze Rd.

2. Grahams Ferry Rd. @ Barber St./Moffitt Ct.

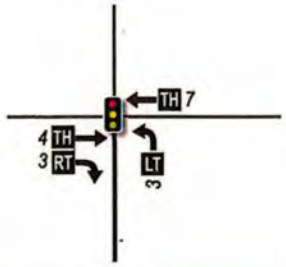


3. Grahams Ferry Rd. @ Future Site Driveway

4. Boeckman Rd/Tooze Rd. @ Villebois Dr.



5. Kinsman Rd. @ Barber St.



6. Wilsonville Rd. @ Brown Rd.

LEGEND

- Study Intersection
- Future Villebois Access
- Future Roadway
- 0% - Trip Distribution Percentage
- STOP - Stop Sign
- Traffic Signal
- 000 - Project Traffic Volume PM Peak Hour
- LT TH RT - Volume Turn Movement (Left • Thru • Right)

DKS

No Scale

Figure 3

PROJECT TRAFFIC & TRIP DISTRIBUTION PM PEAK HOUR

Project Trips Through City of Wilsonville Interchange Areas

The project trips through the two City of Wilsonville I-5 interchange areas (i.e., at Wilsonville Road[13] and Elligsen Road) were estimated based on the trip generation and distribution discussed previously. It is estimated that the proposed residential development would generate 40 p.m. peak hour trips through the I-5/Wilsonville Road interchange area and 34 p.m. peak hour trips through the I-5/Elligsen Road interchange area.

Future Traffic Volumes and Operating Conditions

Future operating conditions were analyzed at the study intersections for the following future traffic scenarios:

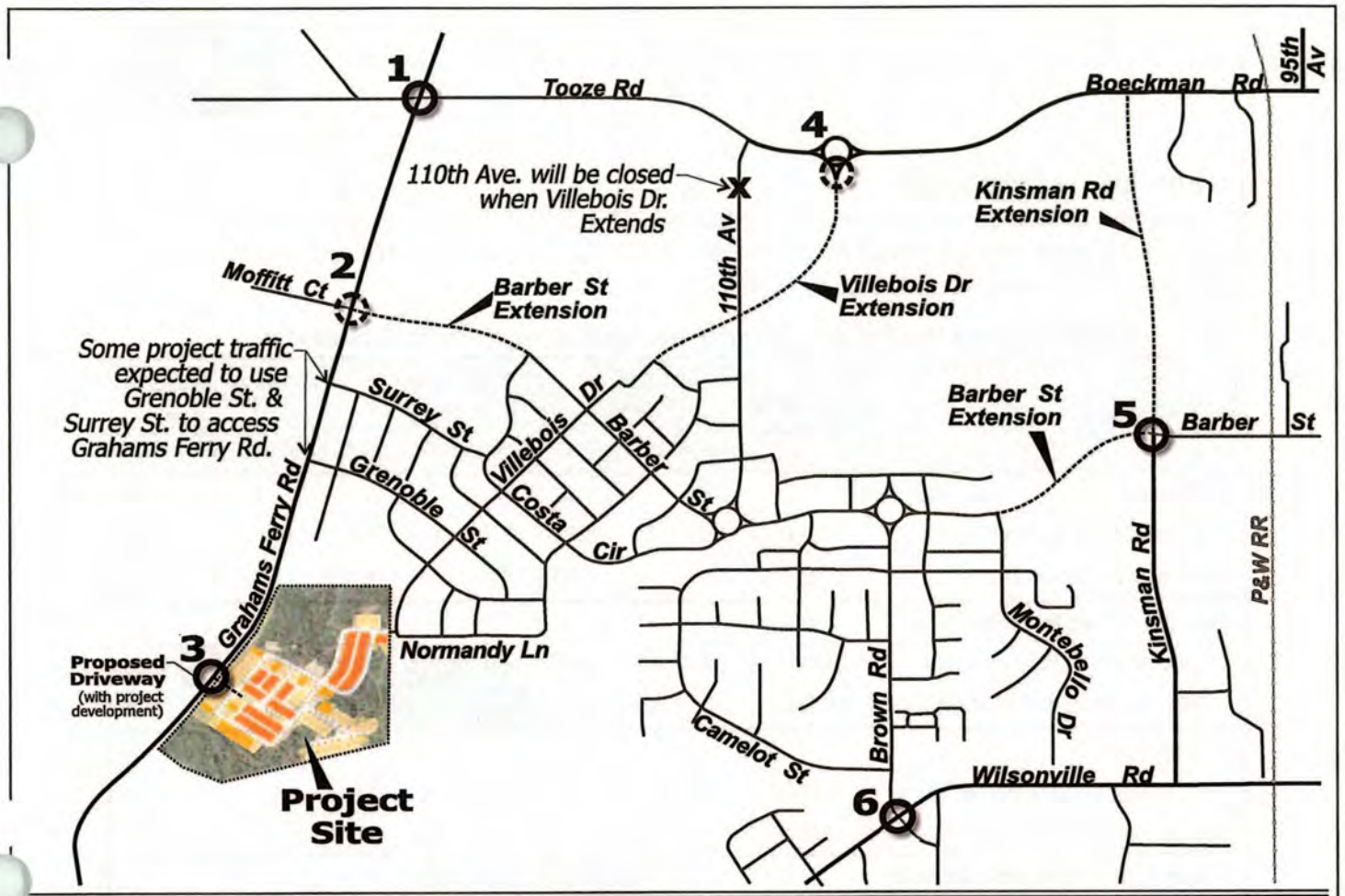
- Existing + Project
- Existing + Stage II (includes traffic from other developments that have Stage II approval or are under construction)
- Existing + Project + Stage II

Future traffic volumes were estimated at the study intersections for each scenario. The future operating scenarios include various combinations of three types of traffic: existing, project, and Stage II. Existing and project traffic have been explained previously in this report. Stage II traffic is estimated based on the list of currently approved Stage II developments, which was provided by City staff.[14] Stage II traffic includes all trips associated with the Villebois area except for Future Study Area trips and an additional 190 trips that are now expected to be generated by the Villebois area and are above the approved trip levels. This list and the corresponding p.m. peak hour trip generation estimates for these developments are included in the appendix.

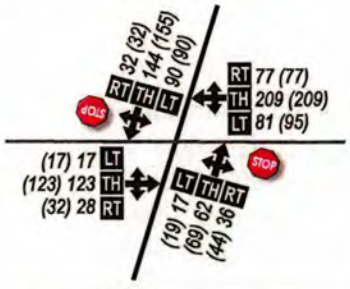
The weekday p.m. peak hour traffic volumes used to analyze the "Existing plus Stage II" and "Existing plus Stage II plus Project" scenarios are shown in Figure 4. The analysis of these scenarios enables the assessment of project impacts.

[13] The I-5/Wilsonville Road interchange area includes the Wilsonville Road/Boones Ferry Road and Wilsonville Road/Town Center Loop West intersections.

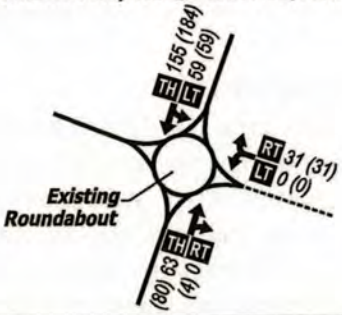
[14] Email from Blaise Edmonds, City of Wilsonville, August 13, 2013 (see appendix for Stage II list).



1. Grahams Ferry Rd. @ Tooze Rd.

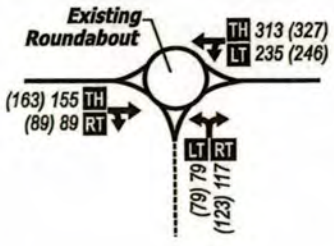


2. Grahams Ferry Rd. @ Barber St./Moffitt Ct.

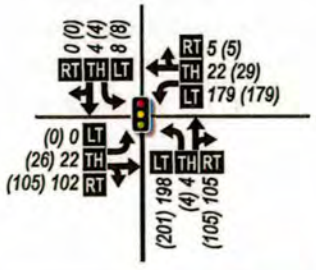


3. Grahams Ferry Rd. @ Future Site Driveway

4. Boeckman Rd/Tooze Rd. @ Villebois Dr.



5. Kinsman Rd. @ Barber St.



6. Wilsonville Rd. @ Brown Rd.

LEGEND

- Study Intersection
- Future Villebois Access
- Future Roadway
- LT TH RT - Volume Turn Movement (Left•Thru•Right)
- STOP - Stop Sign
- Traffic Signal
- Lane Configuration
- 000 (000) - Existing + Stage II (+ Project) PM Peak Hour Traffic Volumes

DKS

No Scale

Figure 4

EXISTING + STAGE II (+ PROJECT) PM PEAK HOUR TRAFFIC VOLUMES

Intersection Operations

The study intersection operating conditions for the three future scenarios are listed in Table 9. As shown, all study intersections except for the Grahams Ferry Road/Tooze Road Intersection are expected to meet the City's applicable operating standards.

Table 9: Future Project and Stage II Intersection Operations Comparison

Intersection	Operating Standard	Existing + Project			Existing + Stage II			Existing + Stage II + Project		
		Delay	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*
Signalized										
Wilsonville Rd/Brown Rd	LOS D	15.2	B	0.65	23.1	C	0.78	24.3	C	0.80
Barber St/Kinsman Rd	LOS D	7.0	A	0.40	14.7	B	0.45	14.8	B	0.46
Two-Way Stop Controlled										
Grahams Ferry Rd/Tooze Rd	LOS D	19.2	A/C	0.42	>50	A/F	>1.0	>50	A/F	>1.0
Grahams Ferry Rd/Project Access	LOS D	9.0	A/A	0.04				9.0	A/A	0.04
Roundabout										
Grahams Ferry Rd/Barber St	LOS D	4.7	A	0.17	5.1	A	0.21	5.5	A	0.24
Boeckman Rd/Villebois Drive	LOS D	7.8	A	0.39	13.1	B	0.64	14.1	B	0.67

Signalized Intersections/Roundabouts:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

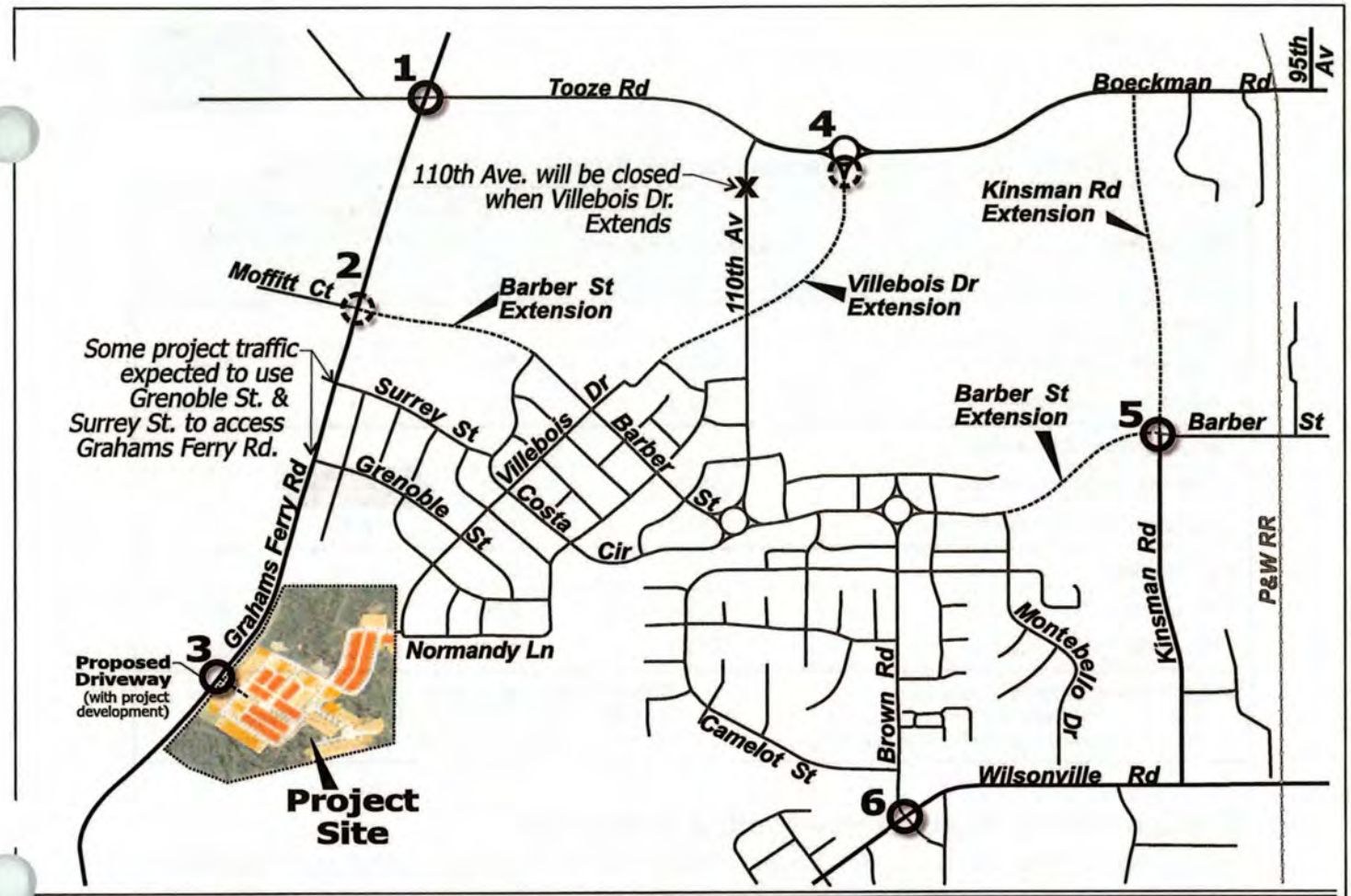
Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

Additional Villebois Trip Generation

In addition to analyzing the transportation impacts associated with development of the Future Study Area, analysis was performed to estimate the impact related to the additional 190 p.m. peak hour trips generated by the area of Villebois previously evaluated. These trips are not included in Stage II traffic volumes and are above and beyond the vested trips originally estimated for the Villebois area. These additional trips are based on the most recent land use assumptions, which assume more single-family dwelling units than originally planned. A previous memorandum[15] documents historic and current trip generation assumptions for the entire Villebois Urban Village and is provided in the appendix.

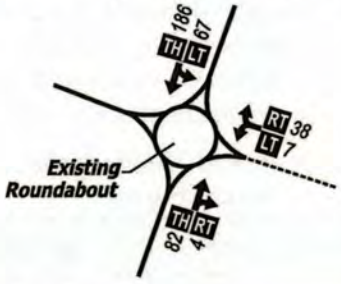
Figure 5 shows the study intersections volumes when the additional Villebois traffic is added. In addition, Table 10 shows the intersection operations for the future scenario that accounts for existing, project, Stage II, and the additional 190 trips. As shown, all study intersections except for the Grahams Ferry Road/Tooze Road intersection would meet the City's operating standards.

[15] *Villebois Urban Village SAP North Area 1B Transportation Study*, DKS Associates, July 31, 2013



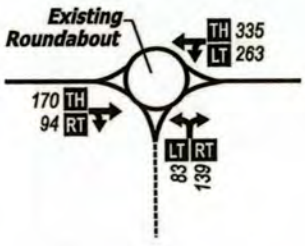
1. Grahams Ferry Rd. @ Tooze Rd.

2. Grahams Ferry Rd. @ Barber St./Moffitt Ct.



3. Grahams Ferry Rd. @ Future Site Driveway

4. Boeckman Rd/Tooze Rd. @ Villebois Dr.



5. Kinsman Rd. @ Barber St.

6. Wilsonville Rd. @ Brown Rd.

LEGEND

- Study Intersection
- Future Villebois Access
- Future Roadway
- LT TH RT - Volume Turn Movement (Left•Thru•Right)
- STOP - Stop Sign
- Traffic Signal
- Lane Configuration
- 000 -PM Peak Hour Traffic Volumes

DKS

No Scale

Figure **5**

EXISTING + STAGE II+ PROJECT + ADDITIONAL VILLEBOIS PM PEAK HOUR TRAFFIC VOLUMES

Table 10: Intersection Operation for Full Build-Out of the Villebois Area

Intersection	Operating Standard	Existing + Stage II + Project + Additional Villebois Traffic		
		Delay	*LOS*	*V/C*
Signalized				
Wilsonville Rd/Brown Rd	LOS D	26.7	C	0.81
Barber St/Kinsman Rd	LOS D	15.5	B	0.49
Two-Way Stop Controlled				
Grahams Ferry Rd/Tooze Rd	LOS D	>50	A/F	>1.0
Grahams Ferry Rd/Project Access	LOS D	9.0	A/A	0.04
Roundabout				
Grahams Ferry Rd/Barber St	LOS D	0.56	A	0.25
Boeckman Rd/Villebois Drive	LOS D	15.4	C	0.71

Signalized Intersections/Roundabouts:
LOS = Level of Service of Intersection
V/C = Volume-to-Capacity Ratio of Intersection

Unsignalized Intersections:
LOS = Level of Service of Major Street/Minor Street
V/C = Volume-to-Capacity Ratio of Worst Movement

Grahams Ferry Road Cross-Section Evaluation

Analysis was performed to determine if the segment of Grahams Ferry Road adjacent to the project site should consist of either two or three lanes. A key consideration for this analysis was the need for a left-turn pocket at the proposed site access to the Future Study Area. To assist in the analysis, a 24-hour tube counts was taken on Grahams Ferry Road between Grenoble Street and the proposed project access. Table 11 shows the bi-directional volumes, speeds, and heavy vehicle percentages. The roadway's ADT is very low, and the fastest 15% of traffic drive almost 10 mph over the speed limit, which is higher than usual (i.e., 85th percentile speeds are usually within about 5 mph of the speed limit).

Table 11: Grahams Ferry Road Bi-Directional Traffic Volumes, Speeds, and Heavy Vehicle Percentages

Surveyed Data	Northbound	Southbound	Total
Traffic Volumes			
Average Daily Traffic (ADT)	300 (45%)	370 (55%)	670
Speeds			
Posted Speed Limit	40 mph	40 mph	
85th Percentile Speed[a]	47 mph	51 mph	
Average Speed	39 mph	40 mph	
Trucks			
Heavy Vehicle Percentage	14.4%	12.8 %	13.5%

[a] The 85th percentile speed is defined as the speed below which 85 percent of the vehicles are traveling.

Left-turn lane criteria were also analyzed at the unsignalized project access along Grahams Ferry Road where there is currently no southbound left-turn lane. Turn lane warrant analysis was not performed at the Grahams Ferry Road/Tooze Road intersection, as the City has plans to convert this intersection to a roundabout within the next few years (see appendix for preliminary layout). These left-turn lane criteria account for roadway volumes and speeds, which affect both operations and safety. Table 12 shows that left-turn lane criteria would not be met at the project access under current or future conditions. In addition, it is expected that installation of roundabouts at Barber Street and Tooze Road will result in decreased travel speeds along Grahams Ferry Road, further reducing the need for a left-turn lane.

Table 12: Left-Turn Lane Storage Criteria on Grahams Ferry Road

Intersection	Movement	Criteria Met? (PM Peak Hours)	
		2013 Existing	*Existing + Project + Stage II + Additional Villebois Traffic*[a]
Grahams Ferry Rd/Project Access	SB Left	No	No

[a] No analysis was needed for the intermediate scenarios because no additional criteria are met when all additional traffic volumes (i.e., project, Stage II, and additional Villebois traffic) are added to the roadway network.

Local Street Impacts

Analysis was performed to determine the impact to the local street system associated with additional traffic created by development of Villebois Future Study Area. Based on the trip generation and distribution estimates previously discussed, the proposed development would add approximately 45 p.m. peak hour and 450 daily trips to Villebois Drive, and 11 p.m. peak hour trips and 110 daily trips to Normandy Lane. While the development will increase traffic on these local roads, traffic volumes are unlikely to exceed the 1,600 daily trip threshold used to identify negative impacts to neighborhood livability. If speeding remains a concern along Villebois Drive and Normandy Lane, curb extensions that offset on-street parking could be added to help slow travel speeds on these roads.

Site Plan Evaluation

A site plan showing the proposed residential lots and site layout was provided by the project sponsor and is included in the appendix. This site plan was evaluated with consideration for pedestrian and bicycle needs (including multi-use trails), vehicular access and circulation, connectivity, safety and alignment of streets and alleys.

Pedestrian and Bicycle Facilities

The proposed site plan shows a network of trails through the Future Study Area, including connections to the regional trails adjacent to the project site. It is recommended that an additional trail connection be provided at Normandy Lane and that a trail connection also be provided to the Coyote Way Trail, which is a nature trail in the Graham Oaks Nature Park that abuts the development parcel. The site plan also shown frontage improvements along Grahams Ferry Road, which should be consistent with recent and planned future improvements to the north along this roadway. In addition, the road providing access to the Future Study Area from Grahams Ferry Road (currently proposed to be named SW Athens Lane) is proposed to include bike lanes in both directions.

Vehicular Circulation/Connectivity

It is important for the site to have roadway and pedestrian connections to both Grahams Ferry Road and Villebois Drive. Connectivity is one of the guiding principles of the Villebois Village Master Plan because it provides travel choices, reduces out-of-direction travel, and contributes to the cohesiveness of the community. In addition, frontage improvements are needed along Grahams Ferry Road to upgrade it to urban standards.

Site Access

Based on the 85th percentile speed of approximately 50 miles per hour (mph) on Grahams Ferry Road, 555 feet of sight distance is needed for the project access.[16] Preliminary observations suggest there is sufficient sight distance. At the time that the project site is built, sight distance at all proposed project access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon prior to occupancy.

In an effort to reduce speeds along Grahams Ferry Road, the City should consider installing traffic calming features. Potential speed reduction countermeasures could include raised center medians, curb extensions, speed feedback signs, or additional landscaping such as street trees that have been shown to reduce travel speeds.

Project Impact Summary

The following list summarizes the key transportation impact findings associated with the proposed development of the Villebois Future Study Area:

Trip Generation

- The project site would generate approximately 114 (72 in, 42 out) p.m. peak hour trips and 1,081 daily trips.
- Of the project trips, 40 p.m. peak hour trips would pass through the I-5/Wilsonville Road interchange area and 34 p.m. peak hour trips would pass through the I-5/Elligsen Road interchange area.

Study Intersection Operations

- Grahams Ferry Road/Tooze Road is still the only study intersection that is not expected to meet the City's applicable operating standards under a future scenario. This intersection fails due to the addition of Stage II traffic and the traffic associated with Villebois build out. To improve this intersection, the City has plans to convert it to a roundabout within the next few years. This roundabout will allow it to meet City standards even with the addition of the 190 additional p.m. peak hour trips from full Villebois build-out.

On-Site and Frontage Improvements

- Additional trail connections should be provided at Normandy Lane and at the southeast corner of the parcel to connect to the Coyote Way Trail, which is a nature trail in the Graham Oaks Nature Park that abuts the development parcel.

[16] *Geometric Design of Highways and Streets,* AASHTO, 2004; Case B1, p. 661.

- Frontage improvements along Grahams Ferry Road should be coordinated with City staff in order to upgrade the roadway to urban standards.
- A left-turn on Grahams Ferry Road is not needed at the project access. Therefore, Grahams Ferry Road can remain a two-lane roadway along the project frontage.
- At the time that the project site is built, sight distance at all proposed project access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon prior to occupancy.
- In an effort to reduce speeds along Grahams Ferry Road, the City should consider installing traffic calming features. Potential speed reduction countermeasures could include raised center medians, curb extensions, speed feedback signs, or additional landscaping such as street trees that have been shown to reduce travel speeds.

Appendix

Site Information

Wilsonville Stage II Project List

ODOT Collision Data

Weekday Peak Hour Traffic Counts

Level of Service Descriptions

HCM Analysis: Existing

HCM Analysis: Existing + Stage II

HCM Analysis: Existing + Stage II + Project

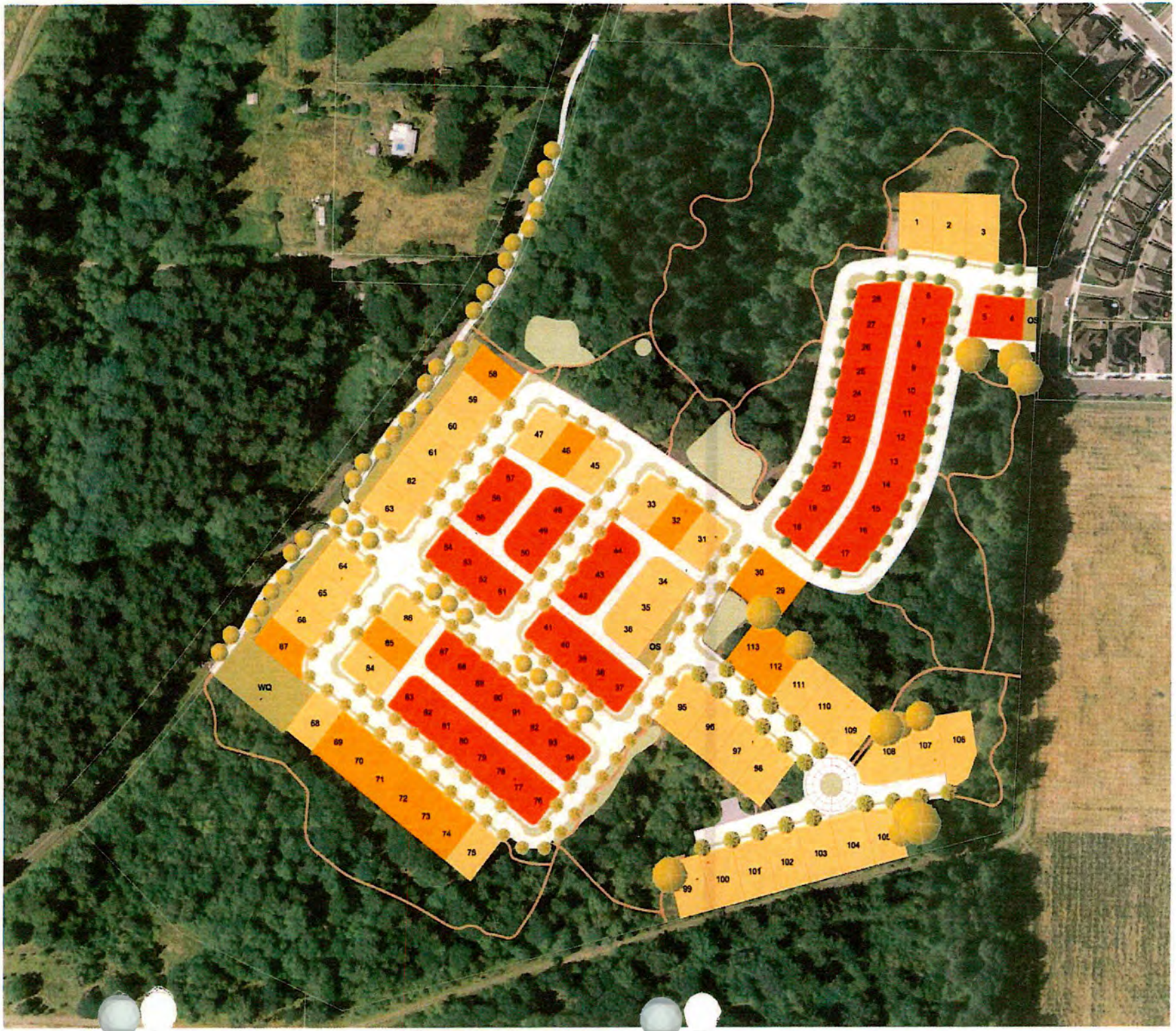
HCM Analysis: Existing + Stage II + Project + Additional Villebois Trips

Master Plan Amendment Memo

Prior Villebois Trip Generation Memo

DKS

Site Information


Proposed Grande Point at Villebois
Large Lots - 41
Standard Lots - 13
Medium Lots - 59
Total - 113 Units
Park and Open Space
Medium Lots
Standard Lots
Large Lots
OS
WQ

DKS

Wilsonville Stage II Project List

Wilsonville Planning Division
Stage II Approved, Vested, and Other Projects

Updated August 13, 2013

Stage II Approved										
Project	**Land Use**	**Status**	**Size**	**Total PM Peak Trips**	**Trip Allocation Percentage**			**Net New (Primary) PM Peak Hour Trips**		
					Internal	*Pass-By*	*Diverted*	*In*	*Out*	*Total*
Ash Meadows	MFDU		22 units					14	7	21
Rivergreen (Phase 3)	SFDU	2 plans submitted (2 lots left)	4 units					4	2	6
Mercedes Benz (Phase 2)	Auto Dealership	Not built						20	26	46
Town Center Ph III and its trip dedication to Miller Paint store *Uses marked with "*" have not been built and their PM peak hour trip sum exceeds remaining vested trip level by 2 trips. It has yet to be determined how to allocate trips between remaining buildings.*	Wilsonville Town Center Office (Pad 5)	Built, 50% occupied	44.0 KSF					~~18~~ 9	~~86~~ 43	~~104~~ 52
	*Fast Food Restaurant (Pad 2)	Not built	2.5 KSF					18	16	34*
	*High Turnover Restaurant (Pad 1)	Not built	7.5 KSF					24	17	41*
	*Miller Paint store	Not built	5.0 KSF					6	6	12*
	Remaining Approved Total									~~189~~ **137**
Cross Creek Subdivision	Residential	Lots for sale (10 of 13 lots built)	13 units					7	4	11
Hydro-Temp	Office/Flex-Space	Not built	60.8 KSF					44	46	90
Copper Creek *Previously analyzed for 26 units (sufficiently close to new unit count; therefore, used original trips)*	Residential	Built (19 of 21 homes built, not occupied)	21 units					15	8	23
Chad Ward building on Kinsman	Manuf., warehouse, office & 5,000 SF retail bldg.	Not built	25.4 KSF					11	41	52
Joe Angel's retail (Wilsonville Retail) on Boones Ferry Rd	Retail (North Bldg)	Not built	11.2 KSF			26%	44%	66	65	131
	Bank (South Bldg)	Not built	3.2 KSF			26%	58%	53	58	111
	Total							**119**	**123**	**242**

Wilsonville Planning Division
Stage II Approved, Vested, and Other Projects

Updated August 13, 2013

Stage II Approved										
Project	**Land Use**	**Status**	**Size**	**Total PM Peak Trips**	**Trip Allocation Percentage**			**Net New (Primary) PM Peak Hour Trips**		
					Internal	*Pass-By*	*Diverted*	*In*	*Out*	*Total*
Athey Creek Church	Convert existing Diatron Bldg to Church	5 year Temporary Use Permit (TUP)	39.6 KSF							
Abele-Renaissance Subdivision	Residential (single-family)	Not built	33 units					21	12	33
Fred Meyer – Old Town Square *Most of this mixed-use site is already built and almost all is occupied, except for these apartments.*	Residential (apartments)	Built, not occupied	52 units	43	40%			16	10	26
Wilsonville Road Business Park *Land use sizes are slightly lower than analyzed in TIS. Applicant is requesting Stage I and Stage II approval for both phases and Site Design Review for Phase 1 only.*	Phase 1: Industrial, office, service/retail (4 buildings on east parcel)	Built (60% occupied)	89.8 KSF					~~13~~ 5	~~87~~ 35	~~100~~ 40
	Phase 2 - office (2-story building on west parcel)	Not built	21.7 KSF					15	71	86
	Total		111.5 KSF	186				~~**28**~~ **20**	~~**158**~~ **106**	~~**186**~~ **126**
Brenchley Estates Phase I, Parcels 1 and 2 *Unit quantities and types are slightly different than those analyzed in TIS, but they are sufficiently close that same trip generation is assumed for Stage II analysis. Assumes entire Phase I trip generation.*	Residential (apartments) Parcel 1	Built, 95% occupied	324 units					156	84	240
	Residential (single-family) Parcel 2	Under construction	30 units							
	Clubhouse (residential use)	Built	5.4 KSF					N/A	N/A	N/A
	Total			240				**156**	**84**	**240**
The Boone Building	Dentist office, offices and retail.	Built, not occupied	19.5 KSF	65				25	40	65
Mentor Graphics Data center	Data Center	Built, not occupied	19.7 KSF	0						

Wilsonville Planning Division
Stage II Approved, Vested, and Other Projects

Updated August 13, 2013

Stage II Approved										
Project	**Land Use**	**Status**	**Size**	**Total PM Peak Trips**	**Trip Allocation Percentage**			**Net New (Primary) PM Peak Hour Trips**		
					Internal	*Pass-By*	*Diverted*	*In*	*Out*	*Total*
SMART	Fleet and operations building	Under construction	12,400	15						
Retherford Meadows SAP-2 East (Villebois)	Residential	Under construction	88 lots	89						
Brenchley Estates - North **Prior approval given for different mix of land uses, which would generate 267 p.m. peak hour trips. New land uses generate less, but prior amount still used in case development plans change.*	Residential (apartments) Lot 1	Under construction Built, 5% occupied	288 units					116	63	179
	Clubhouse (residents only)	Built	5.4 KSF					N/A	N/A	N/A
	Active Adults at the Grove (senior adult housing-attached)	Not built	112 units					15	13	28
	Total							**174***	**93***	**267***
Fox Center Townhomes	Residential	Under construction	15 units					9	4	13
Shredding Systems (SQFT does not including paint canopy and another canopy)	Industrial/Commercial	Not built	66.8 KSF					20	46	66
Carl's Jr. and small commercial building	Commercial	Carl's Jr. under construction. Small Commercial not built	2,867 3,150					30	30	60
Wilsonville '76' station north	Commercial	Not built	Replace convenience store (3,030) and add fuel pumps					31	30	61

Vested Projects with trips through Interchange Areas										
Project	**Land Use**	**Status**	**Size**	**Total PM Peak Trips**	**Trip Allocation Percentage**			**Net New (Primary) PM Peak Hour Trips**		
					Internal	*Pass-By*	*Diverted*	*In*	*Out*	*Total*
Villebois	Mixed Use	Building 1F built	N/A					266	144	309 WVIC
The Villebois approved projects as shown below are part of the 410 vested trips through the WV Road Interchange Area as shown above (309 trips based on occupied units in SAP-South Phases 1,2, and 3)										
Villebois SAP-South Phases 2 and 3	Residential	Built, not occupied	121 units					74	41	115
Villebois SAP-East Phase 1	Residential	Lots for sale (60 of 190 units built)	190 units							
Villebois SAP-Central Phase 1	Residential	Mostly built, row house lots for sale	394 units							
Villebois SAP-Central Phase 2	Residential and 5 KSF commercial	Charleston built	114-134 (mid 124)							
Villebois Phase 2 North: "Tonquin Woods at Villebois No. 4"	Residential	Not built	90 lots							
Villebois Phase 4 Central: "Polygon Northwest at Villebois No. 2" and "Tonquin Woods at Villebois No. 5"	Residential	Under construction	57 lots							
Villebois SAP-South Phase 5	Residential	Built, not occupied	27 units							
Villebois SAP-South Phase 6	Residential	Built, not occupied	81 units							
Villebois SAP North Phases 1 and 2	Residential	35 of 142 units built	142 units							
Villebois SAP East Tonquin Woods	Residential	Approved but not yet under construction	205 lots							
Villebois SAP East Tonquin Woods 2	Residential	Approved but not yet under construction	93 lots							

Wilsonville Planning Division
Stage II Approved, Vested, and Other Projects

Updated August 13, 2013

Projects Without Stage II Approval										
Project	**Land Use**	**Status**	**Size**	**Total PM Peak Trips**	**Trip Allocation Percentage**			**Net New (Primary) PM Peak Hour Trips**		
					Internal	*Pass-By*	*Diverted*	*In*	*Out*	*Total*
Brenchley Estates - North	Residential (single family)	Not built	57 units	58				36	22	58
Polygon/Villebois Future Study Area	Residential (single family)	Not built	113 units							

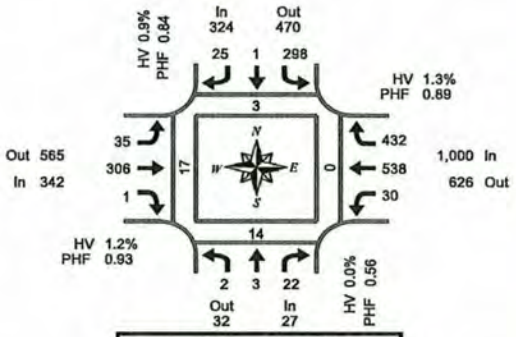
ODOT Collision Data

General Data			Street Names		From Intersection		Collision Location			Overall										
Crash ID	Serial #	Crash Date	1st Street	2nd Street	Distance	Direction	Impact Location	Lat	Long	Road Character	Crash Type	Collision Type	Crash Severity	Weather	Road Surface	Light	Event 1	Cause 1	Cause 2	Cause 3
1488193	3626	10/1/2012	WILSONVILLE RD	BROWN RD	160	SW	8	45.302031	-122.786467	STRGHT	S-1STOP	REAR	INJ	CLEAR	DRY	DAYLIGHT	FORCED BY	FOLLOW TOO CLOSE		
1401657	323	1/27/2011	BROWN RD	WILSONVILLE RD	0	N	6	45.302304	-122.785989	INTER	S-1STOP	REAR	INJ	CLOUDY	DRY	DARK-NO ST LIGHTS		FOLLOW TOO CLOSE		
1499798	4664	12/4/2012	BROWN RD	WILSONVILLE RD	90	N	8	45.302506	-122.786197	CURVE	O-STRGHT	HEAD	PDO	RAIN	WET	DAYLIGHT		DROVE LEFT OF CENTER		
1445900	5004	12/28/2011	SW BARBER ST	KINSMAN RD	0	S	5	45.310135	-122.778539	INTER	FIX OBJ	FIX	PDO	CLOUDY	WET	DARK-NO ST LIGHTS	CURB	INATTENTION		
1466029	1191	3/30/2012	Grahams Ferry Rd	Tooze Rd		CN	3	45.317322	-122.799689	INTER	ANGL-OTH	ANGL	PDO	RAIN	WET	DAYLIGHT		PASSED STOP SIGN		
1469998	1774	5/14/2012	Grahams Ferry Rd	Tooze Rd		CN	4	45.317322	-122.799689	INTER	ANGL-OTH	ANGL	INJ	CLEAR	DRY	DAYLIGHT		NO YIELD		
1475603	2336	6/29/2012	Grahams Ferry Rd	Tooze Rd		CN	2	45.317322	-122.799689	INTER	ANGL-OTH	ANGL	PDO	CLOUDY	DRY	DAYLIGHT		PASSED STOP SIGN		
1488834	3696	10/5/2012	Grahams Ferry Rd	Tooze Rd		CN	1	45.317322	-122.799689	INTER	ANGL-OTH	ANGL	INJ	CLEAR	DRY	DAYLIGHT		SPEEDING	INATTENTION	PASSED STOP SIGN
1401876	412	2/4/2011	Grahams Ferry Rd	Tooze Rd		CN	3	45.317332	-122.799684	INTER	ANGL-OTH	ANGL	INJ	CLOUDY	DRY	DAYLIGHT	FENCE/BUI	NO YIELD		
1418988	1973	6/3/2011	Grahams Ferry Rd	Tooze Rd		CN	3	45.317332	-122.799684	INTER	ANGL-OTH	ANGL	INJ	CLEAR	DRY	DAYLIGHT		NO YIELD		
1435474	3135	8/26/2011	Grahams Ferry Rd	Tooze Rd		CN	1	45.317332	-122.799684	INTER	ANGL-OTH	ANGL	PDO	CLEAR	DRY	DAYLIGHT	BLD OBSCL	NO YIELD		
1444566	4750	12/9/2011	Grahams Ferry Rd	Tooze Rd		CN	1	45.317332	-122.799684	INTER	ANGL-OTH	ANGL	PDO	FOG	DRY	DAYLIGHT		NO YIELD		
1375908	2491	7/16/2010	Grahams Ferry Rd	Tooze Rd		CN	2	45.317331	-122.799681	INTER	ANGL-OTH	ANGL	INJ	CLEAR	DRY	DAYLIGHT		NO YIELD		

Weekday Peak Hour Traffic Counts

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
5:00 PM to 6:00 PM

SW Brown Rd & SW Wilsonville Rd

Thursday, August 01, 2013
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	1	1	0	25	0	3	0	1	26	0	0	2	37	25	0	121	0	1	0	0
4:05 PM	0	0	1	0	18	0	2	0	3	29	0	0	7	42	28	0	130	0	4	0	0
4:10 PM	0	0	3	0	22	0	1	0	2	24	0	0	0	34	24	0	110	2	0	0	0
4:15 PM	1	0	0	0	20	1	0	0	1	28	0	0	2	32	27	0	112	0	0	0	0
4:20 PM	0	0	1	0	21	0	2	0	2	15	0	2	3	34	25	0	103	1	0	0	0
4:25 PM	0	0	3	0	8	0	0	0	1	29	0	0	4	38	30	1	113	0	0	0	0
4:30 PM	0	0	3	0	22	0	4	0	3	18	0	0	1	46	24	1	121	0	4	0	1
4:35 PM	0	0	4	0	23	0	4	0	0	23	1	0	0	39	25	0	119	0	0	0	0
4:40 PM	0	0	0	0	21	0	2	0	2	23	1	0	2	47	31	2	129	0	0	0	1
4:45 PM	0	0	3	0	11	0	5	0	0	24	0	1	3	53	33	0	132	0	2	0	0
4:50 PM	0	0	3	0	19	0	2	0	1	28	0	0	3	50	40	0	146	1	4	0	0
4:55 PM	0	1	1	0	19	0	3	0	4	34	0	0	1	35	34	1	132	0	0	0	1
5:00 PM	0	0	0	0	17	1	2	0	2	26	0	0	8	37	40	0	133	0	1	0	7
5:05 PM	0	0	6	0	20	0	0	0	6	22	0	0	2	46	29	0	131	0	3	0	0
5:10 PM	0	0	2	0	30	0	0	0	2	33	1	0	1	45	36	0	150	1	0	0	2
5:15 PM	1	1	2	0	27	0	2	0	2	22	0	0	0	33	38	0	128	0	0	0	1
5:20 PM	0	1	2	0	15	0	3	0	4	27	0	0	2	57	35	0	146	0	1	0	0
5:25 PM	0	0	1	0	25	0	4	0	2	20	0	0	3	52	32	0	139	0	1	0	2
5:30 PM	0	0	0	0	31	0	3	0	4	34	0	0	3	49	41	0	165	0	2	0	0
5:35 PM	0	1	1	0	26	0	2	0	3	15	0	2	2	54	34	0	138	0	1	0	0
5:40 PM	1	0	0	0	19	0	1	0	4	24	0	1	4	49	44	0	146	0	3	0	0
5:45 PM	0	0	3	0	29	0	3	0	3	26	0	0	3	41	27	0	135	2	2	0	1
5:50 PM	0	0	3	0	32	0	4	0	2	24	0	0	2	31	43	0	141	0	0	0	2
5:55 PM	0	0	2	0	27	0	1	1	1	33	0	0	0	44	33	0	141	0	0	0	2
Total Survey	3	5	45	0	527	2	53	1	55	607	3	6	58	1,025	778	5	3,161	7	29	0	20

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	1	5	0	65	0	6	0	6	79	0	0	9	113	77	0	361	2	5	0	0
4:15 PM	1	0	4	0	49	1	2	0	4	72	0	2	9	104	82	1	328	1	0	0	0
4:30 PM	0	0	7	0	66	0	10	0	5	64	2	0	3	132	80	3	369	0	4	0	2
4:45 PM	0	1	7	0	49	0	10	0	5	86	0	1	7	138	107	1	410	1	6	0	1
5:00 PM	0	0	8	0	67	1	2	0	10	81	1	0	11	128	105	0	414	1	4	0	9
5:15 PM	1	2	5	0	67	0	9	0	8	69	0	0	5	142	105	0	413	0	2	0	3
5:30 PM	1	1	1	0	76	0	6	0	11	73	0	3	9	152	119	0	449	0	6	0	0
5:45 PM	0	0	8	0	88	0	8	1	6	83	0	0	5	116	103	0	417	2	2	0	5
Total Survey	3	5	45	0	527	2	53	1	55	607	3	6	58	1,025	778	5	3,161	7	29	0	20

Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	27	32	59	0	324	470	794	1	342	565	907	3	1,000	626	1,626	0	1,693	3	14	0	17
%HV	0.0%				0.9%				1.2%				1.3%				1.2%				
PHF	0.56				0.84				0.93				0.89				0.94				

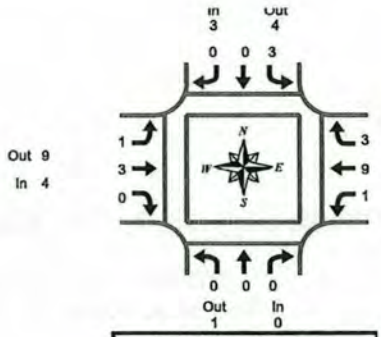
By Movement	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	3	22	27	298	1	25	324	35	306	1	342	30	538	432	1,000	1,693
%HV	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.9%	2.9%	1.0%	0.0%	1.2%	3.3%	1.7%	0.7%	1.3%	1.2%
PHF	0.50	0.38	0.55	0.56	0.85	0.25	0.63	0.84	0.80	0.92	0.25	0.93	0.68	0.85	0.91	0.89	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	2	23	0	229	1	28	0	20	301	2	3	28	487	346	5	1,468	4	15	0	3
4:15 PM	1	1	26	0	231	2	24	0	24	303	3	3	30	502	374	5	1,521	3	14	0	12
4:30 PM	1	3	27	0	249	1	31	0	28	300	3	1	26	540	397	4	1,606	2	16	0	15
4:45 PM	2	4	21	0	259	1	27	0	34	309	1	4	32	560	436	1	1,686	2	16	0	13
5:00 PM	2	3	22	0	298	1	25	1	35	306	1	3	30	538	432	0	1,693	3	14	0	17

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW Brown Rd & SW Wilsonville Rd

Thursday, August 01, 2013
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:05 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	1	2	4
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
4:20 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	1	0	1	4
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:40 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:50 PM	0	0	0	0	1	0	0	1	0	3	0	3	0	1	0	1	5
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3
5:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:25 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:40 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	2	4
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:50 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	8	0	0	8	1	13	0	14	1	16	4	21	43

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	1	3	6
4:15 PM	0	0	0	0	4	0	0	4	0	2	0	2	0	1	0	1	7
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:45 PM	0	0	0	0	1	0	0	1	0	4	0	4	0	2	0	2	7
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
5:15 PM	0	0	0	0	2	0	0	2	0	1	0	1	0	4	0	4	7
5:30 PM	0	0	0	0	0	0	0	0	1	1	0	2	1	1	2	4	6
5:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
Total Survey	0	0	0	0	8	0	0	8	1	13	0	14	1	16	4	21	43

Heavy Vehicle Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW Brown Rd			Southbound SW Brown Rd			Eastbound SW Wilsonville Rd			Westbound SW Wilsonville Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	3	4	7	4	9	13	13	6	19	20
PHF	0.00			0.38			0.33			0.54			0.63

By Movement	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	3	0	0	3	1	3	0	4	1	9	3	13	20
PHF	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38	0.25	0.38	0.00	0.33	0.25	0.45	0.38	0.54	0.63

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

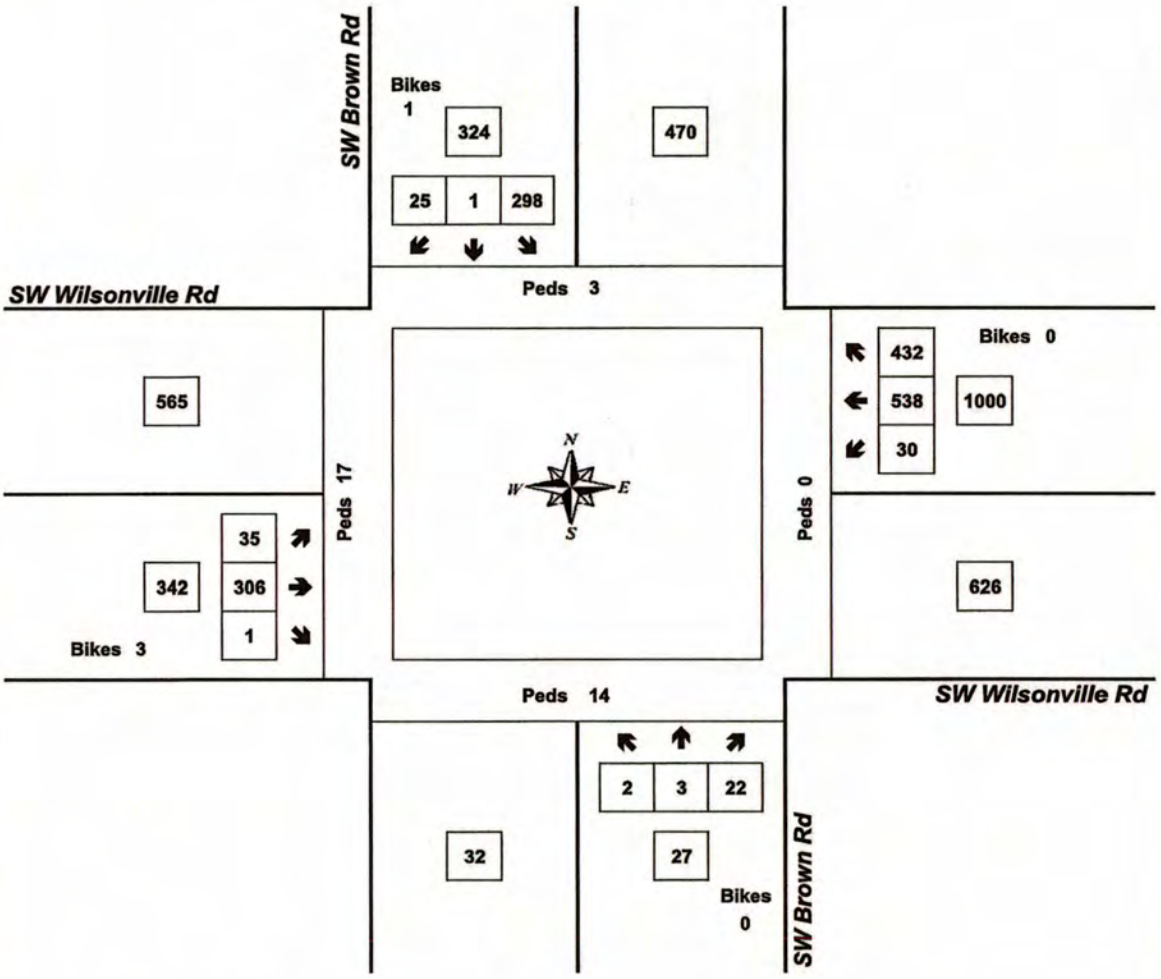
Interval Start Time	Northbound SW Brown Rd				Southbound SW Brown Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	5	0	0	5	0	10	0	10	0	7	1	8	23
4:15 PM	0	0	0	0	5	0	0	5	0	7	0	7	0	8	1	9	21
4:30 PM	0	0	0	0	3	0	0	3	0	6	0	6	0	11	1	12	21
4:45 PM	0	0	0	0	3	0	0	3	1	6	0	7	1	10	3	14	24
5:00 PM	0	0	0	0	3	0	0	3	1	3	0	4	1	9	3	13	20

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

SW Brown Rd & SW Wilsonville Rd

5:00 PM to 6:00 PM
Thursday, August 01, 2013

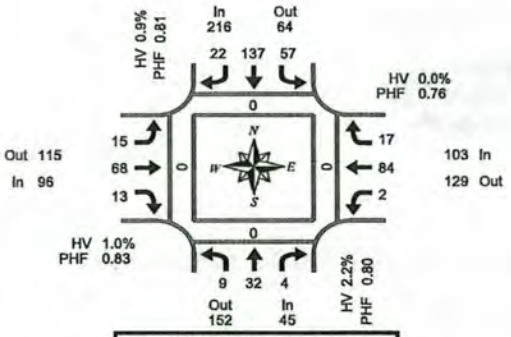


Approach	PHF	HV%	Volume
EB	0.93	1.2%	342
WB	0.89	1.3%	1,000
NB	0.56	0.0%	27
SB	0.84	0.9%	324
Intersection	0.94	1.2%	1,693

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW Grahams Ferry Rd & SW Tooze Rd

Thursday, August 01, 2013
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	2	0	0	0	7	1	0	2	3	1	0	0	5	1	0	22	0	0	0	0
4:05 PM	0	0	0	0	3	8	0	0	1	7	2	0	0	5	2	0	28	0	0	0	0
4:10 PM	1	4	0	1	4	6	1	0	0	3	2	0	0	6	1	0	28	0	0	0	0
4:15 PM	2	4	0	0	2	3	2	0	0	4	0	0	0	7	4	0	28	0	0	0	0
4:20 PM	0	2	0	0	3	4	0	0	0	5	0	0	0	4	0	0	18	0	0	0	0
4:25 PM	0	2	0	0	4	8	0	0	0	2	1	0	0	2	0	0	19	0	0	0	0
4:30 PM	0	2	0	0	3	7	3	0	1	5	1	0	2	7	4	0	35	0	0	0	0
4:35 PM	0	4	1	0	5	7	3	0	0	6	0	0	0	5	5	0	36	0	0	0	0
4:40 PM	0	1	0	0	1	7	2	0	1	7	0	0	0	5	3	0	27	0	0	0	0
4:45 PM	0	0	0	0	5	3	0	0	1	7	0	0	0	4	1	1	21	0	0	0	0
4:50 PM	1	2	1	0	3	8	1	0	0	8	0	0	0	8	1	0	33	0	0	0	0
4:55 PM	0	1	0	0	2	5	0	0	2	4	1	0	0	9	1	0	25	0	0	0	0
5:00 PM	1	3	0	0	4	11	0	0	0	3	1	0	0	5	2	0	30	0	0	0	0
5:05 PM	1	1	1	1	4	10	1	0	0	6	4	0	0	6	1	0	35	0	0	0	0
5:10 PM	0	4	0	0	3	11	2	0	3	6	0	0	1	11	1	0	42	0	0	0	0
5:15 PM	0	2	1	0	4	6	1	0	3	4	0	0	0	2	3	0	26	0	0	0	0
5:20 PM	1	0	0	0	5	13	4	0	1	7	1	0	0	8	1	0	41	0	0	0	0
5:25 PM	2	2	0	0	6	10	1	0	3	5	1	0	0	8	1	0	39	0	0	0	0
5:30 PM	1	5	0	0	4	11	5	0	0	6	1	0	0	8	0	0	41	0	0	0	0
5:35 PM	0	3	1	0	5	15	2	0	0	4	0	0	0	6	1	0	37	0	0	0	0
5:40 PM	1	2	0	0	8	12	3	0	2	8	4	0	1	9	2	0	52	0	0	0	0
5:45 PM	1	5	0	0	4	17	1	0	1	8	1	0	0	7	0	0	45	0	0	0	0
5:50 PM	1	3	1	0	6	7	2	0	2	3	0	1	0	11	4	0	40	0	0	0	0
5:55 PM	0	2	0	0	4	14	0	0	0	8	0	0	0	3	1	0	32	0	0	0	0
Total Survey	13	56	6	2	92	210	35	0	23	129	21	1	4	151	40	1	780	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	6	0	1	7	21	2	0	3	13	5	0	0	16	4	0	78	0	0	0	0
4:15 PM	2	8	0	0	9	15	2	0	0	11	1	0	0	13	4	0	65	0	0	0	0
4:30 PM	0	7	1	0	9	21	8	0	2	18	1	0	2	17	12	0	98	0	0	0	0
4:45 PM	1	3	1	0	10	16	1	0	3	19	1	0	0	21	3	1	79	0	0	0	0
5:00 PM	2	8	1	1	11	32	3	0	3	15	5	0	1	22	4	0	107	0	0	0	0
5:15 PM	3	4	1	0	15	29	6	0	7	16	2	0	0	18	5	0	106	0	0	0	0
5:30 PM	2	10	1	0	17	38	10	0	2	18	5	0	1	23	3	0	130	0	0	0	0
5:45 PM	2	10	1	0	14	38	3	0	3	19	1	1	0	21	5	0	117	0	0	0	0
Total Survey	13	56	6	2	92	210	35	0	23	129	21	1	4	151	40	1	780	0	0	0	0

Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Total
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	45	152	197	1	216	64	280	0	96	115	211	1	103	129	232	0	460
%HV	2.2%				0.9%				1.0%				0.0%				0.9%
PHF	0.80				0.81				0.83				0.76				0.84

Pedestrians Crosswalk			
North	South	East	West
0	0	0	0

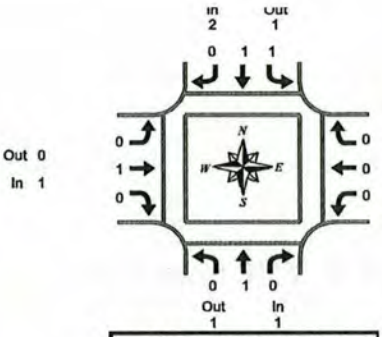
By Movement	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	32	4	45	57	137	22	216	15	68	13	96	2	84	17	103	460
%HV	0.0%	3.1%	0.0%	2.2%	1.8%	0.7%	0.0%	0.9%	0.0%	1.5%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.9%
PHF	0.56	0.80	0.50	0.80	0.79	0.78	0.55	0.81	0.54	0.85	0.65	0.83	0.50	0.78	0.71	0.76	0.84

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	4	24	2	1	35	73	13	0	8	61	8	0	2	67	23	1	320	0	0	0	0
4:15 PM	5	26	3	1	39	84	14	0	8	63	8	0	3	73	23	1	349	0	0	0	0
4:30 PM	6	22	4	1	45	98	18	0	15	68	9	0	3	78	24	1	390	0	0	0	0
4:45 PM	8	25	4	1	53	115	20	0	15	68	13	0	2	84	15	1	422	0	0	0	0
5:00 PM	9	32	4	1	57	137	22	0	15	68	13	1	2	84	17	0	460	0	0	0	0

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW Grahams Ferry Rd & SW Tooze Rd

Thursday, August 01, 2013
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:10 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	3
4:40 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Survey	0	3	0	3	1	3	0	4	1	3	0	4	0	0	3	3	14

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	1	0	1	0	1	1	0	0	1	0	0	1	1	4
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
5:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
Total Survey	0	3	0	3	1	3	0	4	1	3	0	4	0	0	3	3	14

Heavy Vehicle Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW Grahams Ferry Rd			Southbound SW Grahams Ferry Rd			Eastbound SW Tooze Rd			Westbound SW Tooze Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	1	2	2	1	3	1	0	1	0	2	2	4
PHF	0.25			0.25			0.25			0.00			0.50

By Movement	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	1	0	1	1	1	0	2	0	1	0	1	0	0	0	0	4
PHF	0.00	0.25	0.00	0.25	0.25	0.25	0.00	0.25	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.50

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Grahams Ferry Rd				Southbound SW Grahams Ferry Rd				Eastbound SW Tooze Rd				Westbound SW Tooze Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	0	2	0	2	1	2	0	3	0	0	3	3	10
4:15 PM	0	2	0	2	0	2	0	2	1	1	0	2	0	0	2	2	8
4:30 PM	0	2	0	2	0	1	0	1	1	2	0	3	0	0	2	2	8
4:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	4
5:00 PM	0	1	0	1	1	1	0	2	0	1	0	1	0	0	0	0	4

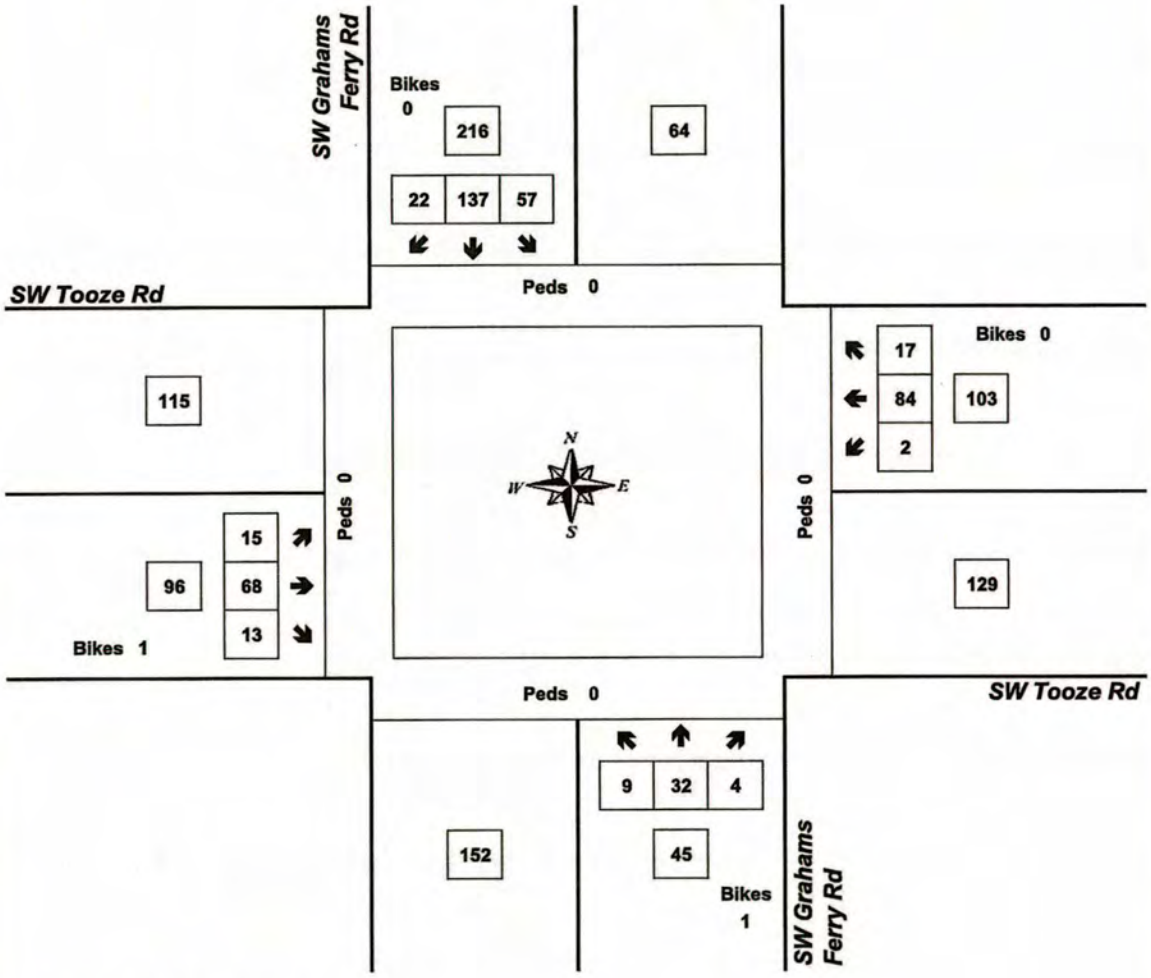
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

SW Grahams Ferry Rd & SW Tooze Rd

5:00 PM to 6:00 PM
Thursday, August 01, 2013



Approach	PHF	HV%	Volume
EB	0.83	1.0%	96
WB	0.76	0.0%	103
NB	0.80	2.2%	45
SB	0.81	0.9%	216
Intersection	0.84	0.9%	460

Count Period: 4:00 PM to 6:00 PM

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SW Grahams Ferry Rd S-O SW Grenoble St

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
08/01/13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	39	40
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	6	1	0	0	0	0	0	0	7	45	48
05:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	33	35
06:00	1	0	0	0	1	3	13	5	3	0	0	0	0	0	26	49	52
07:00	0	0	0	0	5	4	8	11	5	0	0	0	0	0	33	50	53
08:00	0	0	1	2	0	2	8	6	4	0	0	0	0	0	23	50	53
09:00	0	0	0	0	1	9	5	1	1	0	0	1	0	0	18	46	64
10:00	0	0	0	1	1	5	3	2	1	0	0	0	0	0	13	47	51
11:00	0	0	0	0	1	4	6	2	0	0	0	0	0	0	13	45	48
12 PM	4	0	0	0	2	7	2	2	0	0	0	0	0	0	17	42	47
13:00	0	0	0	2	4	2	0	1	0	0	0	0	0	0	9	39	47
14:00	0	0	2	1	0	5	8	3	0	0	0	0	0	0	19	45	48
15:00	1	0	0	2	4	5	1	0	1	0	0	0	0	0	14	40	51
16:00	0	0	0	0	5	11	0	1	1	0	0	0	0	0	18	40	50
17:00	0	0	0	1	4	14	7	9	1	0	0	0	0	0	36	47	50
18:00	0	0	1	3	5	2	6	2	0	0	0	0	0	0	19	44	47
19:00	0	0	0	0	0	4	2	1	0	0	0	0	0	0	7	45	48
20:00	0	0	0	0	0	2	4	0	1	1	0	0	0	0	8	54	57
21:00	1	0	0	0	2	2	1	2	0	0	0	0	0	1	9	46	49
22:00	0	0	0	1	0	4	0	0	0	0	0	0	0	0	5	39	40
23:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	34	35
Total	7	0	5	13	38	86	80	49	18	1	0	1	0	1	299		
Percent	2.3%	0.0%	1.7%	4.3%	12.7%	28.8%	26.8%	16.4%	6.0%	0.3%	0.0%	0.3%	0.0%	0.3%			
AM Peak	06:00		05:00	08:00	07:00	09:00	06:00	07:00	07:00			09:00			07:00		
Vol.	1		1	2	5	9	13	11	5			1			33		
PM Peak	12:00		14:00	18:00	16:00	17:00	14:00	17:00	15:00	20:00				21:00	17:00		
Vol.	4		2	3	5	14	8	9	1	1				1	36		
Grand Total	7	0	5	13	38	86	80	49	18	1	0	1	0	1	299		
Percent	2.3%	0.0%	1.7%	4.3%	12.7%	28.8%	26.8%	16.4%	6.0%	0.3%	0.0%	0.3%	0.0%	0.3%			

15th Percentile :	31 MPH
50th Percentile :	39 MPH
85th Percentile :	47 MPH
95th Percentile :	51 MPH

Statistics

10 MPH Pace Speed :	36-45 MPH
Number in Pace :	154
Percent in Pace :	51.7%
Number of Vehicles > 55 MPH :	3
Percent of Vehicles > 55 MPH :	1.0%
Mean Speed(Average) :	39 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SW Grahams Ferry Rd S-O SW Grenoble St

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
08/01/13	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	39	40
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	44	45
03:00	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**	2	49	50
04:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	43	45
05:00	0	0	0	0	1	1	1	1	0	**1**	0	0	0	0	5	56	58
06:00	0	0	0	0	2	2	1	1	0	0	0	0	0	0	6	45	48
07:00	0	0	0	0	3	**4**	**5**	**2**	**1**	0	0	0	0	0	15	46	51
08:00	0	0	0	0	1	1	1	1	0	0	0	0	0	0	4	46	49
09:00	0	0	0	0	2	3	2	0	0	0	0	0	0	0	7	42	44
10:00	0	0	**1**	**1**	2	2	4	2	0	0	0	0	0	0	12	45	48
11:00	0	**1**	0	0	**4**	4	5	2	0	0	0	0	0	0	**16**	44	47
12 PM	**3**	0	0	0	2	4	7	3	0	0	0	0	0	0	19	45	48
13:00	0	0	0	0	1	3	3	2	1	0	0	0	0	0	10	48	52
14:00	0	0	0	1	5	9	14	3	0	1	0	0	0	0	33	45	49
15:00	0	0	0	**2**	4	17	8	3	1	0	0	0	0	0	35	44	48
16:00	0	0	0	2	4	15	17	10	2	2	0	0	0	0	52	48	53
17:00	0	0	**1**	2	1	**19**	**25**	**18**	2	**4**	0	0	0	0	**72**	48	55
18:00	0	0	0	1	**9**	7	6	6	**3**	0	0	0	0	0	32	48	52
19:00	0	0	0	2	3	7	5	2	0	0	0	0	0	0	19	44	47
20:00	0	0	0	2	1	2	4	1	0	0	0	0	0	0	10	44	47
21:00	1	0	0	0	0	3	3	0	2	0	0	0	0	0	9	51	53
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
23:00	0	0	0	0	0	2	2	1	0	0	0	0	0	0	5	46	48
Total	4	1	2	13	45	107	115	59	12	8	0	0	0	1	367		
Percent	1.1%	0.3%	0.5%	3.5%	12.3%	29.2%	31.3%	16.1%	3.3%	2.2%	0.0%	0.0%	0.0%	0.3%			
AM Peak		11:00	10:00	10:00	11:00	07:00	07:00	07:00	07:00	05:00				03:00	11:00		
Vol.		1	1	1	4	4	5	2	1	1				1	16		
PM Peak	12:00		17:00	15:00	18:00	17:00	17:00	17:00	18:00	17:00					17:00		
Vol.	3		1	2	9	19	25	18	3	4					72		
Grand Total	4	1	2	13	45	107	115	59	12	8	0	0	0	1	367		
Percent	1.1%	0.3%	0.5%	3.5%	12.3%	29.2%	31.3%	16.1%	3.3%	2.2%	0.0%	0.0%	0.0%	0.3%			

15th Percentile :	33 MPH
50th Percentile :	40 MPH
85th Percentile :	46 MPH
95th Percentile :	51 MPH

Statistics

10 MPH Pace Speed :	36-45 MPH
Number in Pace :	206
Percent in Pace :	56.3%
Number of Vehicles > 55 MPH :	9
Percent of Vehicles > 55 MPH :	2.5%
Mean Speed(Average) :	40 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SW Grahams Ferry Rd S-O SW Grenoble St

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/01/13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
05:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	0	19	4	0	3	0	0	0	0	0	0	0	0	0	26
07:00	0	23	9	0	1	0	0	0	0	0	0	0	0	0	33
08:00	0	15	3	1	4	0	0	0	0	0	0	0	0	0	23
09:00	0	13	4	0	1	0	0	0	0	0	0	0	0	0	18
10:00	0	6	4	0	3	0	0	0	0	0	0	0	0	0	13
11:00	1	6	2	0	2	1	0	0	1	0	0	0	0	0	13
12 PM	0	5	5	0	2	0	0	1	1	0	0	0	0	3	17
13:00	0	6	1	0	2	0	0	0	0	0	0	0	0	0	9
14:00	0	13	5	0	0	0	0	1	0	0	0	0	0	0	19
15:00	2	9	1	0	1	0	0	0	0	0	0	0	0	1	14
16:00	0	13	1	0	2	1	0	1	0	0	0	0	0	0	18
17:00	0	28	4	0	3	0	0	1	0	0	0	0	0	0	36
18:00	0	13	3	0	1	0	0	1	1	0	0	0	0	0	19
19:00	0	4	1	0	2	0	0	0	0	0	0	0	0	0	7
20:00	0	5	3	0	0	0	0	0	0	0	0	0	0	0	8
21:00	1	5	2	0	0	0	0	0	0	0	0	0	0	1	9
22:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	4	198	54	1	27	2	0	5	3	0	0	0	0	5	299
Percent	1.3%	66.2%	18.1%	0.3%	9.0%	0.7%	0.0%	1.7%	1.0%	0.0%	0.0%	0.0%	0.0%	1.7%	
AM Peak	11:00	07:00	07:00	08:00	08:00	11:00			11:00						07:00
Vol.	1	23	9	1	4	1			1						33
PM Peak	15:00	17:00	12:00		17:00	16:00		12:00	12:00					12:00	17:00
Vol.	2	28	5		3	1		1	1					3	36
Grand Total	4	198	54	1	27	2	0	5	3	0	0	0	0	5	299
Percent	1.3%	66.2%	18.1%	0.3%	9.0%	0.7%	0.0%	1.7%	1.0%	0.0%	0.0%	0.0%	0.0%	1.7%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SW Grahams Ferry Rd S-O SW Grenoble St

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/01/13	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	2	1	0	1	0	0	1	0	0	0	0	0	0	5
06:00	0	3	1	0	2	0	0	0	0	0	0	0	0	0	6
07:00	0	11	2	0	2	0	0	0	0	0	0	0	0	0	15
08:00	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
09:00	0	4	1	0	1	0	0	1	0	0	0	0	0	0	7
10:00	0	7	2	0	2	1	0	0	0	0	0	0	0	0	12
11:00	0	10	6	0	0	0	0	0	0	0	0	0	0	0	16
12 PM	0	8	5	0	2	0	0	1	0	0	0	0	0	3	19
13:00	0	8	0	0	1	0	0	0	1	0	0	0	0	0	10
14:00	0	25	6	2	0	0	0	0	0	0	0	0	0	0	33
15:00	0	22	7	0	5	1	0	0	0	0	0	0	0	0	35
16:00	1	35	12	0	3	0	0	0	0	1	0	0	0	0	52
17:00	0	57	14	0	1	0	0	0	0	0	0	0	0	0	72
18:00	0	20	6	0	4	0	0	1	1	0	0	0	0	0	32
19:00	1	11	3	0	3	0	0	1	0	0	0	0	0	0	19
20:00	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
21:00	0	5	3	0	0	0	0	0	0	0	0	0	0	1	9
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	3	0	0	2	0	0	0	0	0	0	0	0	0	5
Total	2	248	70	2	31	2	0	5	2	1	0	0	0	4	367
Percent	0.5%	67.6%	19.1%	0.5%	8.4%	0.5%	0.0%	1.4%	0.5%	0.3%	0.0%	0.0%	0.0%	1.1%	
AM Peak		07:00	11:00		06:00	10:00		05:00							11:00
Vol.		11	6		2	1		1							16
PM Peak	16:00	17:00	17:00	14:00	15:00	15:00		12:00	13:00	16:00				12:00	17:00
Vol.	1	57	14	2	5	1		1	1	1				3	72
Grand Total	2	248	70	2	31	2	0	5	2	1	0	0	0	4	367
Percent	0.5%	67.6%	19.1%	0.5%	8.4%	0.5%	0.0%	1.4%	0.5%	0.3%	0.0%	0.0%	0.0%	1.1%	

DKS

Level of Service Descriptions

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials.[1] The following two sections provide interpretations of the analysis approaches.

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1 *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2000, Chapters 16 and 17.

UNSIGNALIZED INTERSECTIONS (Two-Way Stop Controlled)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *2000 Highway Capacity Manual* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service	Expected Delay	(Sec/Veh)
A	Little or no delay	0-10.0
B	Short traffic delay	>10.1-15.0
C	Average traffic delays	>15.1-25.0
D	Long traffic delays	>25.1-35.0
E	Very long traffic delays	>35.1-50.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 50

Source: 2000 *Highway Capacity Manual*, Transportation Research Board Washington, D.C.

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the HCM (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *2000 Highway Capacity Manual* provides the basis for these calculations.

Level of Service	Delay (secs.)	Description
A	≤10.00	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	10.1-20.0	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	20.1-35.0	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	35.1-55.0	**Approaching Unstable/Tolerable Delays:** The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	55.1-80.0	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	≥80.0	**Forced Flow/Excessive Delays:** Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C.

HCM Analysis: Existing

HCM Unsignalized Intersection Capacity Analysis
1: Grahams Ferry Rd & Tooze Rd

Villebois Future Study Area TIA
2013 Existing (PM Peak)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	70	5	60	175	45	5	25	25	35	75	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	18	84	6	72	211	54	6	30	30	42	90	36
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	265			90			587	533	87	551	509	238
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	265			90			587	533	87	551	509	238
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.4
p0 queue free %	99			95			98	93	97	89	79	95
cM capacity (veh/h)	1311			1517			325	417	977	387	439	791

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	108	337	66	169
Volume Left	18	72	6	42
Volume Right	6	54	30	36
cSH	1311	1517	545	468
Volume to Capacity	0.01	0.05	0.12	0.36
Queue Length 95th (ft)	1	4	10	41
Control Delay (s)	1.4	1.9	12.5	17.0
Lane LOS	A	A	B	C
Approach Delay (s)	1.4	1.9	12.5	17.0
Approach LOS			B	C

Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	43.0%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Signalized Intersection Capacity Analysis
8: Brown Rd & Wilsonville Rd

Villebois Future Study Area TIA
2013 Existing (PM Peak)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	400	5	25	630	260	5	5	20	200	5	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97		1.00	0.95		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (prot)	1804	1859		1797	1881	1559		1854	1538		1794	1579
Flt Permitted	0.25	1.00		0.41	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (perm)	482	1859		785	1881	1559		1854	1538		1794	1579
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	421	5	26	663	274	5	5	21	211	5	32
RTOR Reduction (vph)	0	0	0	0	0	66	0	0	20	0	0	26
Lane Group Flow (vph)	21	426	0	26	663	208	0	10	1	0	216	6
Confl. Peds. (#/hr)	3		14	14		3			17	17		
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6		6			8			4
Actuated Green, G (s)	33.7	32.8		35.5	33.7	33.7		1.8	1.8		11.4	11.4
Effective Green, g (s)	33.7	32.8		35.5	33.7	33.7		1.8	1.8		11.4	11.4
Actuated g/C Ratio	0.53	0.51		0.56	0.53	0.53		0.03	0.03		0.18	0.18
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	273	955		465	993	823		52	43		320	282
v/s Ratio Prot	0.00	0.23		c0.00	c0.35			c0.01			c0.12	
v/s Ratio Perm	0.04			0.03		0.13			0.00			0.00
v/c Ratio	0.08	0.45		0.06	0.67	0.25		0.19	0.01		0.68	0.02
Uniform Delay, d1	8.5	9.8		6.7	11.0	8.2		30.3	30.1		24.5	21.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	1.5		0.0	3.6	0.7		0.7	0.0		4.4	0.0
Delay (s)	8.5	11.3		6.7	14.5	8.9		30.9	30.2		28.8	21.6
Level of Service	A	B		A	B	A		C	C		C	C
Approach Delay (s)		11.1			12.7			30.4			27.9	
Approach LOS		B			B			C			C	

Intersection Summary				
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	57.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

DKS

HCM Analysis: Existing + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑			↕	
Volume (veh/h)	17	123	28	81	209	77	17	62	36	90	144	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	20	148	34	98	252	93	20	75	43	108	173	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	345			182			825	746	165	780	716	298
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	345			182			825	746	165	780	716	298
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.4
p0 queue free %	98			93			87	76	95	52	47	95
cM capacity (veh/h)	1226			1405			152	306	885	225	325	732

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	202	442	139	320
Volume Left	20	98	20	108
Volume Right	34	93	43	39
cSH	1226	1405	324	300
Volume to Capacity	0.02	0.07	0.43	1.07
Queue Length 95th (ft)	1	6	51	307
Control Delay (s)	0.9	2.2	24.2	109.3
Lane LOS	A	A	C	F
Approach Delay (s)	0.9	2.2	24.2	109.3
Approach LOS			C	F

Intersection Summary			
Average Delay	35.8		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	35	71	240
Demand Flow Rate, veh/h	35	71	240
Vehicles Circulating, veh/h	71	66	0
Vehicles Exiting, veh/h	66	174	106
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	4.0	5.1
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	T	LT
Assumed Moves	LR	T	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	35	71	240
Cap Entry Lane, veh/h	1052	1058	1130
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	35	71	240
Cap Entry, veh/h	1052	1058	1130
V/C Ratio	0.033	0.067	0.212
Control Delay, s/veh	3.7	4.0	5.1
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	283	637	228
Demand Flow Rate, veh/h	301	660	239
Vehicles Circulating, veh/h	281	96	196
Vehicles Exiting, veh/h	475	339	386
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.7	13.1	6.8
Approach LOS	A	B	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	301	660	239
Cap Entry Lane, veh/h	853	1027	929
Entry HV Adj Factor	0.940	0.966	0.954
Flow Entry, veh/h	283	637	228
Cap Entry, veh/h	802	991	886
V/C Ratio	0.353	0.643	0.257
Control Delay, s/veh	8.7	13.1	6.8
LOS	A	B	A
95th %tile Queue, veh	2	5	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	22	102	179	22	5	198	4	105	8	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.88		1.00	0.97		1.00	0.86		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1665		1687	1851		1805	1516		1801	1900	
Flt Permitted		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1665		1687	1851		1805	1516		1801	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	24	112	197	24	5	218	4	115	9	4	0
RTOR Reduction (vph)	0	97	0	0	3	0	0	90	0	0	0	0
Lane Group Flow (vph)	0	39	0	197	26	0	218	29	0	9	4	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		5.2		9.1	18.3		8.3	8.5		0.9	1.1	
Effective Green, g (s)		5.2		9.1	18.3		8.3	8.5		0.9	1.1	
Actuated g/C Ratio		0.13		0.23	0.46		0.21	0.21		0.02	0.03	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218		386	853		377	324		40	52	
v/s Ratio Prot		c0.02		c0.12	0.01		c0.12	c0.02		0.00	0.00	
v/s Ratio Perm												
v/c Ratio		0.18		0.51	0.03		0.58	0.09		0.23	0.08	
Uniform Delay, d1		15.3		13.4	5.9		14.1	12.5		19.1	18.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		1.1	0.0		2.1	0.1		2.9	0.6	
Delay (s)		15.7		14.5	5.9		16.3	12.6		21.9	19.4	
Level of Service		B		B	A		B	B		C	B	
Approach Delay (s)		15.7			13.4			15.0			21.1	
Approach LOS		B			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	45.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	444	5	25	693	508	5	5	20	331	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97		1.00	0.95		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (prot)	1805	1859		1800	1881	1558		1854	1536		1793	1580
Flt Permitted	0.14	1.00		0.34	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (perm)	262	1859		641	1881	1558		1854	1536		1793	1580
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	467	5	26	729	535	5	5	21	348	5	33
RTOR Reduction (vph)	0	1	0	0	0	138	0	0	20	0	0	24
Lane Group Flow (vph)	21	471	0	26	729	397	0	10	1	0	353	9
Confl. Peds. (#/hr)	3		14	14		3			17	17		
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6		6			8			4
Actuated Green, G (s)	30.8	29.0		30.8	29.0	29.0		1.8	1.8		17.2	17.2
Effective Green, g (s)	30.8	29.0		30.8	29.0	29.0		1.8	1.8		17.2	17.2
Actuated g/C Ratio	0.47	0.44		0.47	0.44	0.44		0.03	0.03		0.26	0.26
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	164	819		331	829	686		50	42		468	413
v/s Ratio Prot	c0.00	0.25		0.00	c0.39			c0.01			c0.20	
v/s Ratio Perm	0.06			0.03		0.25			0.00			0.01
v/c Ratio	0.13	0.58		0.08	0.88	0.58		0.20	0.01		0.75	0.02
Uniform Delay, d1	12.9	13.8		10.1	16.8	13.8		31.3	31.1		22.4	18.0
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	2.9		0.0	12.8	3.5		0.7	0.0		6.0	0.0
Delay (s)	13.0	16.7		10.1	29.6	17.3		32.0	31.2		28.4	18.1
Level of Service	B	B		B	C	B		C	C		C	B
Approach Delay (s)		16.6			24.1			31.5			27.5	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	68.4%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Analysis: Existing + Stage II + Project

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↔	
Volume (veh/h)	17	123	32	95	209	77	19	69	44	90	155	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	20	148	39	114	252	93	23	83	53	108	187	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	345			187			867	782	167	830	755	298
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	345			187			867	782	167	830	755	298
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.4
p0 queue free %	98			92			82	71	94	45	39	95
cM capacity (veh/h)	1226			1400			125	288	882	196	305	732

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	207	459	159	334
Volume Left	20	114	23	108
Volume Right	39	93	53	39
cSH	1226	1400	299	274
Volume to Capacity	0.02	0.08	0.53	1.22
Queue Length 95th (ft)	1	7	73	389
Control Delay (s)	0.9	2.5	30.0	165.8
Lane LOS	A	A	D	F
Approach Delay (s)	0.9	2.5	30.0	165.8
Approach LOS			D	F

Intersection Summary				
Average Delay		53.0		
Intersection Capacity Utilization		62.0%	ICU Level of Service	B
Analysis Period (min)		15		

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	43	94	273
Demand Flow Rate, veh/h	43	94	273
Vehicles Circulating, veh/h	90	66	8
Vehicles Exiting, veh/h	70	215	125
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.8	4.2	5.5
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	43	94	273
Cap Entry Lane, veh/h	1033	1058	1121
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	43	94	273
Cap Entry, veh/h	1033	1058	1121
V/C Ratio	0.042	0.089	0.244
Control Delay, s/veh	3.8	4.2	5.5
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	15	50	11	26	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	17	56	12	29	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	197	62			68	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197	62			68	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			98	
cM capacity (veh/h)	781	1009			1546	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	68	107
Volume Left	7	0	29
Volume Right	17	12	0
cSH	931	1700	1546
Volume to Capacity	0.03	0.04	0.02
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.0	0.0	2.1
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	2.1
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	293	666	235
Demand Flow Rate, veh/h	312	690	246
Vehicles Circulating, veh/h	295	96	207
Vehicles Exiting, veh/h	491	357	400
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.1	14.1	6.9
Approach LOS	A	B	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	312	690	246
Cap Entry Lane, veh/h	841	1027	919
Entry HV Adj Factor	0.939	0.965	0.955
Flow Entry, veh/h	293	666	235
Cap Entry, veh/h	790	991	878
V/C Ratio	0.371	0.672	0.268
Control Delay, s/veh	9.1	14.1	6.9
LOS	A	B	A
95th %tile Queue, veh	2	5	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	26	105	179	29	5	201	4	105	8	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.88		1.00	0.98		1.00	0.86		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1672		1687	1861		1805	1516		1801	1900	
Flt Permitted		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1672		1687	1861		1805	1516		1801	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	29	115	197	32	5	221	4	115	9	4	0
RTOR Reduction (vph)	0	100	0	0	3	0	0	90	0	0	0	0
Lane Group Flow (vph)	0	44	0	197	34	0	221	29	0	9	4	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		5.3		9.1	18.4		8.3	8.5		0.9	1.1	
Effective Green, g (s)		5.3		9.1	18.4		8.3	8.5		0.9	1.1	
Actuated g/C Ratio		0.13		0.23	0.46		0.21	0.21		0.02	0.03	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		222		385	860		376	323		40	52	
v/s Ratio Prot		c0.03		c0.12	0.02		c0.12	c0.02		0.00	0.00	
v/s Ratio Perm												
v/c Ratio		0.20		0.51	0.04		0.59	0.09		0.23	0.08	
Uniform Delay, d1		15.4		13.4	5.9		14.2	12.5		19.1	18.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		1.2	0.0		2.3	0.1		2.9	0.6	
Delay (s)		15.8		14.6	5.9		16.6	12.7		22.0	19.5	
Level of Service		B		B	A		B	B		C	B	
Approach Delay (s)		15.8			13.2			15.2			21.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	450	5	25	704	519	5	5	20	337	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97		1.00	0.95		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (prot)	1805	1859		1800	1881	1558		1854	1536		1793	1580
Flt Permitted	0.14	1.00		0.33	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (perm)	263	1859		622	1881	1558		1854	1536		1793	1580
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	474	5	26	741	546	5	5	21	355	5	33
RTOR Reduction (vph)	0	1	0	0	0	140	0	0	20	0	0	24
Lane Group Flow (vph)	21	478	0	26	741	406	0	10	1	0	360	9
Confl. Peds. (#/hr)	3		14	14		3			17	17		
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6		6			8			4
Actuated Green, G (s)	30.7	28.9		30.7	28.9	28.9		1.8	1.8		17.7	17.7
Effective Green, g (s)	30.7	28.9		30.7	28.9	28.9		1.8	1.8		17.7	17.7
Actuated g/C Ratio	0.46	0.44		0.46	0.44	0.44		0.03	0.03		0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	163	811		320	821	680		50	41		479	422
v/s Ratio Prot	c0.00	0.26		0.00	c0.39			c0.01			c0.20	
v/s Ratio Perm	0.06			0.04		0.26			0.00			0.01
v/c Ratio	0.13	0.59		0.08	0.90	0.60		0.20	0.01		0.75	0.02
Uniform Delay, d1	13.4	14.2		10.4	17.3	14.2		31.5	31.3		22.2	17.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	3.1		0.0	15.1	3.8		0.7	0.0		5.8	0.0
Delay (s)	13.5	17.3		10.4	32.4	18.1		32.2	31.4		28.1	17.9
Level of Service	B	B		B	C	B		C	C		C	B
Approach Delay (s)		17.1			26.0			31.7			27.2	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

DKS

HCM Analysis: Existing + Stage II + Project + Additional Villebois Trips

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	17	125	35	98	211	83	22	77	47	96	163	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	20	151	42	118	254	100	27	93	57	116	196	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	354			193			890	803	172	856	774	304
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	354			193			890	803	172	856	774	304
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.4
p0 queue free %	98			92			76	67	94	35	34	95
cM capacity (veh/h)	1216			1393			110	279	877	178	296	726

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	213	472	176	351
Volume Left	20	118	27	116
Volume Right	42	100	57	39
cSH	1216	1393	275	257
Volume to Capacity	0.02	0.08	0.64	1.36
Queue Length 95th (ft)	1	7	100	468
Control Delay (s)	0.9	2.6	38.6	224.9
Lane LOS	A	A	E	F
Approach Delay (s)	0.9	2.6	38.6	224.9
Approach LOS			E	F

Intersection Summary					
Average Delay			71.8		
Intersection Capacity Utilization			68.5%	ICU Level of Service	C
Analysis Period (min)			15		

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	51	96	284
Demand Flow Rate, veh/h	51	96	284
Vehicles Circulating, veh/h	92	75	8
Vehicles Exiting, veh/h	79	217	135
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.9	4.2	5.6
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	51	96	284
Cap Entry Lane, veh/h	1031	1048	1121
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	51	96	284
Cap Entry, veh/h	1031	1048	1121
V/C Ratio	0.049	0.092	0.253
Control Delay, s/veh	3.9	4.2	5.6
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	15	50	11	26	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	17	56	12	29	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	197	62			68	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197	62			68	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			98	
cM capacity (veh/h)	781	1009			1546	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	68	107
Volume Left	7	0	29
Volume Right	17	12	0
cSH	931	1700	1546
Volume to Capacity	0.03	0.04	0.02
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.0	0.0	2.1
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	2.1
Approach LOS	A		

Intersection Summary			
Average Delay		2.2	
Intersection Capacity Utilization		21.8%	ICU Level of Service A
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	307	696	259
Demand Flow Rate, veh/h	327	721	271
Vehicles Circulating, veh/h	315	101	216
Vehicles Exiting, veh/h	507	386	426
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.7	15.4	7.4
Approach LOS	A	C	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	327	721	271
Cap Entry Lane, veh/h	825	1021	910
Entry HV Adj Factor	0.939	0.966	0.956
Flow Entry, veh/h	307	696	259
Cap Entry, veh/h	775	987	870
V/C Ratio	0.397	0.706	0.298
Control Delay, s/veh	9.7	15.4	7.4
LOS	A	C	A
95th %tile Queue, veh	2	6	1

HCM Signalized Intersection Capacity Analysis
7: Kinsman Rd & Barber St

Villebois Future Study Area TIA
2013 Existing + Project + Stage II + Adtl Villebois (PM Peak)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	28	128	179	31	5	226	4	105	8	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.88		1.00	0.98		1.00	0.86		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1666		1687	1863		1805	1516		1801	1900	
Flt Permitted		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1666		1687	1863		1805	1516		1801	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	31	141	197	34	5	248	4	115	9	4	0
RTOR Reduction (vph)	0	122	0	0	3	0	0	90	0	0	0	0
Lane Group Flow (vph)	0	50	0	197	36	0	248	29	0	9	4	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		5.4		9.1	18.5		8.4	8.6		0.9	1.1	
Effective Green, g (s)		5.4		9.1	18.5		8.4	8.6		0.9	1.1	
Actuated g/C Ratio		0.14		0.23	0.46		0.21	0.21		0.02	0.03	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		224		383	861		379	325		40	52	
v/s Ratio Prot		c0.03		c0.12	0.02		c0.14	c0.02		0.00	0.00	
v/s Ratio Perm												
v/c Ratio		0.22		0.51	0.04		0.65	0.09		0.23	0.08	
Uniform Delay, d1		15.4		13.5	5.9		14.5	12.6		19.2	19.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5		1.2	0.0		4.0	0.1		2.9	0.6	
Delay (s)		15.9		14.7	5.9		18.5	12.7		22.1	19.6	
Level of Service		B		B	A		B	B		C	B	
Approach Delay (s)		15.9			13.2			16.6			21.3	
Approach LOS		B			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	48.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
8: Brown Rd & Wilsonville Rd

Villebois Future Study Area TIA
2013 Existing + Project + Stage II + Adtl Villebois (PM Peak)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	450	5	25	704	546	5	5	20	362	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97		1.00	0.95		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (prot)	1805	1859		1800	1881	1558		1854	1535		1793	1581
Flt Permitted	0.14	1.00		0.31	1.00	1.00		0.98	1.00		0.95	1.00
Satd. Flow (perm)	266	1859		594	1881	1558		1854	1535		1793	1581
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	474	5	26	741	575	5	5	21	381	5	33
RTOR Reduction (vph)	0	1	0	0	0	151	0	0	20	0	0	24
Lane Group Flow (vph)	21	478	0	26	741	424	0	10	1	0	386	9
Confl. Peds. (#/hr)	3		14	14		3			17	17		
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6		6			8			4
Actuated Green, G (s)	30.4	28.6		30.6	28.7	28.7		1.9	1.9		19.4	19.4
Effective Green, g (s)	30.4	28.6		30.6	28.7	28.7		1.9	1.9		19.4	19.4
Actuated g/C Ratio	0.45	0.42		0.45	0.42	0.42		0.03	0.03		0.29	0.29
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	160	784		301	796	659		51	43		513	452
v/s Ratio Prot	c0.00	0.26		0.00	c0.39			c0.01			c0.22	
v/s Ratio Perm	0.06			0.04		0.27			0.00			0.01
v/c Ratio	0.13	0.61		0.09	0.93	0.64		0.20	0.01		0.75	0.02
Uniform Delay, d1	14.5	15.3		11.2	18.6	15.5		32.2	32.0		22.0	17.4
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	3.5		0.0	18.9	4.8		0.7	0.0		5.5	0.0
Delay (s)	14.6	18.8		11.2	37.5	20.3		32.9	32.1		27.5	17.4
Level of Service	B	B		B	D	C		C	C		C	B
Approach Delay (s)		18.6			29.6			32.3			26.7	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	70.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

DKS

Master Plan Amendment Memo

MEMORANDUM

DKS
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REGISTERED PROFESSIONAL ENGINEER
56267
OREGON
July 9, 2002
SCOTT M. MANSUR
EXPIRES: 12-31-2014

DATE: August 7, 2013

TO: Steve Adams, P.E., City of Wilsonville
Chris Neamtzu, City of Wilsonville
Dan Pauly, City of Wilsonville

FROM: Scott Mansur, P.E., PTOE SM

SUBJECT: **Villebois Urban Village Master Plan Amendment Transportation Summary** P13003-013

The purpose of the memorandum is to evaluate transportation related aspects of the revised Villebois Village Master Plan dated August, 2010 as they relate to integrating the Polygon Northwest Proposal to include the 42.8 acres of the former Living Enrichment Center (LEC) that was previously considered as a "Future Study Area". The transportation review addresses the following items:

- Street connectivity
- Nature trail connectivity
- Street and trail section update
- Parking adjacent to SROZ areas
- North/south connectivity
- Enhanced pedestrian crossings

The following section provides a detailed review and associated comments in regards to the Villebois Master Plan document as they relate to the LEC expansion.

Street Connectivity [Chapter 5, page 69, Continuity of Streets and Trails and Figure 7]

Street connections are of utmost importance when considering future connectivity to the LEC property for all modes of travel. The current adopted Street Plan Figure 7 identified Villebois Drive as the access road to the LEC property and showed a street stub off of it in the southwest corner of Villebois. The applicant shows this connection on their site plan via SW Amalfi Lane as well as their revised Villebois Master Plan Figure 7 dated July 26, 2013. This street connection will be critical to provide connectivity between Villebois Village and the LEC property for all modes. The City's adopted Transportation System Plan identified the need for Local Street spacing of 300 to 500 feet.

Recommendation: Figure 7 should be updated to show the planned connectivity as identified by the applicant. Add a second paragraph to the Continuity of Streets and Trails subsection in Chapter 5 as follows:

> *Provide local/residential street connections within Villebois every 300' to 500' to improve access between neighborhoods to encourage use of all modes of travel.*

Nature Trail Connectivity [Chapter 5, page 69, Continuity of Streets and Trails and Figure 5]

Nature trail connection stubs from SW Grenoble Street and SW San Remo Court were shown on the currently adopted Parks and Open Space Plan (Figure 5) that are located north of the LEC property. The applicant shows these nature trail connections in their revised Figure 5 dated July 26, 2013. This revised plan also shows east and south connections from the internal Villebois nature trail to the Coyote Way Trail that is adjacent to the LEC property which is appropriate. We recommend one additional connection of the Villebois nature trail to the sidewalk on SW Normandy Lane. This additional connection is shown in the Appendix.

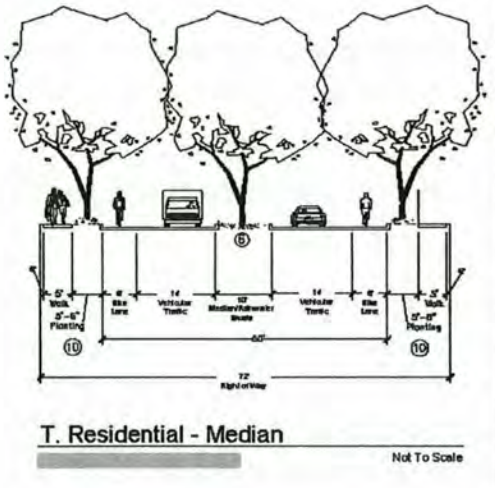
Recommendation: Figure 5 should be updated to show the planned nature trial connectivity as identified by the applicant with the addition of a trail connection to SW Normandy Lane. Add a third paragraph to the Continuity of Streets and Trails subsection in Chapter 5 as follows:

> *Provide nature trail connections between the LEC property and SW San Remo Court, SW Grenoble Street, and Normandy Lane. Also provide east and south trail connections from the LEC property to the Coyote Way Trail within Grahams Oak Nature Park.*

Street and Trail Section- Residential Median Street "T" [Chapter 5, Figure 9B]

The applicant has recommended the addition of a Residential Median Street "T" that would include a 10' center median, 14' travel lanes and six foot bike lanes. DKS has reviewed this street section as shown and finds it acceptable. The 20' of pavement between median and curb (14' travel lane plus six foot bike lane) would meet the Uniform Fire Code requirements.

Recommendation: Figure 9B should be updated as identified by the applicant to include Residential Median



Recommended Residential Street "T"

DKS

Street "T".

Parking Adjacent to Significant Resource Overlay Zones (SROZ) [Chapter 5, Section 3]

In order to protect visibility of the adjacent natural open spaces, on-street parking should be restricted on a portion of the public street that is directly adjacent to SROZ areas. For example, parking is not currently allowed on the south side of SW Normandy Lane that is directly adjacent to the Grahams Oak Nature Park. Parking is allowed on the north side that is adjacent to residential houses.

Recommendation: Add an additional bullet on page 73 of Section 5.3 as follows:

- *In order to protect visibility of open spaces, on-street parking should not be allowed on the side of public streets that are directly adjacent to SROZ areas. For example, parking would not be allowed on the south side of SW Normandy Lane since it is directly adjacent to the Grahams Oak Nature Park.*

Villebois Drive North/South Connectivity [Chapter 5, Compliance Analysis]

Villebois Drive is a key roadway that provides neighborhood connectivity between southwest and northeast Villebois. The Villebois street network was planned in a way to minimize traffic volumes on Villebois Drive (by providing parallel alternative routes) while still maintaining north/south and east/west neighborhood connectivity. This roadway should be operated and maintained in a manner to encourage north/south neighborhood travel. Any design treatments that would discourage neighborhood connectivity should not be considered.

Recommendations: Add an additional bullet to the METHODOLOGY section on page 63 and add additional section to the end of the Compliance Analysis subsection on page 70 as follows:

Methodology (add bullet to end of page 63)

- Provides adequate north/south through connectivity for local traffic with Villebois Drive and the Loop Road

North/South Neighborhood Connectivity (page 70)

Villebois Drive is a key roadway that provides neighborhood connectivity between southwest and northeast Villebois. This roadway should be operated and maintained in a manner to encourage north/south neighborhood travel. Any design modifications that would discourage north/south neighborhood connectivity should not be considered.

DKS

Enhanced Pedestrian and Bicycle Crossings [Chapter 5, Compliance Analysis]

Where trails and pathways cross public streets, street crossings can create barriers in the transportation system for pedestrians and bicycles. Enhanced pedestrian crossings (medians, curb extensions, raised pedestrian crossing, signing and markings) should be considered where applicable to facilitate safe bicycle and pedestrian movements.

Enhanced Pedestrian and Bicycle Crossing Example

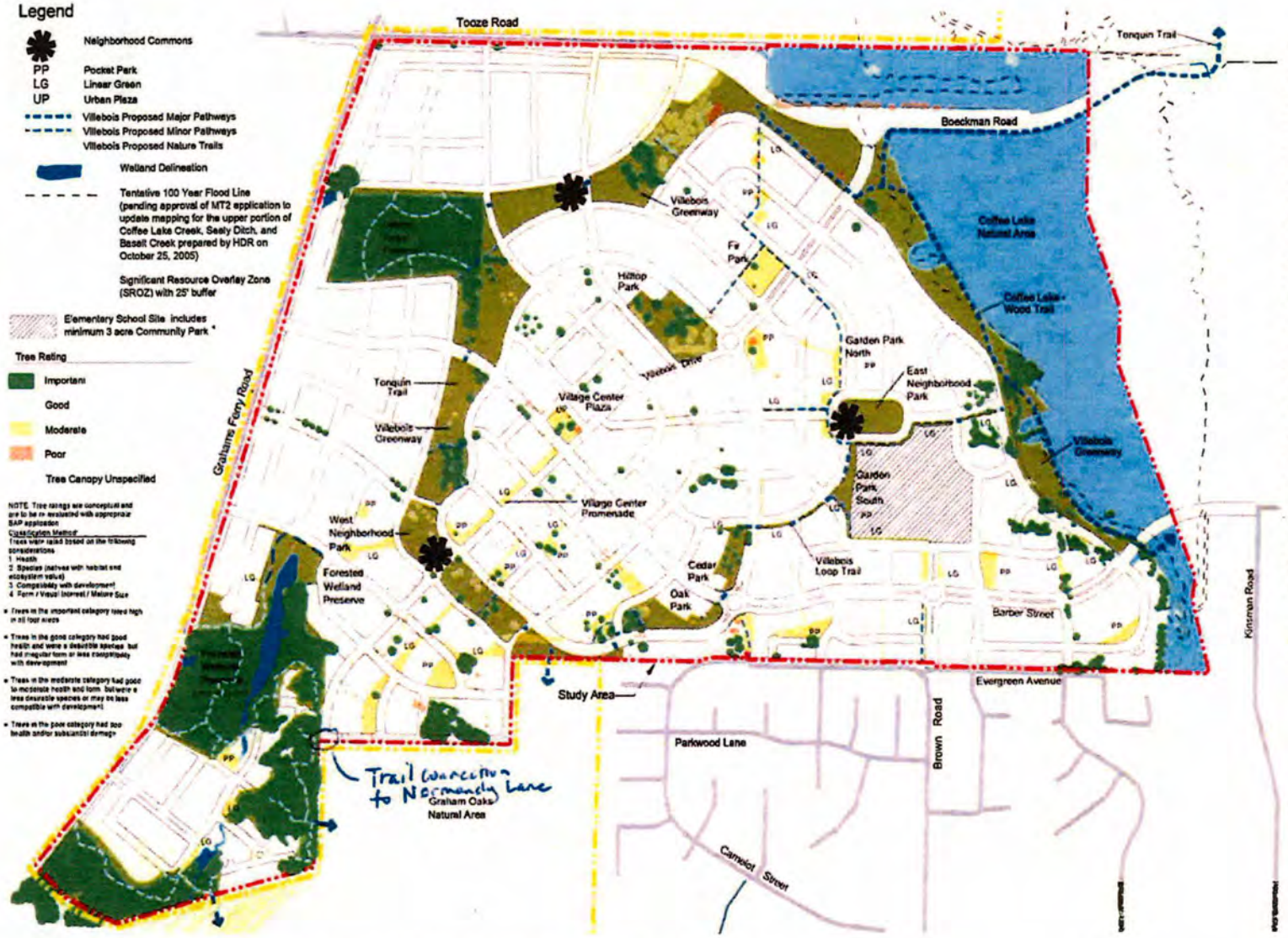
Recommendation: Add the following to the COMPLIANCE ANALYSIS section after the Continuity of Streets and Trails subsection in Chapter 5 as follows:

> ***Enhanced Pedestrian and Bicycle Crossings***
> *Provide enhanced pedestrian and bicycle crossings for high use pedestrian crossings (i.e. trails and pathway). Enhanced crossings can include but are not limited to medians, curb extensions, raised pedestrian crossings, signing and markings.*
>
> *Implementation: Placement of enhanced pedestrian crossings shall be reviewed and approved by City staff through the Specific Area Plan (SAP) and Preliminary Development Plan (PDP) approval process. Enhanced crossing locations should follow ODOT and FHWA guidelines to maintain consistency with state and national and practices.*

DKS

APPENDIX:

Figure 5



Neighborhood Parks - 21.83 acres
East Neighborhood Park 3.88 acres
Cedar Park - 1.20 acre
Oak Park 1.53 acres
Fir Park - 1.50 acre
(UP)Village Center Plaza - 0.52 acres
Hilltop Park - 2.00 acres
West Neighborhood Park 1.90 acres
(PP)Pocket Parks 5.00 acres
(LG)Linear Greens with Pathways- 4.05 acres
(LG)Village Center Promenade- 0.95 acres

Community Parks - minimum 3.00 Acres

Elementary School
Minimum 3 acres of park area associated with school location

Regional Parks - 33.45 acres
Villebois Greenway 33.45 acres

Open Space - 100.66 acres
Forested Wetland Preserve - 5.07 acres
Forested Wetland Preserve (Future Study Area) - 22.4 acres
Upland Forest Preserve - 10.65 acres
Coffee Lake Natural Area 62.59 acres

Total amount of Parks= 58.28 acres
Total amount of Open Space= 100.66 acres
Total amount of Parks & Open Space= 158.94 acres

Trails and Pathways - 50.38 miles
Nature Trail - 1.85 miles
Minor Path - 1.20 miles
Major Path - 2.60 miles
(Tonquin Trail/Villebois Loop Trail/ Coffee Lake-Wood Trail)
Bike Lane - 8.90 miles
Sidewalks - 34.83 miles

Park Legend

City ownership; HOA maintenance for 5 years; then city maintenance except for Special Features (Note: NP-4 and NP-6 may be in this category if restrooms and parking are provided for the community in addition to the park area shown. If not they will be owned and maintained by the HOA with public access.)

Owned and maintained by HOA with public access

Coffee Lake Open Space- To be publicly owned and maintained, with more specific responsibilities to be detailed at the time of specific O&M Agreement for the appropriate development phase(s)

0 300 600 NORTH

Parks and Open Space Plan

JULY 26, 2013

NOTES

The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations. Flood Insurance Rate Map 410025-0004-C dated February 19, 1987 shows the northerly limit of the detailed study area having an elevation of 143 (Ft NGVD). This elevation has been used to approximate the flood plain limits within the project limits. Development in and around wetlands will be done per all applicable federal, state and local wetland regulations.

DKS

Prior Villebois Trip Generation Memo

DKS

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MEMORANDUM

REGISTERED PROFESSIONAL ENGINEER
56267
OREGON
July 9, 2002
SCOTT M. MANSUR
EXPIRES: 12/31/2014

DATE: July 31, 2013

TO: Steve Adams, P.E., City of Wilsonville

FROM: Scott Mansur, P.E., PTOE
Brad Coy, P.E.
Derek Moore, E.I.T

SUBJECT: **Villebois Urban Village SAP North Area 1B Transportation Study** P13003-009

This memorandum evaluates trip generation for the entire Villebois Urban Village (i.e., Central, East, South, and North areas) based on current land use information and assumptions. Since the Master Plan approval and subsequent legislative amendments, the land use within the Villebois area has been modified, including changes to the number and type of residential units as well as moving the Lowrie Primary School from Specific Area Plan (SAP) North to SAP East. This memorandum was prepared to help understand how the currently proposed trip generation levels compare with previously approved trip generation levels for the Villebois Urban Village as a whole as well as for each SAP area.

The following sections of this memorandum document the previously approved and currently proposed land use and trip generation, as well as provide a comparison between the two. The SAP North site plan is also evaluated and recommendations are provided.

Villebois Land Use

The *Villebois Master Plan* was amended in 2005 to approve the Villebois Urban Village for 2,473 residential units, 35,000 square feet of commercial space, and a 47,000 sq. ft. elementary school (see Table 1). These land uses were estimated to generate 1,907 p.m. peak hour trips, and this trip level was the basis for the Villebois Village transportation impact study.[1]

Table 1: Approved Land Use for Villebois Urban Village Legislative Amendment April 26, 2005

SAP	Single Family Units	Condo/Town House Units	Apartment Units	Retail (KSF)	School	TOTAL
East	568	87	-	5	-	655
Central	9	500	501	20	-	1,010
North	252	71	30	5	47 (KSF)	353
South	324	121	10	5	-	455
Total	**1,153**	**779**	**541**	**35**	**47 (KSF)**	**2,473**

[1] *Villebois Urban Village Master Plan Amendment Transportation Study*, DKS Associates, June 2005

Since approval of the 2005 legislative amendment, these land use estimates have been modified and many units have been constructed. Most notably, there has been an increase in the number of residential units along with a shift in the number of units constructed as detached homes versus attached homes. In addition, the Lowrie Primary School has been constructed in SAP East instead of its original location in SAP North. Table 2 shows the updated land use estimates, which includes 57 residential units more than what was previously approved.

Table 2: Currently Proposed Lane Use for Villebois Urban Village

SAP	Single Family Units	Condo/Town House Units	Apartment Units	Retail (KSF)	School	TOTAL
East	534	42	-	-	500 students	576
Central	49	459	501	33	-	1,009
North	423	31	10	-	-	464
South	357	103	21	-	-	481
Total	**1,363**	**635**	**532**	**33**	**500 students**	**2,530**
Net Change	**+210**	**-144**	**-9**	**-2**	**-**	**+57**

Proposed Villebois Trip Generation

New trip generation estimates were performed for the currently proposed Villebois land use based on the original trip rates. As shown in Table 3, the Villebois Urban Village is now expected to generate 2,096 (1,333 in, 763 out) p.m. peak hour new external trips.

Table 3: Current Villebois Trip Generation

Land Use (ITE Code)	Size	Average Trip Generation Rate	Number of New Trips		
			In	Out	Total
Single Family Units (210)	1,363 units	1.01 trips/unit	868	509	1377
Condo/Townhome (230)	635 units	0.52 trips/unit	221	109	330
Apartments (220)	532 units	0.62 trips/unit	215	115	330
Shopping Center (820)	33 KSF	3.75 trips/KSF	60	64	124
School	500 students	0.15 trips/student	39	36	75
		Total Trips	**1,403**	**833**	**2,236**
		Internal Trips[a]	*-51*	*-51*	*-102*
		Pass-By Trips[b]	*-19*	*-19*	*-38*
		Net New Trips	**1,333**	**763**	**2,096**

[a] Internal trip rates from ITE's *Trip Generation Manual*, 9th Edition, 2012. 50% of school trips assumed to be internal.
[b] 34% of external shopping center trips

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Land Use/Trip Generation Comparison

Table 4 compares the previously approved and currently proposed land use and trip generation findings for the entire Villebois Urban Village. As shown, the Villebois area as now proposed would include an additional 57 residential units and is estimated to generate an additional 189 p.m. peak hour trips. These additional p.m. peak hour trips are a result of the overall increase in the number of units as well as a shift from attached units to detached units (detached units have a trip rate nearly double that of attached units). At the PDP level, many of these land use changes and additional trips have been approved with the assumption that fewer trips would be generated in other Villebois phases. However, this analysis shows that the proposed land use would generate more trips than what was originally approved.

Table 4: Villebois Trip Generation Comparison

Transportation Study	Study Date	Unit Count	New External Trips
Villebois Master Plan Second Legislative Amendment	April, 2005	2,473	1,907
Currently Proposed Villebois Development	May, 2013	2,530	2,096
Difference	-	**+57**	**+189**

Site Plan Evaluation

DKS reviewed the current site plan for SAP North provided by the project sponsor (see attached), and the site plan comments are summarized below:

- **Curb Extensions**: The current site plan shows curb extensions at numerous intersections. The applicant should submit AutoTurn templates to verify that emergency vehicles have adequate room to make turning maneuvers.
- **Pedestrian Pathways:** The *Villebois Master Plan* identifies several pedestrian pathways and trails throughout the Villebois North Area, including the regional Tonquin Trial. These pathways are not identified on the provided site plan; however the project sponsor should ensure that the appropriate pathways are incorporated into SAP North development. A copy of the Parks and Open Space Plan from the *Villebois Master Plan* is attached to this document for reference.

A site plan for SAP North was previously evaluated[2] and the following concerns still apply to the current site plan:

[2] *Villebois SAP North PDP 1 Transportation Review*, DKS Associates, September 2007

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- **Firenze Street Extension to Grahams Ferry:** The approved Villebois Master Plan previously showed Firenze Street extending to Grahams Ferry Road. The current site plan does not show this extension, but it does show a new connection to Grahams Ferry Road made instead by Oslo Lane; Oslo Lane is located approximately 200 feet north of Firenze Street and 600 feet south of Tooze Road. Even though the Oslo Lane extension would still meet required spacing standards along Grahams Ferry Road, the extension of Firenze Street would provide better internal circulation within SAP North and better access spacing on Grahams Ferry Road between Tooze Road and Barber Street.
- **Firenze Street or Oslo Lane Left Turn Lane**: Whether the Grahams Ferry Road connection from Firenze Street or Oslo Lane is considered (see site plan comment #1), a left turn pocket should be provided for turn movements onto Grahams Ferry Road. Adequate street width for the left turn lane can be obtained by removing the on-street parking and internal curb extensions.
- **Iceland Lane/Paris Avenue Connection to Firenze Street:** The approved Villebois Master Plan showed a residential street connection between Firenze Street and Barcelona Street. The current site plan shows two offset residential streets (Paris Avenue and Iceland Lane). The Paris Avenue connection to Firenze Street is aligned with an alley rather than being aligned with Iceland Lane. The proposed street network may encourage additional through traffic on the alley which is not desirable. Paris Avenue and Iceland Lane should be aligned to provide a residential connector street between Firenze Street and Barcelona Street.

Summary

A summary of key findings relating to the Villebois Urban Village transportation review include the following:

- The Villebois Urban Village is now proposed to include 2,530 residential units, 33,000 square feet of commercial space, and a 500 student elementary school. These land uses are estimated to generate 2,096 p.m. peak hour trips. The original Villebois Urban Village traffic impact analysis was based on the assumption of 1,907 p.m. peak hour trips. Therefore, the current proposal includes 189 p.m. peak hour trips more than what was approved in the *Villebois Master Plan Legislative Amendment*. At the PDP level, many of these land use changes and additional trips have been approved with the assumption that fewer trips would be generated in other Villebois phases.
- Various site plan concerns should be resolved as indicated in the previous section of this memorandum.

Please let us know if you have any questions or comments.

Morgan Holen & Associates, LLC
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Villebois SAP South Plan Area 2 – Wilsonville, Oregon
Tree Maintenance and Protection Plan
September 10, 2013
Revised: January 17, 2014

MHA1314

Purpose

This Tree Maintenance and Protection Plan for the Villebois Specific Area Plan (SAP) South, Plan Area 2 project located in Wilsonville, Oregon, is provided pursuant to City of Wilsonville Development Code, Section 4.610.40. This arborist report describes the existing trees located on the project site, as well as recommendations for tree removal, retention, mitigation, and protection. This report is based on observations made by International Society of Arboriculture (ISA) Certified Arborists Morgan Holen (PN-6145A) and Walter Knapp (PN-0497A) during a site visit conducted on June 4, 2013 and additional site visits by Morgan during July and August 2013. A complete description of individual trees is provided in the enclosed tree inventory data.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by Polygon Northwest Company to verify existing inventory data (from 2007) for individual trees measuring six inches and larger in diameter and to develop a tree maintenance and protection plan for the project. The site is planned for residential development. A site plan was provided by Pacific Community Design illustrating the location of trees and tree survey point numbers, and potential construction impacts.

Visual Tree Assessment (VTA) was performed on individual trees located within and adjacent to the proposed construction area and not across the entire site. VTA is the standard process developed by the ISA whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of potential construction impacts and treatment recommendations include retain, remove, and likely to be removed. Following the inventory fieldwork, we coordinated with Pacific Community Design to discuss and finalize treatment recommendations. Treatment recommendations were modified as needed on December 18, 2013 and January 10 and 17, 2014, based on revised site plans provided by Pacific Community Design.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to this site.

General Description

The Villebois SAP South, Plan Area 2 project site is the former Living Enrichment Center site, a retreat center that closed in 2004. The site is heavily treed, but included a large building in the center of the site with other structures scattered across the site; demolition work is in progress. Much of the forest is relatively natural and will be protected during site development. The individual tree inventory was limited to trees potentially impacted by construction based on the proposed site plan and numerous other trees will be preserved during site development.

The groves are dominated by Douglas-firs (*Pseudotsuga menziesii*) with scattered Oregon white oaks (*Quercus garryana*) which are naturally being outcompeted by the faster growing Douglas-firs. In wetter

portions of the site, red alder (*Alnus rubra*), Scouler's willow (*Salix scouleriana*), and Oregon ash (*Fraxinus latifolia*) are more common. Just thirty non-native and invasive trees were inventoried, including sweet cherry (*Prunus avium*), Siberian elm (*Ulmus pumila*), European white birch (*Betula pendula*), English hawthorn (*Crataegus monogyna*), and Norway maple (*Acer pseudoplatanus*).

The trees are undergoing natural forest stand succession, whereby trees compete with one another and some grow to dominate and suppress others. Trees are most sustainable if retained intact within groups or larger groves, with selective removal of trees for the purposes of construction and because of poor or hazardous condition. In addition, selective removal of Douglas-firs growing directly adjacent to Oregon white oaks could help to enhance the health and viability of oaks in areas where trees will be preserved in their relatively natural condition.

In all, 811 trees measuring 6-inches and larger in diameter were inventoried including 30 tree species. Table 1 provides a summary of the count of trees by species. A complete description of individual trees is provided in the enclosed tree inventory data.

Table 1. Count of Trees by Species – Villebois SAP S Plan Area 2, Wilsonville, OR.

Common Name	Species Name	Total	%
Austrian pine	*Pinus nigra*	1	0.12%
bigleaf maple	*Acer macrophyllum*	20	2.47%
black cottonwood	*Populus trichocarpa*	5	0.62%
cedar	unknown	2	0.25%
copper beech	*Fagus sylvatica*	1	0.12%
dawn redwood	*Metasequoia glyptostroboides*	2	0.25%
Deciduous	unknown	22	2.71%
Douglas-fir	*Pseudotsuga menziesii*	330	40.69%
English hawthorn	*Crataegus monogyna*	1	0.12%
European white birch	*Betula pendula*	4	0.49%
grand fir	*Abies grandis*	3	0.37%
incense-cedar	*Calocedrus decurrens*	4	0.49%
Leyland cypress	*Cupressocyparis leylandii*	1	0.12%
lodgepole pine	*Pinus contorta*	19	2.34%
madrone	*Arbutus menziesii*	2	0.25%
magnolia	*Magnolia* spp.	2	0.25%
Maple	*Acer* spp.	3	0.37%
Norway maple	*Acer platanoides*	1	0.12%
Oregon ash	*Fraxinus latifolia*	19	2.34%
Oregon white oak	*Quercus garryana*	94	11.59%
Pine	*Pinus* spp.	62	7.64%
ponderosa pine	*Pinus ponderosa*	1	0.12%
red alder	*Alnus rubra*	91	11.22%
Scotch pine	*Pinus sylvestris*	2	0.25%
Scouler's willow	*Salix scouleriana*	73	9.00%
Siberian elm	*Ulmus pumila*	6	0.74%
spruce	*Picea* spp.	3	0.37%
sweet cherry	*Prunus avium*	18	2.22%
sweetgum	*Liquidambar styraciflua*	2	0.25%
western redcedar	*Thuja plicata*	17	2.10%
Total		**811**	**100%**

The tree inventory includes 94 (11.6%) Oregon white oaks, but no native yews (*Taxus* spp.) or any species listed by either the state or federal government as rare or endangered were found on the site.

Tree Plan Recommendations

As described in the enclosed tree inventory data, individual trees were assigned a general condition rating as defined by the Villebois Specific Area Plan South Community Elements Book:

P: Poor Condition
M: Moderate Condition
G: Good Condition
I: Important Condition

Of the 811 inventoried trees, 279 (34.4%) trees are recommended for retention and may require special protection during construction, 512 (63.1%) trees are recommended for removal because of poor and hazardous condition or for the purposes of construction, and the remaining 20 (2.5%) trees are recommended for protection but are likely to be removed for the purposes of construction. Table 2 provides a summary of the count of trees by general condition rating and treatment recommendation.

Table 2. Count of Trees by Treatment Recommendation and General Condition Rating.

	General Condition Rating				Total
Treatment Recommendation	**P**	**M**	**G**	**I**	
Retain	109	101	49	20	**279** (34.4%)
Remove	286	121	101	4	**512** (63.1%)
Likely to be Removed	7	9	4	0	**20** (2.50%)
Total	**402** (50%)	**231** (28%)	**154** (19%)	**24** (3%)	**811** (100%)

The 20 trees classified as "likely to be removed", shall be accounted for as removed for the purposes of mitigation, but re-evaluated during construction in terms of long-term sustainability, and retained or removed at that time. These trees will be protected during construction, but if the arborist determines that a tree is not sustainable with construction impacts, the arborist shall submit a brief memorandum to the City documenting the change in condition to seek written authorization to proceed with removal and mitigation. If a tree is protected throughout construction, no mitigation will be required for the tree.

In addition, the enclosed tree data identifies 60 (7.4%) trees recommended for re-evaluation at the time of construction in terms of general condition, hazard potential, and safety. These trees will also be protected during construction, but if the arborist determines that a tree is not sustainable or presents a foreseeable threat of danger, the arborist shall submit a brief memorandum to the City documenting the change in condition to seek written authorization to proceed with removal and provide additional mitigation as necessary.

Where groves of trees will be preserved beyond the limits of the tree inventory, the natural area could be enhanced by removing invasive trees and plants, including English ivy (*Hedera helix*) growing up tree trunks. Relatively speaking however, invasive species are not a widespread problem across the site. Additionally, select trees could be removed to improve growing space for adjacent trees and to provide planting space for native trees, shrubs, and ground covers. Following clearing and once the site has been prepared for construction, the arborist could walk the groves of preserved trees and identify trees in poor or hazardous condition, or those competing with Oregon white oaks, and mark them for removal. A mix of native species could be replanted to increase species, age class, and structural diversity within

the groves. Standing dead trees should remain standing for wildlife habitat where safe to do so. Large woody debris may be left on site following tree removal activities to provide wildlife habitat and soil nutrients; place large wood in direct contact with the ground surface and remove small woody debris from the site to avoid fire hazard.

Mitigation Requirements

All 811 inventoried trees are greater than 6-inches in diameter, including 279 trees recommended for retention with protection throughout construction and 532 trees recommended for removal because of condition and/or construction or are likely to be removed because of construction. Removal of these 532 trees requires mitigation per Section 4.620.00; removed trees shall be replaced on a basis of one tree planted for each tree removed. Therefore, 532 trees measuring at least 2-inch in diameter shall be planted as mitigation for tree removal.

Tree Protection Standards

Trees designated for retention will need special consideration to assure their protection during construction. We highly recommend a preconstruction meeting with the owner, contractors, and project arborist to review tree protection measures and address questions or concerns on site. Tree protection measures include:

- **Fencing.** Trees to remain on site shall be protected by installation of tree protection fencing to prevent injury to tree trunks or roots, or soil compaction within the root protection area, which generally coincides with tree driplines. Fences shall be 6-foot high steel on concrete blocks or orange plastic construction fencing on metal stakes. The project arborist shall determine the exact location and type of tree protection fencing. Trees located more than 30-feet from construction activity shall not require fencing.
- **Tree Protection Zone.** Without authorization from the Project Arborist, none of the following shall occur beneath the dripline of any protected tree:
    1. Grade change or cut and fill;
    2. New impervious surfaces;
    3. Utility or drainage field placement;
    4. Staging or storage of materials and equipment; or
    5. Vehicle maneuvering.

  Root protection zones may be entered for tasks like surveying, measuring, and, sampling. Fences must be closed upon completion of these tasks.
- **Pruning.** Pruning may be needed to provide for overhead clearance and to remove dead and defective branches for safety. The project arborist can help identify where pruning is necessary once trees recommended for removal have been removed and the site is staked and prepared for construction. Tree removal and pruning shall be performed by a Qualified Tree Service.
- **Excavation.** The project arborist shall provide on-site consultation during all excavation activities beneath the dripline of protected trees. Excavation immediately adjacent to roots larger than 2-inches in diameter within the root protection zone of retained trees shall be by hand or other non-invasive techniques to ensure that roots are not damaged. Where feasible, major roots shall be protected by tunneling or other means to avoid destruction or damage. Exceptions can be made if, in the opinion of the project arborist, unacceptable damage will not occur to the tree. Where soil grade changes affect the root protection area, the grade line should be meandered wherever practicable. This will require on-site coordination to ensure a reasonable balance between engineering, construction, and the need for tree protection.

- **Surfacing.** Where surfacing is proposed beneath the dripline of protected trees, coordinate with the project arborist to provide recommendations for adjustments to protection fencing and to monitor construction in the tree protection zone. Avoid excavation and use a modified profile to build up from existing grade (Figure 1). The profile includes a layer of permeable geotextile fabric on the ground surface and crushed rock to raise the grade as needed. Surfacing may include asphalt, concrete, or other materials. If excavation is necessary, work shall be performed under arborist supervision.

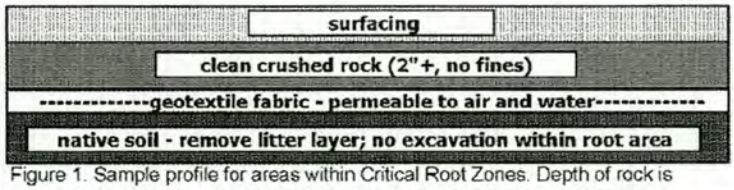

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

- **Landscaping.** Following construction and where landscaping is desired, apply approximately 3-inches of mulch beneath the dripline of protected trees, but not directly against tree trunks. Shrubs and ground covers may be planted within tree protection areas. If irrigation is used, use drip irrigation only beneath the driplines of protected trees.
- **Quality Assurance.** The project arborist should supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports should be provided to the Client and City on a regular basis throughout construction.

Summary

In summary, 279 trees are recommended for retention with construction, an additional 20 trees will be protected but are likely to be removed during construction, and 512 trees are recommended for removal either because of poor condition or for the purposes of construction. The 512 trees planned for removal will require mitigation on a one-for-one basis and the 20 trees likely to be removed will require mitigation if removed.

Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Villebois SAP South, Plan Area 2 project. Please contact us if you have questions or need any additional information.

Thank you,
Morgan Holen & Associates, LLC

Morgan E. Holen

Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: Tree Inventory Data 1-17-14

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2852	1	Oregon white oak	*Quercus garryana*	20		G	one-sided crown	remove	
2853	2	Oregon white oak	*Quercus garryana*	18		M	one-sided crown	remove	
2854	3	Oregon white oak	*Quercus garryana*	2*14		P		remove	
2855	4	Douglas-fir	*Pseudotsuga menziesii*	15	10	P	thin crown or low live crown ratio	remove	
2856	5	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2857	6	Douglas-fir	*Pseudotsuga menziesii*	15	10	M		remove	
2858	7	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	intermediate crown class	remove	
2859	8	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		retain	
2860	9	Oregon white oak	*Quercus garryana*	20		G		remove	
2861	10	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2862	11	Douglas-fir	*Pseudotsuga menziesii*	18	20	G		remove	
2863	12	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
2865	14	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2866	15	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2867	16	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group	retain	
2868	17	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2869	18	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2870	19	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		remove	
2871	20	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		remove	
2877	21	Douglas-fir	*Pseudotsuga menziesii*	26	16	G	old broken top	retain	
2904	22	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2905	23	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2906	24	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	retain in group	retain	
2907	25	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2908	26	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2911	27	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2913	28	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2912	29	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2914	30	Oregon white oak	*Quercus garryana*	2*18,30	30	P	ivy infestation, not sustainable, hazard to adjacent property	remove	
2915	31	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2909	32	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	extensive ivy, high live crown, re-eval during clearing	retain	yes
2910	33	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	extensive ivy, high live crown, re-eval during clearing	retain	yes
2902	34	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2903	35	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2901	36	Douglas-fir	*Pseudotsuga menziesii*	38	15	G	retain in group	retain	
2892	37	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2891	38	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2890	39	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2889	40	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2878	41	Douglas-fir	*Pseudotsuga menziesii*	26	16	G	retain in group	retain	
2885	42	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2884	43	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2883	44	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2879	45	Douglas-fir	*Pseudotsuga menziesii*	38	15	G	remove ivy, safety prune	retain	
2880	46	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2881	47	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2882	48	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group, remove ivy	retain	
2887	50	Douglas-fir	*Pseudotsuga menziesii*	34	15	G	retain in group	retain	
	50A	Douglas-fir	*Pseudotsuga menziesii*	14	10	M	retain in group	retain	
	50B	Douglas-fir	*Pseudotsuga menziesii*	14	10	M	retain in group	retain	
2886	51	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group	retain	
2888	52	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2916	53	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group, re-evaluate during clearing	retain	yes
2917	54	Douglas-fir	*Pseudotsuga menziesii*	30	14	M	retain in group, re-evaluate during clearing	retain	yes
2918	55	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	stem decay	retain	yes
2919	56	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	stem decay	retain	yes
2920	57	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	sweep in main stem	retain	yes
2925	58	Oregon white oak	*Quercus garryana*	24		P	excessive lean, re-evaluate during clearing	retain	yes
2924	59	Oregon white oak	*Quercus garryana*	17		P	excessive lean, re-evaluate during clearing	retain	yes
2922	60	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2923	61	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2921	62	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2943	78	Douglas-fir	*Pseudotsuga menziesii*	9	7	P	remove suppressed tree for adjacent oak	retain	yes
2942	79	Oregon white oak	*Quercus garryana*	12		M		retain	
2944	81	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	high live crown, retain in group	retain	yes
2947	90	Douglas-fir	*Pseudotsuga menziesii*	11	8	M	thin crown or low live crown ratio	retain	yes
2950	93	Oregon white oak	*Quercus garryana*	12		P	ivy growing into crown, not sustainable	retain	yes
2951	94	Oregon white oak	*Quercus garryana*	30		M	ivy growing into crown, remove ivy and re-evaluate	retain	yes
2952	95	Oregon white oak	*Quercus garryana*	46		M	ivy growing into crown, remove ivy and re-evaluate	retain	yes
2953	96	Oregon white oak	*Quercus garryana*	11		M	ivy growing into crown, remove ivy	retain	
2954	97	Douglas-fir	*Pseudotsuga menziesii*	22	12	G	ivy growing into crown, remove ivy	retain	
2956	99	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	thin crown or low live crown ratio	remove	
3001	100	Douglas-fir	*Pseudotsuga menziesii*	20	11	P	decay, broken top	remove	
2959	101	Douglas-fir	*Pseudotsuga menziesii*	13	9	M		remove	
2970	102	Douglas-fir	*Pseudotsuga menziesii*	31	14	G		retain	yes
2971	103	Douglas-fir	*Pseudotsuga menziesii*	22	14	M		retain	
2969	110	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2968	111	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2967	112	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2966	113	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	thin crown or low live crown ratio	remove	
2965	114	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2964	115	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2963	116	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2962	117	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2961	118	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2960	119	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2978	121	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
	121B	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		remove	
2974	122	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
2976	124	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2984	125	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		remove	
2985	126	Douglas-fir	*Pseudotsuga menziesii*	20	11	M		remove	
2983	127	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2979	128	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3009	133	Douglas-fir	*Pseudotsuga menziesii*	20	18	G		remove	
3008	134	Douglas-fir	*Pseudotsuga menziesii*	14	18	G		remove	
3007	135	Douglas-fir	*Pseudotsuga menziesii*	18	18	G		remove	
3000	136	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3002	137	bigleaf maple	*Acer macrophyllum*	18	20	M		remove	
2989	139	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
2987	141	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	broken top	remove	
2986	142	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	dead	remove	
3004	143	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3006	144	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3005	145	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
2993	147	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
2991	148	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2996	149	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2999	151	sweet cherry	*Prunus avium*	12		P	invasive species	remove	
2995	152	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
2998	153	bigleaf maple	*Acer macrophyllum*	3*11		P		remove	
2955	156	Oregon white oak	*Quercus garryana*	12		M		remove	
3019	157	Douglas-fir	*Pseudotsuga menziesii*	17	20	M	thin crown or low live crown ratio	remove	
3022	158	Douglas-fir	*Pseudotsuga menziesii*	16	20	M	thin crown or low live crown ratio	likely to be removed	yes
3023	159	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	likely to be removed	yes
3024	160	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	dead	likely to be removed	yes
3020	161	Oregon white oak	*Quercus garryana*	14	8	P	structural defects; small, asymmetrical live crown	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3021	162	Douglas-fir	*Pseudotsuga menziesii*	12	20	P	suppressed	remove	
3025	163	Douglas-fir	*Pseudotsuga menziesii*	24	20	G	remove ivy; safety prune	remove	
3026	164	Douglas-fir	*Pseudotsuga menziesii*	19	20	G		retain	
3027	165	Douglas-fir	*Pseudotsuga menziesii*	30	20	G		retain	
3028	166	Oregon white oak	*Quercus garryana*	14	20	M	structural defects	likely to be removed	
3029	167	black cottonwood	*Populus trichocarpa*	26		M	inherent species limitations	likely to be removed	yes
3018	168	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	sweep in main stem	remove	
3017	169	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		remove	
3016	170	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		remove	
3031	172	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3044	174	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
3043	175	Douglas-fir	*Pseudotsuga menziesii*	12	8	G		remove	
3040	179	Scouler's willow	*Salix scouleriana*	18		P		remove	
3039	180	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	pitch seam	remove	
3042	181	bigleaf maple	*Acer macrophyllum*	24		P		remove	
3041	182	bigleaf maple	*Acer macrophyllum*	60		P		remove	
3036	183	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2792	197	Oregon white oak	*Quercus garryana*	41	30	I	codominant stems	retain	
2793	198	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2794	199	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	high live crown; retain in group	retain	
2795	200	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2796	201	Douglas-fir	*Pseudotsuga menziesii*	13	9	M	retain in group	retain	
2798	203	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group; remove ivy	retain	
2799	204	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
3109	298	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	remove for street construction	remove	
3110	299	Scouler's willow	*Salix scouleriana*	12		P		remove	
3111	300	Douglas-fir	*Pseudotsuga menziesii*	13	9	G		remove	
3112	301	black cottonwood	*Populus trichocarpa*	20		M	inherent species limitations; hazard potential	retain	yes
3113	302	Scouler's willow	*Salix scouleriana*	14		P		remove	
3114	303	red alder	*Alnus rubra*	12		M	species limitations	remove	
3118	307	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
3119	308	Douglas-fir	*Pseudotsuga menziesii*	17	10	G		retain	
3324	325	Siberian elm	*Ulmus pumila*	12		P		remove	
3325	326	Siberian elm	*Ulmus pumila*	16		P		remove	
3327	327	Siberian elm	*Ulmus pumila*	16		P		remove	
3133	328	Douglas-fir	*Pseudotsuga menziesii*	32		P	stressed, declining	retain	yes
3344	332	black cottonwood	*Populus trichocarpa*	20		P		remove	
3345	333	red alder	*Alnus rubra*	8		P		remove	
3332	334	Douglas-fir	*Pseudotsuga menziesii*	16	18	P	chlorotic	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3329	335	pine	*Pinus spp.*	30		P	multi-stem	remove	
3320	336	Siberian elm	*Ulmus pumila*	14		P		remove	
3328	338	western redcedar	*Thuja plicata*	18		G		remove	
3323	341	Siberian elm	*Ulmus pumila*	12		P		remove	
3322	342	Siberian elm	*Ulmus pumila*	12		P	invasive species	remove	
	353	Douglas-fir	*Pseudotsuga menziesii*	8		M		remove	
3184	354	Oregon white oak	*Quercus garryana*	28	25	I		retain	
	361	Scouler's willow	*Salix scouleriana*	12		P	decay	retain	yes
3181	376	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	377	Oregon white oak	*Quercus garryana*	16		M	one-sided crown; retain in group	retain	
	382	Douglas-fir	*Pseudotsuga menziesii*	26	14	M	basal swelling; retain in group	retain	
	383	Douglas-fir	*Pseudotsuga menziesii*	22	14	M	retain in group	retain	
3180	384	lodgepole pine	*Pinus contorta*	12		P		likely to be removed	yes
3179	385	lodgepole pine	*Pinus contorta*	8		P		retain	yes
3178	386	lodgepole pine	*Pinus contorta*	14		P		retain	yes
	387	Oregon white oak	*Quercus garryana*	28		I	safety prune	retain	
	394	Oregon white oak	*Quercus garryana*	28		I	safety prune	retain	
	400	Douglas-fir	*Pseudotsuga menziesii*	22		M		remove	
3340	401	red alder	*Alnus rubra*	12		P		remove	
3337	402	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
3338	403	Douglas-fir	*Pseudotsuga menziesii*	16	12	G		remove	
3341	404	red alder	*Alnus rubra*	12		P		remove	
3342	405	red alder	*Alnus rubra*	8		P		remove	
3343	406	red alder	*Alnus rubra*	10		P		remove	
3352	408	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3353	409	Oregon white oak	*Quercus garryana*	14	20	G		remove	
	410	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3331	411	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3326	412	cedar	*unknown*	8		P	poor condition	remove	
3336	414	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	416	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3347	417	red alder	*Alnus rubra*	8		P		remove	
3363	418	Douglas-fir	*Pseudotsuga menziesii*	24		P	pitch seam; one-sided	likely to be removed	
3364	420	Oregon white oak	*Quercus garryana*	18		G		retain	
3367	421	Oregon white oak	*Quercus garryana*	16		M	narrow crown angle, limited response potential	retain	
3365	422	Douglas-fir	*Pseudotsuga menziesii*	24		G		likely to be removed	
3362	423	Oregon white oak	*Quercus garryana*	2*20		M		likely to be removed	
3366	426	Douglas-fir	*Pseudotsuga menziesii*	22		M	one-sided	likely to be removed	
3334	427	Douglas-fir	*Pseudotsuga menziesii*	22	12	P	old broken top	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3333	428	red alder	*Alnus rubra*	14		P		remove	
3348	430	red alder	*Alnus rubra*	10		P		remove	
3349	431	red alder	*Alnus rubra*	8		P		remove	
3351	433	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3357	434	Douglas-fir	*Pseudotsuga menziesii*	18		G		remove	
3346	435	Scouler's willow	*Salix scouleriana*	12		P		remove	
3399	437	Douglas-fir	*Pseudotsuga menziesii*	34	15	G	open grown tree	remove	
3390	440	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3404	448	Douglas-fir	*Pseudotsuga menziesii*	16	10	G	edge grown	retain	yes
3393	450	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3398	453	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3397	454	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3409	456	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	one-sided crown; re-evaluate during clearing	retain	yes
3408	457	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	basal decay	retain	yes
3412	458	Douglas-fir	*Pseudotsuga menziesii*	14	8	M		remove	
3406	459	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
3402	460	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		retain	
3384	461	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3405	462	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	overtopped	retain	yes
3407	463	Oregon white oak	*Quercus garryana*	14		P	not suitable for retention with adjacent removal	retain	yes
3403	464	bigleaf maple	*Acer macrophyllum*	8		P		retain	yes
3401	466	Douglas-fir	*Pseudotsuga menziesii*	26	13	G	old broken top	retain	yes
3413	467	Douglas-fir	*Pseudotsuga menziesii*	24	13	M	stand grown	remove	
3392	468	Oregon white oak	*Quercus garryana*	20	25	P	overtopped	remove	
3400	469	Oregon white oak	*Quercus garryana*	16	20	M	one-sided crown	remove	
3413	472	Douglas-fir	*Pseudotsuga menziesii*	24	13	M	high live crown	remove	
3391	473	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3387	474	Douglas-fir	*Pseudotsuga menziesii*	12	8	G		remove	
3411	475	Oregon ash	*Fraxinus latifolia*	8		P		remove	
3389	476	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3388	477	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3385	478	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3386	479	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3417	480	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3419	481	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3421	482	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3422	483	Douglas-fir	*Pseudotsuga menziesii*	48	16	G		remove	
3420	484	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3448	485	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3450	486	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		retain	
3446	487	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3447	488	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		retain	yes
3455	489	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		retain	yes
3451	490	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3452	491	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3453	492	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	remove	
3454	493	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
3439	494	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	very high live crown	retain	yes
3462	495	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3471	497	Douglas-fir	*Pseudotsuga menziesii*	10		P	overtopped	retain	
3463	498	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3460	499	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3455	500	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		remove	
3456	501	Oregon white oak	*Quercus garryana*	24	25	P	small asymmetrical live crown	remove	
3457	502	Oregon white oak	*Quercus garryana*	36	35	M	poor structure; re-evaluate during clearing	retain	yes
3458	503	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	remove	
3459	504	Oregon white oak	*Quercus garryana*	6		P		remove	
3484	505	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	remove for construction	remove	
3483	506	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
3461	507	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3465	508	Oregon white oak	*Quercus garryana*	24	30	P	narrow crown angle, limited response potential	remove	
3468	509	Oregon white oak	*Quercus garryana*	36	35	I		retain	
3467	510	Oregon white oak	*Quercus garryana*	12		G		retain	
3470	511	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3464	512	Douglas-fir	*Pseudotsuga menziesii*	12		M		remove	
3466	513	Douglas-fir	*Pseudotsuga menziesii*	12		M		remove	
	514	Oregon white oak	*Quercus garryana*	12		M		retain	
3485	515	sweet cherry	*Prunus avium*	6		P		remove	
3481	516	Douglas-fir	*Pseudotsuga menziesii*	36	15	G	open grown	remove	
3486	518	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	suppressed	remove	
3478	519	Douglas-fir	*Pseudotsuga menziesii*	27	13	G		remove	
3479	520	madrone	*Arbutus menziesii*	14		M		remove	
3477	521	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3487	522	sweet cherry	*Prunus avium*	6		P		remove	
3416	523	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3418	524	red alder	*Alnus rubra*	10		P		remove	
3415	525	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	poor height to diameter ratio	remove	
3472	526	Oregon white oak	*Quercus garryana*	2*16	35	P	overtopped	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3480	529	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3424	530	Douglas-fir	*Pseudotsuga menziesii*	14	9	G	leans to development	retain	yes
3482	532	black cottonwood	*Populus trichocarpa*	24		P		remove	
3185	535	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3424	536	Oregon white oak	*Quercus garryana*	8		P	dead	retain	yes
3444	539	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		retain	
3443	542	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3441	546	Douglas-fir	*Pseudotsuga menziesii*	20	11	P		retain	
3440	547	Douglas-fir	*Pseudotsuga menziesii*	16	6	G	not suitable for retention with adjacent removal	retain	
	548	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		retain	
3436	549	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		retain	
3437	550	Douglas-fir	*Pseudotsuga menziesii*	26	13	M	re-evaluate during clearing	retain	
3442	551	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	not suitable for retention with adjacent removal	retain	
3438	552	Douglas-fir	*Pseudotsuga menziesii*	12	10	M	re-evaluate during clearing	retain	
3512	553	Oregon white oak	*Quercus garryana*	2*24		I		remove	
3506	554	Scouler's willow	*Salix scouleriana*	6		P		remove	
3505	555	Scouler's willow	*Salix scouleriana*	10		P		remove	
3517	556	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
	557	maple	*Acer spp.*	8		P		remove	
	558	red alder	*Alnus rubra*	6		P		remove	
3521	559	Douglas-fir	*Pseudotsuga menziesii*	10	8	M	one-sided crown	remove	
3514	560	Scouler's willow	*Salix scouleriana*	16		P		remove	
3527	561	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	562	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	overtopped	remove	
3529	563	red alder	*Alnus rubra*	12		P		remove	
3535	564	red alder	*Alnus rubra*	12		P		remove	
3536	565	red alder	*Alnus rubra*	10		P		remove	
3537	566	red alder	*Alnus rubra*	12		P	lean	remove	
3530	567	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3515	568	red alder	*Alnus rubra*	10		P		remove	
3534	569	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
3533	570	red alder	*Alnus rubra*	8		P		remove	
3533	570	red alder	*Alnus rubra*	8		M	lean	remove	
3526	571	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3522	572	Scouler's willow	*Salix scouleriana*	10		P		remove	
3516	573	Oregon white oak	*Quercus garryana*	24		M	narrow crown angle, limited response potential, dead branches	remove	
3531	574	Scouler's willow	*Salix scouleriana*	6*10		P	decay	remove	
3525	575	red alder	*Alnus rubra*	6		P		remove	
3524	576	red alder	*Alnus rubra*	6		P		remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3523	577	Scouler's willow	*Salix scouleriana*	8		P		remove	
3532	578	Oregon white oak	*Quercus garryana*	2*8		P		remove	
3528	579	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	580	red alder	*Alnus rubra*	6		P		remove	
3510	581	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3509	582	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
3508	583	Oregon white oak	*Quercus garryana*	42		P	very poor structure	remove	
3507	584	Scouler's willow	*Salix scouleriana*	14		P		remove	
3503	585	Oregon white oak	*Quercus garryana*	2*22		I		remove	
3502	586	Oregon white oak	*Quercus garryana*	18		G	one-sided crown	remove	
3499	587	red alder	*Alnus rubra*	16		M	species limitations	remove	
3500	588	Scouler's willow	*Salix scouleriana*	20		P	decay, species limitations	remove	
	589	red alder	*Alnus rubra*	10		P		remove	
3492	590	Oregon ash	*Fraxinus latifolia*	10		P		remove	
3491	591	Scouler's willow	*Salix scouleriana*	10		P		remove	
	592	red alder	*Alnus rubra*	6		P		remove	
	593	red alder	*Alnus rubra*	10		P		remove	
	594	red alder	*Alnus rubra*	6		P		remove	
	595	red alder	*Alnus rubra*	8		P		remove	
3494	596	Scouler's willow	*Salix scouleriana*	16		P		remove	
3493	597	red alder	*Alnus rubra*	10		P		remove	
3511	598	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped	remove	
	599	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3489	600	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
3488	601	bigleaf maple	*Acer macrophyllum*	16		M		remove	
	602	Douglas-fir	*Pseudotsuga menziesii*	8	7	G		remove	
	603	red alder	*Alnus rubra*	8		P		retain	
	604	Oregon white oak	*Quercus garryana*	14		M	one-sided crown	retain	
	609	Scouler's willow	*Salix scouleriana*	10		P	decrepit	remove	
3555	610	incense-cedar	*Calocedrus decurrens*	8		M		remove	
3556	611	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
3566	612	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3565	613	red alder	*Alnus rubra*	6		P		remove	
3564	614	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		remove	
3554	615	Douglas-fir	*Pseudotsuga menziesii*	8	7	M		remove	
3563	616	lodgepole pine	*Pinus contorta*	12		P		remove	
	617	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped, low vigor	remove	
	618	Oregon white oak	*Quercus garryana*	24	25	I	no major defects; coordinate with arborist prior to working beneath dripline	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	619	Scouler's willow	*Salix scouleriana*	16		P	decrepit	remove	
	620	incense-cedar	*Calocedrus decurrens*	14		P	canker	remove	
	621	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	mechanical damage	remove	
	622	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	mechanical damage	remove	
	623	Oregon ash	*Fraxinus latifolia*	16		M	broken top, decay; 623 & 624 are one tree	remove	
	625	Oregon white oak	*Quercus garryana*	24	25	I	no major defects; coordinate with arborist prior to working beneath dripline	retain	
	626	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
	627	bigleaf maple	*Acer macrophyllum*	10		P	lean, overtopped	remove	
	628	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
	629	Douglas-fir	*Pseudotsuga menziesii*	9	7	P		remove	
	630	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	631	Douglas-fir	*Pseudotsuga menziesii*	25	13	G		remove	
	632	madrone	*Arbutus menziesii*	6		P		remove	
3571	633	red alder	*Alnus rubra*	8		P		remove	
3561	635	European white birch	*Betula pendula*	6		P	invasive species	remove	
3560	636	bigleaf maple	*Acer macrophyllum*	12		P		remove	
3553	637	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3552	638	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
3551	639	dawn redwood	*Metasequoia glyptostroboides*	6		M		remove	
3559	640	incense-cedar	*Calocedrus decurrens*	8		M		remove	
3558	641	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3557	642	spruce	*Picea spp.*	10		P		remove	
3549	643	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3550	644	red alder	*Alnus rubra*	10		P	decay	remove	
3548	645	incense-cedar	*Calocedrus decurrens*	12		P	multi-stem	remove	
3547	646	grand fir	*Abies grandis*	8		P		remove	
	647	Douglas-fir	*Pseudotsuga menziesii*	6	6	P	overtopped	remove	
3573	648	Oregon white oak	*Quercus garryana*	8		G		remove	
3572	649	red alder	*Alnus rubra*	6		P		remove	
3570	650	red alder	*Alnus rubra*	8		P		remove	
3569	651	bigleaf maple	*Acer macrophyllum*	6		P		remove	
3567	652	lodgepole pine	*Pinus contorta*	6	6	P		remove	
3568	653	red alder	*Alnus rubra*	6		M		remove	
	654	lodgepole pine	*Pinus contorta*	14		P		remove	
	655	Douglas-fir	*Pseudotsuga menziesii*	24	18	G	no major defects; coordinate with arborist prior to working beneath dripline	retain	
3545	656	western redcedar	*Thuja plicata*	6		P		remove	
3543	657	Scouler's willow	*Salix scouleriana*	6		P		remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3542	658	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3541	659	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3538	660	Douglas-fir	*Pseudotsuga menziesii*	26	13	G	open grown	remove	
3539	661	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
	662	Leyland cypress	*Cupressocyparis leylandii*	18		P	multi-stem, poor structure	likely to be removed	
	663	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	664	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
	665	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
	666	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
	667	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3546	668	pine	*Pinus spp.*	12		P		remove	
3540	669	Douglas-fir	*Pseudotsuga menziesii*	2*24	15	P	codominant	remove	
3544	670	Scouler's willow	*Salix scouleriana*	8		P		remove	
	671	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	672	Scouler's willow	*Salix scouleriana*	48		P	decrepit	retain	
	673	Douglas-fir	*Pseudotsuga menziesii*	10		M		retain	
	674	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	675	bigleaf maple	*Acer macrophyllum*	6		P		retain	
	676	deciduous	*unknown*	8		P		likely to be removed	
	678	pine	*Pinus spp.*	12		M		remove	
	679	red alder	*Alnus rubra*	6		P		retain	
	680	pine	*Pinus spp.*	14		M		remove	
	681	red alder	*Alnus rubra*	12		P		retain	
	682	pine	*Pinus spp.*	10		M		remove	
	683	pine	*Pinus spp.*	18		M		remove	
	684	pine	*Pinus spp.*	8		M		remove	
	685	pine	*Pinus spp.*	10		M		remove	
	686	pine	*Pinus spp.*	14		M		remove	
	687	western redcedar	*Thuja plicata*	12		M		likely to be removed	
	689	pine	*Pinus spp.*	8		M		remove	
	690	pine	*Pinus spp.*	10		M		remove	
	691	pine	*Pinus spp.*	8		M		remove	
	692	pine	*Pinus spp.*	10		M		remove	
	693	pine	*Pinus spp.*	12		M		remove	
	694	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	695	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	696	sweet cherry	*Prunus avium*	8		P	invasive species; severe ivy	retain	
	697	sweet cherry	*Prunus avium*	8		P	invasive species	retain	
	698	red alder	*Alnus rubra*	6		P		retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	699	cedar	*unknown*	10		G		retain	
	700	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	701	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	702	red alder	*Alnus rubra*	14		P	decay, mostly dead	retain	
	702A	Oregon ash	*Fraxinus latifolia*	6		P	extensive ivy	remove	
	703	red alder	*Alnus rubra*	6		P	mostly dead	retain	
	704	English hawthorn	*Crataegus monogyna*	8		P	invasive species; mostly dead, ivy infestation	retain	
	705	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	706	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	707	red alder	*Alnus rubra*	8		P	severe ivy	retain	
	708	red alder	*Alnus rubra*	10		P	severe ivy	retain	
	709	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	710	sweet cherry	*Prunus avium*	22		P	invasive species	retain	
	712	Oregon ash	*Fraxinus latifolia*	12		P	codom stem failure; severe ivy	retain	
	713	Oregon ash	*Fraxinus latifolia*	24		P	decay; severe ivy	retain	
	715	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	716	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	717	red alder	*Alnus rubra*	10		P	severe ivy	retain	
	718	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	719	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	720	red alder	*Alnus rubra*	8		P	severe ivy	retain	
	721	Oregon ash	*Fraxinus latifolia*	8		M		retain	
	722	Oregon ash	*Fraxinus latifolia*	8		M		retain	
	737	Scouler's willow	*Salix scouleriana*	24		P	decrepit; severe ivy	retain	
	744	Scouler's willow	*Salix scouleriana*	10		P	decrepit; severe ivy	retain	
	745	Oregon ash	*Fraxinus latifolia*	12		M		retain	
	746	Oregon ash	*Fraxinus latifolia*	6		P	severe ivy	retain	
	747	western redcedar	*Thuja plicata*	27		G		remove	
	749	spruce	*Picea spp.*	10		P		remove	
	750	spruce	*Picea spp.*	16		P		retain	yes
	751	red alder	*Alnus rubra*	13		M		retain	
	752	Oregon white oak	*Quercus garryana*	24		I		retain	
	753	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	snag - excellent wildlife habitat, potentially hazardous	retain	yes
	754	red alder	*Alnus rubra*	10		P	species limitations	retain	
	755	red alder	*Alnus rubra*	12		P	species limitations	retain	
	756	Oregon white oak	*Quercus garryana*	12		M	extensive ivy, small one-sided crown	retain	yes
	757	Scouler's willow	*Salix scouleriana*	24		P	decrepit	retain	
	758	red alder	*Alnus rubra*	8		P		retain	
	759	deciduous	*unknown*	6		P		retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	760	red alder	*Alnus rubra*	14		M		likely to be removed	
	761	pine	*unknown*	12		M		remove	
	762	western redcedar	*Thuja plicata*	12		M		remove	
	763	pine	*Pinus spp.*	14		M		remove	
	764	western redcedar	*Thuja plicata*	8		M		remove	
	765	pine	*Pinus spp.*	10		M		remove	
	766	pine	*Pinus spp.*	14		M		remove	
	767	western redcedar	*Thuja plicata*	14		M		remove	
	768	pine	*Pinus spp.*	10		M		remove	
	769	pine	*Pinus spp.*	10		M		remove	
	770	pine	*Pinus spp.*	10		M		remove	
	771	dawn redwood	*Metasequoia glyptostroboides*	18		M		remove	
	772	pine	*Pinus spp.*	8		M		remove	
	773	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped	remove	
	774	red alder	*Alnus rubra*	10		P		remove	
	775	Oregon white oak	*Quercus garryana*	30	35	G		retain	
	777	Douglas-fir	*Pseudotsuga menziesii*	13	9	P	overtopped	remove	
	778	Douglas-fir	*Pseudotsuga menziesii*	28	25	G		remove	
	779	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	dead branches	remove	
	780	Douglas-fir	*Pseudotsuga menziesii*	28	20	G		remove	
	781	Oregon ash	*Fraxinus latifolia*	24		M	remove for construction	remove	
	782	sweetgum	*Liquidambar styraciflua*	16		P		likely to be removed	
	783	Oregon ash	*Fraxinus latifolia*	18		M		remove	
	784	Scouler's willow	*Salix scouleriana*	32		P	decay	remove	
	785	Oregon white oak	*Quercus garryana*	28	35	I	no defects observed; remove for construction	remove	
	786	lodgepole pine	*Pinus contorta*	14		P		remove	
	787	Oregon white oak	*Quercus garryana*	18	20	G		retain	
	788	Oregon white oak	*Quercus garryana*	26	35	G	dead wood in crown, but generally sound	retain	
	789	Douglas-fir	*Pseudotsuga menziesii*	28	14	P	root rot, broken top	remove	
	790	pine	*Pinus spp.*	10		P		remove	
	791	pine	*Pinus spp.*	12		M		remove	
	792	pine	*Pinus spp.*	18		P		remove	
	793	lodgepole pine	*Pinus contorta*	8		P		remove	
	794	pine	*Pinus spp.*	12		M		remove	
	795	pine	*Pinus spp.*	16		M		remove	
	796	pine	*Pinus spp.*	18		M		remove	
	797	lodgepole pine	*Pinus contorta*	12		P		remove	
	798	lodgepole pine	*Pinus contorta*	10		P		remove	
	799	Oregon white oak	*Quercus garryana*	2*14	30	G		likely to be removed	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	800	deciduous	*unknown*	10		P		remove	
	801	Douglas-fir	*Pseudotsuga menziesii*	22	20	P	root damage	remove	
	802	lodgepole pine	*Pinus contorta*	12		P	very poor condition	remove	
	803	European white birch	*Betula pendula*	12		P	invasive species	remove	
	804	Douglas-fir	*Pseudotsuga menziesii*	24	18	G		remove	
	805	Douglas-fir	*Pseudotsuga menziesii*	20	18	P	root damage	remove	
	806	Douglas-fir	*Pseudotsuga menziesii*	25	18	P	root damage	remove	
	807	lodgepole pine	*Pinus contorta*	6		P	very poor condition	remove	
	808	deciduous	*unknown*	6		P		remove	
	809	deciduous	*unknown*	6		P		remove	
	810	deciduous	*unknown*	10		P		remove	
	811	Austrian pine	*Pinus nigra*	14		M		remove	
	812	lodgepole pine	*Pinus contorta*	10		P		remove	
	813	Scotch pine	*Pinus sylvestris*	10		P		remove	
	814	sweetgum	*Liquidambar styraciflua*	14		M		remove	
	815	lodgepole pine	*Pinus contorta*	14		P		remove	
	816	Scotch pine	*Pinus sylvestris*	12		P		remove	
	817	pine	*Pinus spp.*	8		P		remove	
	818	red alder	*Alnus rubra*	8		P		remove	
	819	pine	*Pinus spp.*	10		P		remove	
	820	red alder	*Alnus rubra*	8		P		remove	
	821	red alder	*Alnus rubra*	10		P		remove	
	822	red alder	*Alnus rubra*	10		P		remove	
	823	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	824	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	825	red alder	*Alnus rubra*	10		P		remove	
	826	Oregon white oak	*Quercus garryana*	30		P	codominant stems, decay	remove	
	827	deciduous	*unknown*	6		P		remove	
	828	pine	*Pinus spp.*	8		P		remove	
	829	red alder	*Alnus rubra*	10		P		remove	
	830	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	831	Oregon ash	*Fraxinus latifolia*	12		P	dead branches	retain	yes
	832	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	833	red alder	*Alnus rubra*	30		P	clump	remove	
	834	Oregon ash	*Fraxinus latifolia*	36		M	remove for construction	remove	
	835	Oregon ash	*Fraxinus latifolia*	12		P		remove	
	836	Oregon ash	*Fraxinus latifolia*	32	14	P	thin crown or low live crown ratio	remove	
	837	Oregon ash	*Fraxinus latifolia*	24		M	ivy growing into crown; remove for construction	remove	
	838	Oregon ash	*Fraxinus latifolia*	10		M	ivy growing into crown; remove for construction	remove	

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	839	Oregon ash	*Fraxinus latifolia*	40		P	clump	remove	
	840	pine	*Pinus spp.*	6		P		remove	
	841	Oregon white oak	*Quercus garryana*	6		P		remove	
	842	pine	*Pinus spp.*	8		M		remove	
	843	deciduous	*unknown*	12		P		remove	
	844	pine	*Pinus spp.*	10		P		remove	
	845	deciduous	*unknown*	6		P		remove	
	846	red alder	*Alnus rubra*	8		P		remove	
	847	western redcedar	*Thuja plicata*	12		P		remove	
	848	western redcedar	*Thuja plicata*	20		P		remove	
	849	western redcedar	*Thuja plicata*	18		G		remove	
	850	Oregon white oak	*Quercus garryana*	18,24	35	M	codominant; history of branch failure; hazardous	remove	
	851	copper beech	*Fagus sylvatica*	8		G	forked top	remove	
	852	pine	*Pinus spp.*	6		P		remove	
	853	Norway maple	*Acer platanoides*	10		M		remove	
	854	European white birch	*Betula pendula*	12		P	invasive species	remove	
	855	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
	856	Oregon white oak	*Quercus garryana*	26	30	I	pair driveways for tree protection	retain	
	858	maple	*Acer spp.*	6		M		remove	
	859	pine	*Pinus spp.*	10		M		remove	
	860	Oregon white oak	*Quercus garryana*	20	25	I		retain	
	861	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		retain	
	862	red alder	*Alnus rubra*	12		P	species limitations	remove	
	863	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
	864	maple	*Acer spp.*	6		M		remove	
	865	Oregon white oak	*Quercus garryana*	22	25	G	one-sided crown	retain	
	866	deciduous	*unknown*	6		P		remove	
	867	pine	*Pinus spp.*	8		P		remove	
	868	deciduous	*unknown*	6		P		remove	
	869	pine	*Pinus spp.*	6		P		remove	
	870	deciduous	*unknown*	10		P		remove	
	871	red alder	*Alnus rubra*	20		P		remove	
	872	pine	*Pinus spp.*	6		P		remove	
	873	Oregon white oak	*Quercus garryana*	36	30	G		retain	
	874	pine	*Pinus spp.*	8		P		remove	
	875	Douglas-fir	*Pseudotsuga menziesii*	32	14	M		retain	
	876	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped	retain	yes
	878	Douglas-fir	*Pseudotsuga menziesii*	36	25	P	pitch seam	retain	yes
	879	Douglas-fir	*Pseudotsuga menziesii*	22	20	G		remove	

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	880	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	overtopped	remove	
	881	Douglas-fir	*Pseudotsuga menziesii*	20	20	G		remove	
	882	Scouler's willow	*Salix scouleriana*	14		P		remove	
	883	Scouler's willow	*Salix scouleriana*	12		P		remove	
	884	Scouler's willow	*Salix scouleriana*	6		P		remove	
	885	Scouler's willow	*Salix scouleriana*	16		P		remove	
	886	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
	887	grand fir	*Abies grandis*	6		P		remove	
	888	grand fir	*Abies grandis*	8		P		remove	
	889	red alder	*Alnus rubra*	10		P		remove	
	890	pine	*Pinus spp.*	6		P		remove	
	891	deciduous	*unknown*	8		M		remove	
	892	European white birch	*Betula pendula*	10		P	invasive species	remove	
	893	western redcedar	*Thuja plicata*	12		G		remove	
	894	pine	*Pinus spp.*	10		P		remove	
	895	red alder	*Alnus rubra*	12		P		remove	
	896	red alder	*Alnus rubra*	8		P		remove	
	897	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	decay	remove	
	898	pine	*Pinus spp.*	6		P		remove	
	899	pine	*Pinus spp.*	6		P		remove	
	900	red alder	*Alnus rubra*	12		M		remove	
	904	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
	907	Oregon white oak	*Quercus garryana*	18		I	good crown density	retain	
	908	Oregon white oak	*Quercus garryana*	22		I	good crown density	retain	
	909	Scouler's willow	*Salix scouleriana*	10		M		remove	
	910	Scouler's willow	*Salix scouleriana*	12		P		remove	
	911	Scouler's willow	*Salix scouleriana*	12		P		remove	
	912	Scouler's willow	*Salix scouleriana*	20		P		remove	
	913	Scouler's willow	*Salix scouleriana*	18		P		remove	
	914	Scouler's willow	*Salix scouleriana*	12		P		remove	
	915	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	916	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
	917	Scouler's willow	*Salix scouleriana*	14		P		remove	
	918	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
	919	Scouler's willow	*Salix scouleriana*	42		P		remove	
	920	Douglas-fir	*Pseudotsuga menziesii*	28	25	M	pitch seam	remove	
	921	Oregon white oak	*Quercus garryana*	24	25	I	excellent crown density	remove	
	922	Scouler's willow	*Salix scouleriana*	6		P		remove	
	923	Oregon white oak	*Quercus garryana*	14		M		remove	

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	924	pine	*Pinus spp.*	12		G		remove	
	925	western redcedar	*Thuja plicata*	18		P		remove	
	926	Douglas-fir	*Pseudotsuga menziesii*	28	20	M	pitch seam, pistol butt	remove	
	927	western redcedar	*Thuja plicata*	20		M		remove	
	928	western redcedar	*Thuja plicata*	18		M		remove	
	929	western redcedar	*Thuja plicata*	18		G		remove	
	930	pine	*Pinus spp.*	12		M		remove	
	931	pine	*Pinus spp.*	8		G		remove	
	932	pine	*Pinus spp.*	8		G		remove	
	934	pine	*Pinus spp.*	8		G		remove	
	935	pine	*Pinus spp.*	12		M		remove	
	936	pine	*Pinus spp.*	8		M		remove	
	937	Scouler's willow	*Salix scouleriana*	6		P		remove	
	938	pine	*Pinus spp.*	10		M	multiple attachments	remove	
	939	pine	*Pinus spp.*	8		G		remove	
	940	pine	*Pinus spp.*	8		G		remove	
	941	pine	*Pinus spp.*	6		M		remove	
	942	pine	*Pinus spp.*	6		G		remove	
	943	western redcedar	*Thuja plicata*	8		G		remove	
	944	pine	*Pinus spp.*	6		G		remove	
	945	Scouler's willow	*Salix scouleriana*	14		P		remove	
	946	Scouler's willow	*Salix scouleriana*	25		P		remove	
	947	Scouler's willow	*Salix scouleriana*	16		P		remove	
	948	western redcedar	*Thuja plicata*	8		P		remove	
	950	Scouler's willow	*Salix scouleriana*	18		P		remove	
	961	red alder	*Alnus rubra*	18		P	ivy growing into crown	retain	yes
	962	Scouler's willow	*Salix scouleriana*	14		P	ivy growing into crown	retain	
	993	red alder	*Alnus rubra*	10		P		remove	
	994	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	1001	red alder	*Alnus rubra*	16		P		remove	
	1002	Scouler's willow	*Salix scouleriana*	14		P		remove	
	1003	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	remove ivy, safety prune; re-evaluate during construction	retain	yes
	1004	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped; extensive ivy	retain	yes
	1005	Scouler's willow	*Salix scouleriana*	16		P	extensive ivy	retain	
	1007	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	spur branch 1006; re-evaluate during construction	retain	yes
	1008	Oregon white oak	*Quercus garryana*	12		M	extensive ivy	retain	yes
	1009	Scouler's willow	*Salix scouleriana*	30		P	decay	remove	
	1010	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped	remove	
	1011	Douglas-fir	*Pseudotsuga menziesii*	2*34	20	M	codominant	remove	

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	1012	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		remove	
	1013	sweet cherry	*Prunus avium*	14		P	invasive species	retain	yes
	1014	Douglas-fir	*Pseudotsuga menziesii*	40	15	P	sweep, swollen base	remove	
	1015	Douglas-fir	*Pseudotsuga menziesii*	30	14	P	pitch seams at base	remove	
	1016	red alder	*Alnus rubra*	12		P		remove	
	1017	red alder	*Alnus rubra*	12		P		remove	
	1018	red alder	*Alnus rubra*	12		P		remove	
	1019	Oregon white oak	*Quercus garryana*	18	20	M	one-sided crown	likely to be removed	
	1021	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	lean	remove	
	1022	Douglas-fir	*Pseudotsuga menziesii*	20	11	P		remove	
	1023	Oregon white oak	*Quercus garryana*	26	25	I		retain	
	1024	Scouler's willow	*Salix scouleriana*	14		P	decay	remove	
	1025	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	one-sided; small live crown	remove	
	1026	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		retain	
	1027	Douglas-fir	*Pseudotsuga menziesii*	32	14	G		likely to be removed	
	1028	Oregon white oak	*Quercus garryana*	14		M	narrow crown angle, limited response potential	retain	yes
	1029	Douglas-fir	*Pseudotsuga menziesii*	26		G		retain	
	1030	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		retain	
	1031	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		retain	
	1032	Douglas-fir	*Pseudotsuga menziesii*	24		G		retain	
	1033	Oregon white oak	*Quercus garryana*	2*10		M		retain	
	1034	Oregon white oak	*Quercus garryana*	4*12	25	M		remove	
	1035	Oregon white oak	*Quercus garryana*	24	25	I		retain	
4046	1036	red alder	*Alnus rubra*	12		P		remove	
	1037	Douglas-fir	*Pseudotsuga menziesii*	34	15	M	ivy growing up main stem	remove	
	1038	red alder	*Alnus rubra*	6		P	extensive ivy	remove	
	1039	red alder	*Alnus rubra*	12		P		remove	
	1040	red alder	*Alnus rubra*	12		P		remove	
	1041	Oregon white oak	*Quercus garryana*	24		M	ivy growing into crown	retain	
	1042	red alder	*Alnus rubra*	12		P		retain	
	1043	red alder	*Alnus rubra*	12		P		retain	
	1044	Oregon white oak	*Quercus garryana*	26		M	ivy growing into crown	retain	
	1045	Oregon white oak	*Quercus garryana*	12		G		likely to be removed	
4043	1046	Oregon white oak	*Quercus garryana*	10		M		remove	
4045	1047	Oregon white oak	*Quercus garryana*	14		P	overtopped	remove	
	1048	Oregon white oak	*Quercus garryana*	16		G		retain	
4044	1049	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		remove	
	1068	Oregon white oak	*Quercus garryana*	20		M	ivy growing into crown	retain	
	1069	Oregon white oak	*Quercus garryana*	18		M		retain	yes

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	1114	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		retain	
	1120	bigleaf maple	*Acer macrophyllum*	12		M		remove	
	1128	Douglas-fir	*Pseudotsuga menziesii*	17	10	M	small live crown	retain	
	1129	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	overtopped	retain	yes
	1150	Douglas-fir	*Pseudotsuga menziesii*	24	13	G	one-sided crown; remove ivy, retain in group	retain	
	1152	Douglas-fir	*Pseudotsuga menziesii*	29	14	M	one-sided crown; retain in group	retain	
	1153	Douglas-fir	*Pseudotsuga menziesii*	22	12	G	retain in group	retain	
	1154	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	retain in group	retain	
	1156	Douglas-fir	*Pseudotsuga menziesii*	17	10	M	pistol butt; retain in group	retain	
	1157	Douglas-fir	*Pseudotsuga menziesii*	24	13	G	one-sided crown; retain in group	retain	
	1158	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	one-sided crown; retain in group	retain	
	1159	Oregon white oak	*Quercus garryana*	24		P	narrow crown angle, limited response potential	retain	
	1167	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		retain	
	1173	Douglas-fir	*Pseudotsuga menziesii*	20		M	one-sided crown; retain in group	retain	
	1184	Oregon white oak	*Quercus garryana*	25		I	one-sided crown	retain	
	1199	Scouler's willow	*Salix scouleriana*	14		P	poor condition	retain	yes
1255	1255	Oregon white oak	*Quercus garryana*	12		M		retain	
	1256	Scouler's willow	*Salix scouleriana*	18		P	decay	retain	
	1257	Oregon white oak	*Quercus garryana*	2*20	35	I	wide crown, moderate crown density	retain	
	1263	bigleaf maple	*Acer macrophyllum*	12		M		retain	
	1264	Oregon white oak	*Quercus garryana*	36	30	I		retain	
	1274	bigleaf maple	*Acer macrophyllum*	14		M		retain	
	1275	bigleaf maple	*Acer macrophyllum*	12		M		retain	
	1278	bigleaf maple	*Acer macrophyllum*	14		M		retain	
	1284	Oregon white oak	*Quercus garryana*	12		M		retain	
	1285	Oregon white oak	*Quercus garryana*	36	36	I	three codom stems, good crown vigor	retain	
	1292	Oregon white oak	*Quercus garryana*	12		M	one-sided crown	retain	
	1293	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
	1365	Oregon white oak	*Quercus garryana*	12		G		retain	
	1367	Oregon white oak	*Quercus garryana*	20		G		retain	
	1369	Oregon white oak	*Quercus garryana*	3*12		G		retain	
	1371	Oregon white oak	*Quercus garryana*	14		G		retain	
	1495	Oregon white oak	*Quercus garryana*	52	40	I	four trunks, large canopy	retain	
	1514	bigleaf maple	*Acer macrophyllum*	9		M		retain	
	1515	bigleaf maple	*Acer macrophyllum*	11		M		retain	
	1524	bigleaf maple	*Acer macrophyllum*	11		M		retain	
	1527	bigleaf maple	*Acer macrophyllum*	9		P		remove	
	1615	Oregon white oak	*Quercus garryana*	55	40	I	multiple trunks	retain	
	1715	Scouler's willow	*Salix scouleriana*	18		P	decrepit, decay	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	1716	Scouler's willow	*Salix scouleriana*	15		P	decrepit, decay	retain	
	1717	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	1718	Scouler's willow	*Salix scouleriana*	14		P	decrepit, decay	retain	
	1719	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	1720	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	2864	Scouler's willow	*Salix scouleriana*	2*8	10	P		remove	
	2982	pine	*Pinus spp.*	8		P		remove	
	3003	bigleaf maple	*Acer macrophyllum*	10		M		remove	
	9330	pine	*Pinus spp.*	10		M		remove	
	21018	pine	*Pinus spp.*	10		P		remove	
	21141	Douglas-fir	*Pseudotsuga menziesii*	9		M	suppressed, retain in group only	retain	yes
	21142	Douglas-fir	*Pseudotsuga menziesii*	9		M	suppressed, retain in group only	retain	yes
	21143	Douglas-fir	*Pseudotsuga menziesii*	10		M	retain in group	retain	
	21144	Douglas-fir	*Pseudotsuga menziesii*	9		M	retain in group	retain	
	21145	Douglas-fir	*Pseudotsuga menziesii*	10		M	retain in group	retain	
	21146	Douglas-fir	*Pseudotsuga menziesii*	9		M	retain in group	retain	
2932	21147	Scouler's willow	*Salix scouleriana*	18		P	decrepit, preserve for wildlife habitat if no target	retain	yes
2945	21148	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
2896	21149	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
2895	21150	sweet cherry	*Prunus avium*	2*12		P	invasive species	retain	
2894	21151	sweet cherry	*Prunus avium*	12		P	invasive species	retain	
2893	21152	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
	21153	Scouler's willow	*Salix scouleriana*	9		P		retain	
	21154	Scouler's willow	*Salix scouleriana*	8		P		retain	
2797	21155	Douglas-fir	*Pseudotsuga menziesii*	18		M	high live crown; retain in group only	retain	yes
	21158	lodgepole pine	*Pinus contorta*	8		P		retain	
	21160	Douglas-fir	*Pseudotsuga menziesii*	8		P	failing	retain	yes
	21161	lodgepole pine	*Pinus contorta*	9		M		retain	
	21162	lodgepole pine	*Pinus contorta*	12		M		retain	
	21163	lodgepole pine	*Pinus contorta*	13		M		retain	
	21164	lodgepole pine	*Pinus contorta*	8		M		retain	
2899	21165	ponderosa pine	*Pinus ponderosa*	18	14	M	dead branches, high live crown	retain	
	21166	Scouler's willow	*Salix scouleriana*	8		P	extensive ivy	retain	
	21167	Douglas-fir	*Pseudotsuga menziesii*	8		P		remove	
	21168	Douglas-fir	*Pseudotsuga menziesii*	9		P		remove	
	21169	Douglas-fir	*Pseudotsuga menziesii*	10		M		remove	
	21170	Scouler's willow	*Salix scouleriana*	9		P		retain	
	21171	Scouler's willow	*Salix scouleriana*	12		P	ivy growing into crown	retain	
2992	21173	black cottonwood	*Populus trichocarpa*	16		M	inherent species limitations	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	21174	Douglas-fir	*Pseudotsuga menziesii*	11		M		retain	
	21175	Douglas-fir	*Pseudotsuga menziesii*	13		M		retain	
	21176	Douglas-fir	*Pseudotsuga menziesii*	9		M		remove	
	21177	Oregon white oak	*Quercus garryana*	8		P		remove	
	21178	red alder	*Alnus rubra*	6		P		remove	
	21179	red alder	*Alnus rubra*	6		P		remove	
	21180	red alder	*Alnus rubra*	6		P		remove	
	21181	Douglas-fir	*Pseudotsuga menziesii*	6		P		remove	
	21182	red alder	*Alnus rubra*	6		P		remove	
	21183	red alder	*Alnus rubra*	11		P		remove	
	21185	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21186	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21187	Scouler's willow	*Salix scouleriana*	10		P		remove	
	21188	Scouler's willow	*Salix scouleriana*	10		P		retain	
	21190	Scouler's willow	*Salix scouleriana*	8		P		retain	
	21191	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21192	Scouler's willow	*Salix scouleriana*	24		P	decrepit, decay	retain	
	21193	Scouler's willow	*Salix scouleriana*	18		P	decrepit, decay	retain	
	21194	Scouler's willow	*Salix scouleriana*	10		P	decrepit, decay	retain	
2948		deciduous	*unknown*	18		M		likely to be removed	
2949		deciduous	*unknown*	18		M		retain	
2957		Scouler's willow	*Salix scouleriana*	48		M		remove	
2975		Scouler's willow	*Salix scouleriana*	14		M		remove	
2980		magnolia	*Magnolia spp.*	12		P		remove	
2981		magnolia	*Magnolia spp.*	8		P		remove	
2988		deciduous	*unknown*	16		M		remove	
2990		deciduous	*unknown*	12		M		remove	
2994		deciduous	*unknown*	12		M		remove	
3032		deciduous	*unknown*	12		M		remove	
3033		deciduous	*unknown*	6		P		remove	
3034		deciduous	*unknown*	8		P		remove	
3035		deciduous	*unknown*	14		M		remove	
3037		pine	*Pinus spp.*	14		M		remove	
3038		pine	*Pinus spp.*	14		M		remove	

DBH: Diameter at Breast Height (measured 4.5-feet above ground level in inches); trees with multiple trunks splitting below DBH are measured separately and individual trunk measurements are separated by a comma, except multiple trunks of the same size are indicated with an asterisk (quantity * size)

C-Rad: Crown Radius, the distance from the center of the tree to the edge of the dripline (measured in feet)

Condition Codes: I -Important; G - Good; M- Moderate; P - Poor

Re-evaluate: Yes identifies trees recommended for re-evaluation at the time of construction in terms of general condition, hazard potential, and safety.

SAP SOUTH – PLAN AREA 2
SIGNIFICANT RESOURCE IMPACT REPORT &
SIGNIFICANT RESOURCE OVERLAY ZONE MAP REFINEMENT
WILSONVILLE, OREGON
T3S, R1W, SECTION 15, TAX LOTS 2800 AND 2890
CLACKAMAS COUNTY, W.M.

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SWCA Project No. 21087.07

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INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by Polygon Northwest Company to conduct a wetland delineation and prepare a significant resource impact report (SRIR) for the SAP South – Plan Area 2 project located in Wilsonville, Clackamas County, Oregon (Appendix A, Figure 1). The site is located east of SW Grahams Ferry Road and south of SW Boeckman-Tooze Road. The study area for the SAP South – Plan Area 2 wetland delineation includes tax lots 2800 and 2890 (Appendix A, Figure 2). The total study area is approximately 42.75 acres.

PHYSICAL ANALYSIS

Soil Types

The following soil units are mapped within the study area according to the Natural Resources Conservation Service (NRCS) Clackamas County Area Soil Survey map (Appendix A, Figure 3):

- Aloha silt loam (Unit 1A): 0–3% slopes; hydric Huberly and Dayton inclusions
- Aloha silt loam (Unit 1B): 3–6% slopes; hydric Huberly and Dayton inclusions
- Amity silt loam (Unit 3); hydric Huberly and Dayton inclusions
- Woodburn silt loam (Unit 91A): 0–3% slopes; hydric Huberly, Dayton, and Aquolls inclusions
- Woodburn silt loam (Unit 91B): 3–8% slopes; hydric Huberly, Dayton, and Aquolls inclusions (NRCS 2013)

Geology

The SAP South – Plan Area 2 project area is located at the southern end of the Tonquin Geologic Area, which extends south from Tualatin and Sherwood to the Willamette River. This area has a unique landscape with extensive evidence of the Bretz Floods (or Missoula Floods) that scoured the Columbia River Gorge and extended into the Willamette Valley multiple times between approximately 13,000 and 15,000 years ago. Receding floodwaters from these events left behind unique geologic formations such as kolk ponds and channels, and basalt hummocks and knolls, which are still present throughout the area today (Metro 2013).

Hydrology

Sources of wetland hydrology in the project area include direct precipitation and a seasonally high groundwater table. Wetlands in the project area exhibit either seasonally saturated soils or shallow ponding during the growing season.

Location of Wetlands

The locations of wetlands mapped in the City of Wilsonville's (the City's) Local Wetlands Inventory (LWI; Fishman Environmental Services 2000) are shown in Figure 4 in Appendix A. SWCA conducted a wetland delineation in May 2013 to refine the location of LWI-mapped wetlands in the project area. Four wetlands were delineated in the project area. Two palustrine forested (PFO) wetlands (referred to as Wetlands A and B) and two palustrine emergent (PEM) wetlands (referred to as Wetlands C and D) were delineated and are shown in Figures 5 and 6 in Appendix A. The wetland delineation was concurred by DSL on October 8, 2013 (DSL WD #2013-0196). The wetland delineation report and DSL correspondence are included in Appendix B.

Location of SROZ and Impact Area Boundaries

Figures 7 and 8 in Appendix A show the location of the existing mapped Significant Resource Overlay Zone (SROZ) boundaries and the 25-foot Impact Area boundaries. The refined SROZ boundaries are based upon the wetland delineation conducted by SWCA, the existing tree canopy drip line as determined by the tree survey, and the City's existing SROZ boundaries. The existing SROZ boundaries mapped on the City's SROZ maps are shown in Figure 9. The refined SROZ boundaries are shown in Figure 10, and Figure 11 shows both the existing and refined boundaries.

Wetlands

The boundaries of three wetlands (units 6.03d, 6.01, and a small wetland mapped in the northwest corner of upland habitat unit 6.011U) mapped in the City's Natural Resource Inventory (Fishman Environmental Services 2000) were revised based on the wetland delineation. These three wetlands were identified in the wetland delineation as Wetlands A, B, and C. In addition, a previously unmapped wetland (Wetland D) was identified in the southwest corner of the project area during the wetland delineation.

According to the City's SROZ requirements, a 50-foot vegetated corridor is required adjacent to significant wetlands that are mapped in the City's inventory or meet the definition of a Metro Title 3 wetland, for areas where the slope adjacent to the wetland is less than 25%.

Title 3 wetlands are defined in Chapter 3.07 of Metro's Urban Grown Management Functional Plan as "wetlands of metropolitan concern as shown on the Metro Water Quality and Flood Management Area Map and other wetlands added to city or county adopted Water Quality and Flood Management Area maps consistent with the criteria in Title 3, section 3.07.340 (E) (3)" (Metro 2012). Title 3 wetlands do not include artificially constructed and managed stormwater and water quality treatment facilities.

The criteria in Metro Title 3, section 3.07.340 (E) (3) are contained in the City's development code section 4.139.10 (.02) as follows:

> A. The wetland is fed by surface flows, sheet flows or precipitation, and has evidence of flooding during the growing season, and has 60 percent or greater vegetated cover, and is

over one-half acre in size; or the wetland qualifies as having intact water quality function under the 1996 Oregon Freshwater Wetland Assessment Methodology; or

B. The wetland is in the Metro Title 3 Flood Management Area as corrected by the most current FEMA Flood Insurance Rate Maps, and has evidence of flooding during the growing season, and is five acres or more in size, and has a restricted outlet or no outlet; or the wetland qualifies as having intact hydrologic control function under the 1996 Oregon Freshwater Wetland Assessment Methodology; or

C. The wetland or a portion of the wetland is within a horizontal distance of less than one-fourth mile from a water body which meets the Department of Environmental Quality definition of water quality limited water body in OAR Chapter 340, Division 41 (1996).

D. Created or restored wetlands that meet the requirements of Section 4.139.10(.02) shall be added to the Significant Resource Overlay Zone. [Added by Ord. # 674 11/16/09]

Wetland A was mapped in the City's LWI (as Unit 6.02) and was determined to be a non-locally significant wetland due to being smaller than 0.5 acre. Site conditions of this wetland are unchanged, and it remains a non-locally significant wetland.

Wetland C was mapped in the City's LWI (as Unit 6.01) and was determined to be a non-locally significant wetland due to being smaller than 0.5 acre. Site conditions of this wetland are unchanged, and it remains a non-locally significant wetland.

Wetland D was not mapped in the City's LWI. This wetland does not meet the City's criteria for adding wetlands to the SROZ per the City's development code section 4.139.10 (.02) based on the following site conditions of Wetland D:

A) Wetland D is fed by precipitation, does not display evidence of flooding during the growing season, and it is less than 0.5 acre in size.

B) Wetland D is not in the Metro Title 3 Flood Management Area as corrected by the most current FEMA Flood Insurance Rate Maps, it does not display evidence of flooding during the growing season, and it is less than 0.5 acre in size.

C) Wetland D is not within a horizontal distance of less than 0.25 mile from a DEQ water quality limited water body.

D) Wetland D is not a created or restored wetland meeting the requirements of section 4.139.10 (.02).

The northern portion of Wetland B was mapped in the City's LWI (as Unit 6.03d) and was determined to be a locally significant wetland. The southern, approximately 75-foot section of Wetland B, located south of an existing paved road, was not mapped in the City's LWI but was identified during the on-site wetland delineation. This southern section of Wetland B is 0.07 acre and does not meet the City's criteria for addition of wetlands to SROZ maps according to section 4.139.10 (.02) in the City's development code. This section of the

wetland consists of an emergent wetland community dominated by Pacific water-dropwort (*Oenanthe sarmentosa*), Siberian springbeauty (*Claytonia sibirica*), and lamp rush (*Juncus effusus*). This section of the wetland is much more open and sparsely vegetated in the tree and shrub layers and does not provide the diverse wildlife habitat that is provided by the northern portion of the wetland determined to be locally significant in the City's LWI. This feature is surrounded on all sides by existing paved roads and former Living Enrichment Center developed areas, which isolate this feature from the larger contiguous complex of wetlands and forested upland wildlife habitat to the north.

The results of the Oregon Freshwater Wetland Assessment Methodology (OFWAM) assessment for the southern section of Wetland B are that the wetland provides wildlife habitat for some species and has degraded water quality and hydrologic control functions (Appendix E). The southern section of Wetland B does not provide any fish habitat due to the long section of culvert that separates this wetland from downstream waters. The southern portion of Wetland B was determined to be a non-locally significant wetland, and it does not meet the criteria for adding wetlands to the SROZ maps.

A 50-foot vegetated corridor has been mapped adjacent to the northern portion of Wetland B that meets the City's criteria for locally significant wetlands and inclusion on the SROZ maps. The boundaries of the Metro Title 3 Water Quality Resource Area is shown in Figure 7 in Appendix A.

Forested Wildlife Habitat

The boundaries of significant forested wildlife habitat (units 6.02U, 6.03U, and 6.011U) were mapped in the City's inventory. The SROZ map reviewed during field work conducted in 2013, and the boundaries of forested wildlife habitat were revised in two locations to more closely follow the drip line of the mature forest canopy than was possible at the scale of the mapping used for the City's inventory. The map refinement resulted in the removal of two areas of forest edge from the SROZ map. The refined boundaries of the forested wildlife habitat are shown in Figures 10 and 11 in Appendix A. Natural resource function ratings for the two upland forest units to which map refinements are proposed (Unit 6.02U and 6.03U) are described later in this document, and upland summary sheets are included in Appendix D.

Existing Significant Resource Conditions

The condition of the locally significant wetland B is described in the wetland delineation report prepared by SWCA in June 2013 (Appendix B).

The significant forested wildlife habitat consists of a mixed coniferous/deciduous forest and includes both upland and wetland forest. Existing conditions of the forested wildlife habitat are similar to conditions documented in the City's inventory in 2000. Vegetation communities are described in the ecological analysis section below. Information regarding the current wildlife habitat assessment ratings is summarized in the functional assessment section later in the document. Current photos of site conditions are included in Appendix C.

ECOLOGICAL ANALYSIS

The site was occupied until approximately 2004 by the Living Enrichment Center. It contained a large central complex of buildings, several smaller cottages, and numerous paved roads and trails. The buildings were vacant for nearly a decade until they were recently demolished to allow for site redevelopment. The boundaries of delineated wetlands are shown in Figures 5 and 6. The boundaries of the refined significant forested wildlife habitat areas are shown in Figure 10. Vegetation communities and wildlife use in the significant forested habitat areas are described below.

Vegetation Communities

The significant forested wildlife habitat consists of a mixed coniferous/deciduous forest containing primarily Oregon white oak, Douglas fir, bigleaf maple, balsam poplar, and red alder in upland forests. Oregon ash and Scouler's willow are present in the forested wetland habitat. In general, tree overstory canopy cover ranges from 80% to 90% throughout the project area. Additional information regarding the existing condition of trees on the site is contained in the Tree Maintenance and Protection Plan (Morgan Holen & Associates 2013). The forest understory contains a high diversity of native shrubs and groundcovers, which provide a multilayered vegetation community. Aerial cover by shrubs and groundcovers ranges from 50% to 100% throughout the project area. The occurrence of non-native species in forested habitats is generally low. The forested areas in the east portion of the site have the highest occurrence of non-native species, including Himalayan blackberry, English holly, and English ivy. Table 1 includes the native, non-native, and noxious vegetation occurring on the site.

Table 1. Vegetation Occurring within Forested Wildlife Habitat Areas

Common Name	Scientific Name	Native/Introduced and Noxious[1]
Trees		
Big-Leaf Maple*	*Acer macrophyllum*	Native
Red Alder*	*Alnus rubra*	Native
Oregon Ash*	*Fraxinus latifolia*	Native
Balsam Poplar*	*Populus balsamifera*	Native
Douglas-Fir*	*Pseudotsuga menziesii*	Native
Oregon White Oak*	*Quercus garryana*	Native
Scouler's Willow	*Salix scouleriana*	Native
Western Arborvitae	*Thuja plicata*	Native
Shrubs		
Saskatoon Service-Berry	*Amelanchier alnifolia*	Native
Red Osier*	*Cornus alba*	Native

Table 1. Vegetation Occurring within Forested Wildlife Habitat Areas

Common Name	Scientific Name	Native/Introduced and Noxious[1]
Beaked Hazelnut*	*Corylus cornuta*	Native
Black Hawthorn*	*Crataegus douglasii*	Native
Cascara False Buckthorn	*Frangula purshiana*	Native
Salal*	*Gaultheria shallon*	Native
Creambush	*Holodiscus discolor*	Native
English holly	*Ilex aquifolium*	Introduced
Oregon Crabapple	*Malus fusca*	Native
Oso-Berry	*Oemleria cerasiformis*	Native
Rose*	*Rosa* species	-
Himalayan Blackberry	*Rubus armeniacus*	Noxious
Cut-Leaf Blackberry	*Rubus laciniatus*	Introduced
Salmon Raspberry	*Rubus spectabilis*	Native
Douglas' Meadowsweet	*Spiraea douglasii*	Native
Common Snowberry*	*Symphoricarpos albus*	Native
Pacific poison oak*	*Toxicodendron diversilobum*	Native
Woody Vines		
English ivy	*Hedera helix*	Noxious
California Dewberry*	*Rubus ursinus*	Native
Herbs		
Dense Sedge	*Carex densa*	Native
Taper-Fruit Short-Scale Sedge*	*Carex leptopoda*	Native
Slough Sedge*	*Carex obnupta*	Native
Thick-Head Sedge	*Carex pachystachya*	Native
Canadian Thistle	*Cirsium arvense*	Noxious
Bull Thistle	*Cirsium vulgare*	Noxious
Siberian Springbeauty*	*Claytonia sibirica*	Native
Pacific Bleedinghearts	*Dicentra formosa*	Native
Fringed Willowherb	*Epilobium ciliatum*	Native
Tall fescue	*Festuca arundinacea*	Introduced
Sticky-Willy	*Galium aparine*	Native
Dovefoot geranium	*Geranium molle*	Introduced

Table 1. Vegetation Occurring within Forested Wildlife Habitat Areas

Common Name	Scientific Name	Native/Introduced and Noxious[1]
Large-Leaf Avens	*Geum macrophyllum*	Native
Common Velvet Grass	*Holcus lanatus*	Introduced
Hairy Cat's-Ear	*Hypochaeris radicata*	Introduced
Pale-Yellow Iris	*Iris pseudacorus*	Noxious
Lamp Rush	*Juncus effusus*	Native
Lupine	*Lupinus species*	-
False lily of the valley	*Maianthemum species*	Native
Pacific Water-Dropwort*	*Oenanthe sarmentosa*	Native
Reed Canary Grass	*Phalaris arundinacea*	Introduced
Common Timothy	*Phleum pratense*	Introduced
Rough-Stalk Blue Grass*	*Poa trivialis*	Introduced
Pineland Sword Fern*	*Polystichum munitum*	Native
Northern Bracken Fern	*Pteridium aquilinum*	Native
Western Buttercup	*Ranunculus occidentalis*	Native
Coastal Hedge-Nettle	*Stachys chamissonis*	Native
Fragrant Fringecup	*Tellima grandiflora*	Native
Western Wakerobin	*Trillium ovatum*	Native
California False Hellebore	*Veratrum californicum*	Native
Vetch	*Vicia* species	-

[1] Native per Hitchcock and Cronquist 1973 and U.S. Department of Agriculture PLANTS database (http://plants.usda.gov/).
Noxious per Oregon Department of Agriculture (ODA) (http://www.oregon.gov/ODA/PLANT/WEEDS/lists.shtml).
* Dominant species

Wildlife Species

Wildlife observations were minimal during the May 20 and 23, 2013, site visits. Table 2 includes wildlife species likely to use the site based on May 2013 observations as well as observations recorded on the project site during the City's inventory.

Table 2. Wildlife Species Likely to Occur within Forested Wildlife Habitat Areas

Common Name	Scientific Name
Mammals	
Coyote	*Canis latrans*
Black-tailed deer	*Odocoileus hemionus*
Western gray squirrel	*Sciurus griseus*
Douglas' squirrel	*Tamiasciurus douglasii*
Birds	
Red-tailed hawk	*Buteo jamaicensis*
Swainson's thrush	*Catharus ustulatus*
American crow	*Corvus brachyrhynchos*
Steller's jay	*Cyanocitta stelleri*
Pileated woodpecker	*Dryocopus pileatus*
Song sparrow	*Melospiza melodia*
Spotted towhee	*Pipilo maculatus*
Red-breasted nuthatch	*Sitta canadensis*
Amphibians	
Pacific chorus frog	*Hyla regilla*
Rough-skinned newt	*Taricha granulosa*
Reptiles	
Common garter snake	*Thamnophis sirtalis*

PROPOSED SROZ MAP REFINEMENT

The boundaries of the significant forested wildlife habitat were revised in two locations to more closely follow the drip line of the mature forest canopy than was possible at the scale of the mapping used for the City's inventory. This map refinement resulted in the removal of two areas of smaller diameter Douglas fir trees planted closely in rows. Due to the artificial plantation-like spacing of trees in the two map refinement areas and the absence of oak in these areas, they were removed from the SROZ map. The refined boundaries of the forested wildlife habitat are shown in Figures 10 and 11 in Appendix A.

Natural resource function ratings for the two upland forest units to which map refinements are proposed (Unit 6.02U and 6.03U) were assessed in 2000 for the City's Natural Resource Inventory and are summarized in Table 3. Existing conditions of the two areas proposed to be removed from the refined SROZ map are also summarized in Table 3. The two forest edge areas where map refinements are proposed to remove these areas from the SROZ map

do not provide high functions for any of the assessed habitat criteria. Upland summary sheets have been prepared for the areas proposed to be removed from the SROZ map. These areas have been identified as Units 6.02U-Refined and 6.03U-Refined; upland summary sheets are included in Appendix D.

Table 3. Wildlife Habitat Assessment Summary for Map Refinement Areas for Years 2000 and 2013

Upland Habitat Function	City's Inventory Rating (2000)	Comments	Current Rating (2013)	Comments
Wildlife habitat	High	Diverse vegetation and structure, large size	Medium	Map refinement will remove two small areas of forest edge habitat with artificial plantation-like spacing of fir trees and limited shrub understory
Water quality protection	Medium	Some protection provided to wetlands	Low	No wetlands or waters are adjacent to map refinement areas
Ecological integrity	Medium	Eastern forest is disturbed	Medium	Invasive species are present including Himalayan blackberry, English ivy, and English holly
Connectivity	Medium	Provides escape area from agricultural areas, Grahams Ferry Road may be barrier	Medium	Removal of forest edge habitat will not reduce connectivity of remaining wildlife habitat areas
Uniqueness	Medium	Representative of high-quality habitat	Low	Map refinement areas contain Douglas trees with invasive species present; no oak trees are present in the refinement areas.

PROPOSED SITE DEVELOPMENT AND SROZ IMPACTS

The proposed site development plan avoids impacts to the locally significant portion of wetland B and to the 50 foot vegetated corridor adjacent to the locally significant wetland. Impacts to upland forested wildlife habitat and the larger diameter oak trees on the site have been minimized to the maximum extent practicable based on several site walk-throughs with City natural resource staff and subsequent revisions to the layout of roads and lots on the site. It was not possible to avoid all impacts to the upland forested wildlife habitat. Minor impacts are proposed due to roads, residential lots, and a trail connection.

The Area of Limited Conflicting Use (ALCU) on the project site totals 866,388 square feet (SF), or 19.9 acres. Impacts will occur to small portions of the upland forested wildlife habitat along the forest edge. The area to be impacted within the Area of Limited Conflicting Use is 34,730 SF (0.80 acre), or 4% of the total ALCU. The proposed mitigation areas are

located along the eastern and southern edges of the upland forest to maximize the wildlife habitat benefit of the mitigation by locating it contiguous with the Graham Oaks Nature Park which borders the east and southeast portions of the site. The proposed forested wildlife habitat encroachment and mitigation areas are shown on the proposed development plan in Figures 12 and 13.

All impacts to the SROZ are allowed under section 4.139.04 of the City's development code. The layout of the SAP South –Plan Area 2 was designed consistent with the Villebois land use plan. One of the elements in the design of the road network in the Villebois land use plan was the location of streets next to parks and open spaces with the goal of maximizing viewing opportunities and the visibility of surrounding natural areas. Chapter 2 – Plan Implementation, Policy #2 states "Future development applications within Villebois Village area shall provide land uses and other major components of the Plan such as roadways and parks and open space in general compliance with their configuration as illustrated on Figure 1 – Land Use Plan or as refined by specific area plans." Per Policy #2, the proposed land use plan for the Future Study Area shows lot configuration and circulation patterns consistent with other areas of Villebois Village Master Plan Figure 1 – Land Use in which streets are located next to parks and open space areas to maximize viewing opportunities and visibility.

Additionally, Chapter 2 – General Land Use Plan Goal states: "Villebois Village shall be a complete community that integrates land use, transportation, and natural resource elements to foster a unique sense of place and cohesiveness." One of the guiding design principles of Villebois was to create a sense of place through connectivity between land use, transportation, and parks and open space. One of the ways this is accomplished in the SAP South – Plan Area 2 is to design a pedestrian-oriented community in which driveway access is via alleys behind residential lots which has the effect of minimizing traffic on main roads.

Table 4 summarizes the proposed SROZ encroachment areas and the activities that are proposed to occur in the SROZ. The paragraphs below describe measures taken to minimize impacts pursuant to 4.139.06.03(E). A mitigation plan for impacts to the SROZ is discussed later in this report.

Table 4. Summary of Proposed SROZ Encroachments

Impact Area ID	Impact Area (SF)	Existing Function	Proposed Use
Wildlife Habitat			
1	310	M	Pedestrian trail
2	5,876	M	Road, residential lots
3	2,350	M	Road, residential lots
4	25,492	M	Road, residential lots
5	348	M	Road
6	354	M	Residential lot
TOTAL	34,730		

Encroachment into the SROZ has been minimized for the entire project including the proposed six SROZ encroachment areas listed in Table 4 by siting almost the entire proposed development in previously developed areas of the site (Figure 14). This previously developed area contains remnant paved areas from the central complex of buildings, several smaller cottages, and numerous paved roads that previously occupied the site before buildings were demolished for redevelopment. Impacts for each of the six SROZ encroachment areas were further minimized on a case by case basis as summarized in the paragraphs below.

SROZ impact area 1 is necessary to construct a pedestrian connection from the internal street to Grahams Ferry Road. The tract containing the trail is 15 feet wide, and the path is proposed to be a 5 feet wide nature path. Impacts have been minimized by siting this trail in an open area at the forest edge where minimal grading and vegetation removal would be necessary, and it would preferably be constructed with natural materials. It has been included as an impact area because there will be a minimal amount of grading associated with construction of the nature path and there is potential that, through the review process, this trail connection may be required to be paved.

Impact Areas 2, 3, 4, 5 and 6 would result from construction of roads and residential lots in the outer edges of the SROZ. Development in this area of the site is constrained by a locally significant wetland and its 50 foot wide vegetated corridor on the west and by high quality mixed Oregon white oak/Douglas fir forest in the forest interior along the eastern edge of the site. Impacts to the SROZ have been minimized by locating development outside the wetland and its vegetated corridor and by limiting impacts to the forest edge which consists of lower quality Douglas fir forest.

As previously stated, SROZ impact areas 2, 3, 4, 5 and 6 have been minimized by siting almost the entire proposed development in the central previously developed and disturbed areas of the site (Figure 14). Based on a series of site walk-throughs conducted on February 13 and 15, May 16, and October 2, 2013 with City staff, the project arborist, and the consultant team for the project, the design of the residential lots and roads was revised in multiple locations to shift proposed impact areas in order to avoid larger diameter oak trees and higher quality forest communities. The proposed site plan is the result of the revisions made as a result of feedback provided by the city during these site visits. Encroachment into the SROZ were minimized by reducing lot sizes in order to reduce the total width necessary to accommodate the road-lot-alley layout of the proposed development while meeting the other goals of the Villebois Village Master Plan. The road-lot-alley layout is necessary for consistency with the stated design principles of the Villebois development described above, and impacts in this area cannot be further reduced while maintaining consistency with the goal of designing a pedestrian-oriented community.

Impacts to the SROZ would be mitigated through natural resource enhancement at a ratio of 2 ½: 1 (mitigation:impact) in accordance with the mitigation standards in section 4.139.07 of the City's development code. The mitigation plan for encroachment into the SROZ is discussed in the next section of this report. In addition to mitigating for SROZ impacts in accordance with the ratios required in the City's SROZ code, the applicant is proposing to

create additional SROZ areas totaling 61,967 SF as shown on Figure 15. These SROZ creation areas are areas that were disturbed by the previous development on the site and in which pavement will be removed and the areas will be planted with native trees, shrubs and groundcovers to restore them to a natural condition consistent with the adjacent existing SROZ.

A series of nature trails and nature trail activity areas are proposed in the SROZ as shown on Figure 16. The construction of these trails is exempt from the SROZ regulations and will be constructed in accordance with section 4.139.04 (.08) of the City's development code. According to the City's code, the construction of new pedestrian paths into the SROZ in order to provide access to the sensitive area or across the sensitive area is an exempt use, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan and that paths are constructed so as to minimize and repair disturbance to existing vegetation and slope stability. The nature trail activity areas are also an exempt use because they will correspond with the trail system and will be providing educational nature play opportunities. Impacts to the SROZ due construction of trails and nature trail activity areas will be minimized by siting these features partially in areas that were previously disturbed by the paved road network on the site and partially in open canopy forest edges. Trail and nature trail activity locations shown on Figure 16 are general locations, and exact locations will be field located to ensure they are located to best minimize impacts to vegetation. Additional information regarding the design of the nature trail activity areas will be included in the Final Development Plan.

In summary, the nature trails and the nature trail activity areas are exempt per Section 4.139.04(.08), and the following measures will be implemented to ensure minimal impact to the adjacent SROZ.

- Trails and nature trail activity areas will be field located and will be sited and constructed in a way that will not impact the natural environment.
- Trails and nature trail activity areas will be located to use existing trails and existing disturbed areas, including existing paved areas, as much as possible.
- Trails and nature trail activity areas will be sited to ensure no tree removal and no grading will occur.
- Nature trail activity areas will be sited next to trails to contain activities within close proximity to trails.
- Trails will be soft surface, and natural materials will be utilized for nature trail activity areas that will blend with the surrounding natural environment.
- For safety purposes, any nature trail activity areas that children may climb on will not exceed 30 inches in height and will have wood chips placed within the fall zone.
- Coordination with the City's Natural Resources Program Manager will occur during field location and placement of nature trails and nature trail activity areas.

DEVELOPMENT RECOMMENDATIONS TO MITIGATE HYDROLOGIC IMPACTS

Minor wetland impacts (1,258 square feet/0.03 acre) to wetland C are proposed for site development (Figure 17). The majority of wetlands (1.66 acres) on the site will be protected during site development and will continue to provide the water quality and hydrologic control functions they currently provide. Large areas of upland forest contained within the SROZ will be preserved during site development, which will minimize the potential for hydrologic impacts. An erosion and sediment control plan will be prepared prior to the start of construction, which will include standard grading and erosion control measures to be used during construction to prevent construction runoff from entering wetlands on the site.

MITIGATION PLAN

Functional Assessment

Natural resource function ratings for the upland forest (Unit 6.011U; Appendix D) on the project site were assessed in 2000 for the City's Natural Resource Inventory and are summarized in Table 5. Existing conditions of the upland forest where encroachment is proposed are similar to conditions observed in 2000; however, forest edges where encroachments are proposed are of lower quality. The lower quality of forest edges is due to previous development on the site including roads and structures (a portion of which are located in the mapped SROZ) as well as having a more open understory containing invasive species. Site conditions of encroachment areas are very similar throughout the site. Therefore, the current wildlife habitat assessment ratings for proposed encroachment areas are summarized collectively in Table 5 below.

Table 5. Wildlife Habitat Assessment Summary for SROZ Encroachment Areas for Years 2000 and 2013

Upland Habitat Function	City's Inventory Rating (2000)	Comments	Current Rating (2013)	Comments
Wildlife habitat	High	Diverse vegetation and structure, large size	Medium	Forest edge where encroachment is proposed lacks the diverse vegetation and structure of the forest interior
Water quality protection	Medium	Some protection provided to wetlands	Medium	Some protection provided to wetlands
Ecological integrity	High-Medium	North and south forest = high; eastern forest more disturbed = medium	Medium	Forest edge contains invasive species including Himalayan blackberry, English ivy and English holly

Table 5. Wildlife Habitat Assessment Summary for SROZ Encroachment Areas for Years 2000 and 2013

Upland Habitat Function	City's Inventory Rating (2000)	Comments	Current Rating (2013)	Comments
Connectivity	Medium	Provides escape area from agricultural areas, Grahams Ferry Road may be barrier	Medium	Southern portion of SROZ is connected to Graham Oaks Nature Park
Uniqueness	Medium	Representative of high-quality habitat	Medium	Common native vegetation community with growth suppression of oak due to Douglas fir, invasive species present

No adverse impacts to upland habitat functions are anticipated due to minor encroachment by access roads and residential lots along the forest edge as summarized in Table 6.

Table 6. Summary of Adverse Ecological Impacts

Upland Habitat Function	Anticipated Adverse Impact?	Comments
Wildlife habitat	No	Minor impacts to forest edge habitat will occur due to construction of roads and residential lots. Invasive species will be removed and native shrubs will be planted to improve the quality of this function.
Water quality protection	No	This function is currently medium, and development is not expected to result in a change to this function due to the preservation of the majority of SROZ areas during site development.
Ecological integrity	No	The ecological integrity of the forest has been affected due to encroachment of invasive species in the eastern and southeastern portions of the site. Invasive species will be removed and native shrubs will be planted to improve the quality of this function.
Connectivity	No	No change will occur due to site development because the preservation of SROZ areas will maintain the connectivity of the site to the Graham Oaks Nature Park to the east and south as well as the connectivity of the site to the forested corridor extending south to the Willamette River.
Uniqueness	No	No change will occur due to site development.

Upland Wildlife Habitat Mitigation

Mitigation for SROZ encroachment into significant upland wildlife habitat will include a combination of invasive species control and enhancement of the understory in forested communities to improve the ecological integrity and uniqueness functions of the upland wildlife habitat.

The current assessment of habitat functions on the site determined that the existing ecological integrity function is medium due to invasive plants in the understory along the

forest edges, particularly in the eastern and southeast portions of the site. Invasive species control will focus on removal of English ivy, Himalayan blackberry, and English holly. Invasive species will be controlled using a combination of mechanical removal and herbicide application.

The forested wildlife habitat is also rated medium for uniqueness. Oregon white oak habitat provides valuable wildlife habitat, and oak trees in some areas of the site are experiencing growth suppression as a result of competition with adjacent Douglas fir trees. Select removal of Douglas fir trees growing adjacent to Oregon white oak trees could help to enhance the health and viability of oak trees in the SROZ by providing improved growing space for oak trees. Following clearing and once the site has been prepared for construction, the project arborist could walk the SROZ and identify trees in poor or hazardous condition, or those competing with Oregon white oak, and make recommendations for tree removal in order to improve the health and viability of the grove; these recommendations would be summarized in a supplemental arborist report. Following tree removal, large woody debris may be left on the site to enhance wildlife habitat value.

The upland wildlife habitat mitigation goal is to improve the ecological integrity and uniqueness functions to a "high" rating. According to the ratios established in Table NR-4 in Section 4.139.07 of the City's SROZ Ordinance, improving a function from a medium rating to a high rating requires mitigation at a ratio of 2.5:1. Table 7 lists the existing function rating at the SROZ impact sites, the existing and proposed function rating in the mitigation planting areas, and the mitigation area ratio. Based on the 2.5:1 mitigation ratio, to compensate for 34,730 SF of encroachment into significant wildlife habitat areas, a minimum of 86,825 SF would need to be enhanced. The applicant is proposing to conduct 195,195 SF of enhancement.

In addition to mitigating for SROZ impacts through SROZ enhancement in accordance with the ratios required in the City's SROZ code, the applicant is proposing to create additional SROZ areas totaling 61,967 SF as shown on Figure 15. The SROZ creation areas are areas that were disturbed by the previous development on the site and in which pavement will be removed and the areas will be planted with native trees, shrubs and groundcovers in accordance with the mitigation planting plan in Appendix F to restore them to a natural condition consistent with the adjacent existing SROZ.

Table 7. Summary of Proposed Upland Wildlife Habitat Mitigation Ratios

Wildlife Habitat Impact Area	Existing Function Rating at Impact Site	Existing & Proposed Function Rating at Mitigation Site	Mitigation Area Ratio (Mitigation : Impact)
1	M	M / H	2 ½ : 1
2	M	M / H	2 ½ : 1
3	M	M / H	2 ½ : 1
4	M	M / H	2 ½ : 1
5	M	M / H	2 ½ : 1
6	M	M / H	2 ½ : 1

Tree and shrub plantings to be installed in the SROZ enhancement area after invasive species have been controlled are shown in Table 8. A mitigation planting plan drawing depicting plant species, quantities, size, and spacing to meet the City's mitigation standards outlined in section 4.139.07 (.02) E. of the City's development code is included in Appendix F. Mitigation for tree removal outside the SROZ will be conducted in accordance with the Tree Preservation and Protection code and will be provided under separate cover.

Table 8. Mitigation Plantings

Scientific Name	Common Name	Size (inches)	Spacing	Quantity
Trees				
Acer circinatum	Vine maple	18–24	8–12 feet on center	62
Amelanchier alnifolia	Serviceberry	18–24	8–12 feet on center	111
Crataegus douglasii	Black hawthorn	24–36	8–12 feet on center	87
Rhamnus purshianai	Cascara	24–36	8–12 feet on center	87
Shrubs				
Corylus cornuta	Beaked hazelnut	18–24	4–5 feet on center	256
Gaultheria shallon	Salal	12–18	4–5 feet on center or in clusters of 4 spaced 8-10 feet apart	342
Holodiscus discolor	Creambush	18–24	4–5 feet on center	256
Oemleria cerasiformis	Indian plum	18–24	4–5 feet on center	256
Physocarpus capitatus	Pacific ninebark	18–24	4–5 feet on center	285
Symphoricarpos albus	Snowberry	12–18	4–5 feet on center or in clusters of 4 spaced 8-10 feet apart	342

Tree and shrub quantities based on a planting rate of 5 trees and 25 shrubs per 500 square feet of impact area (34,730 SF impact area; minimum 347 trees and 1,737 shrubs required) per SROZ Ordinance.

Wetland Mitigation

Minor wetland impacts are proposed to a non-locally significant wetland in the southern portion of the site. Proposed impacts include 1,258 SF (0.03 acre) to the northern portion of Wetland C (Figure 17). The wetland is likely to be considered jurisdictional by the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps) since it drains off-site to the south onto the Graham Oaks Nature Park as Pristine Creek. The wetland delineation report and a wetland removal/fill permit application will be submitted to DSL and the Corps. The DSL and Corps compensatory wetland mitigation requirement is proposed to be met through the purchase of 0.03 credits from the Mud Slough Mitigation Bank.

MITIGATION PERFORMANCE STANDARDS

The objective of the upland wildlife habitat mitigation is to establish a diverse native plant understory and reduce the coverage of invasive species, with the goal of increasing the wildlife habitat and ecological integrity ratings from medium to high. Performance standards will include an 80% survival rate of planted trees and shrubs for each year of the 5-year maintenance and monitoring period. In addition, cover of invasive species shall not exceed 20% of the mitigation area.

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C. Mirth Walker, PWS, CWD
Senior Wetland Scientist
Report Quality Assurance/Quality Control

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APPENDIX A

Maps

Figure 1. Site location map.
Figure 2. Tax lot map.
Figure 3. Soils map.
Figure 4. City of Wilsonville Natural Resource Inventory map.
Figures 5 and 6. Existing conditions & wetland map.
Figures 7 and 8. SROZ map - existing conditions.
Figure 9. SROZ map – existing SROZ boundary.
Figure 10. SROZ map – refined SROZ boundary.
Figure 11. SROZ map – comparison of existing & refined SROZ boundary.
Figures 12 and 13. SROZ map – proposed encroachments & mitigation.
Figure 14. Previous disturbed areas map
Figure 15. Created SROZ areas
Figure 16. SROZ nature trail plan
Figure 17. Proposed wetland impacts map

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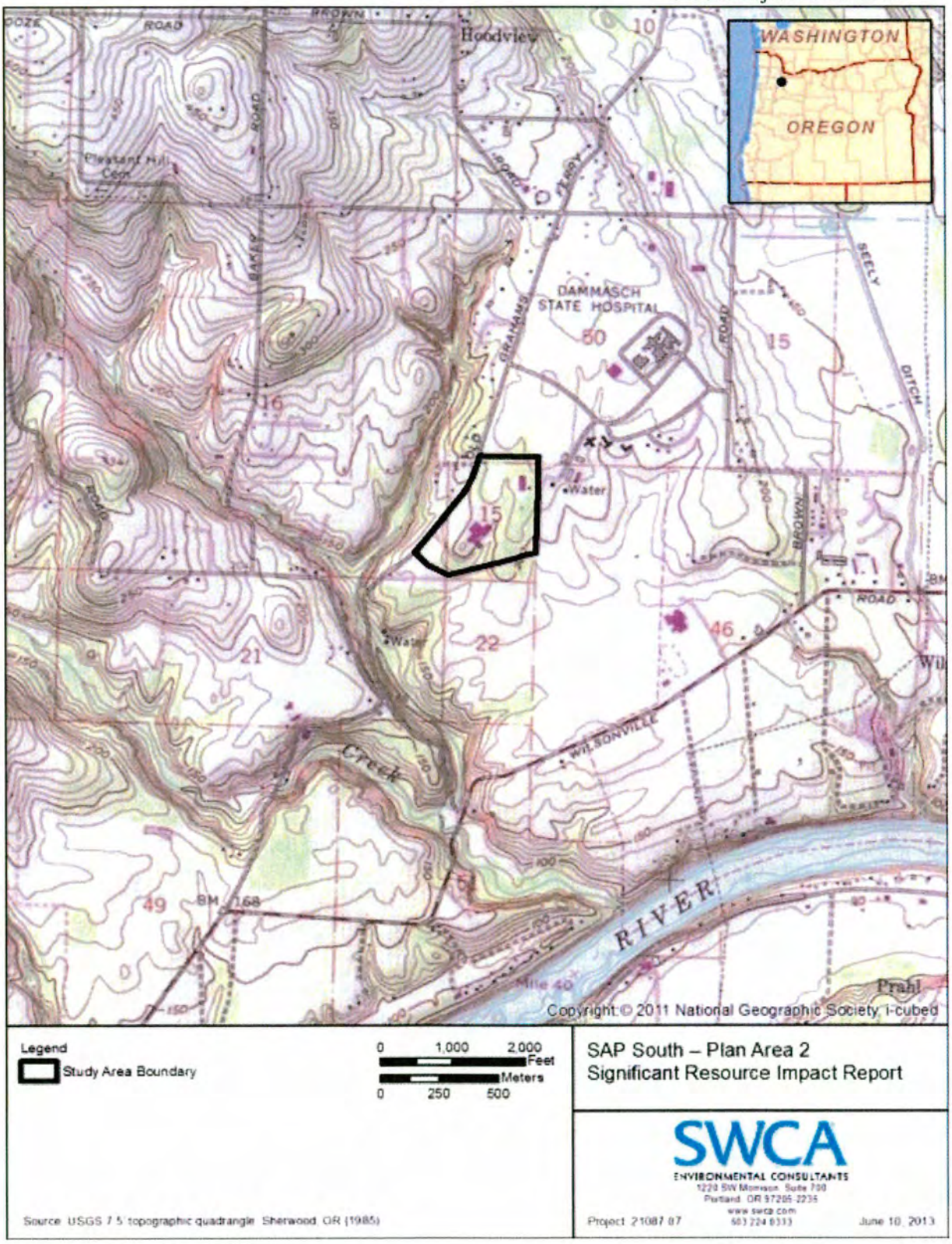

Figure 1. Site location map.

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Figure 2. Tax lot map.

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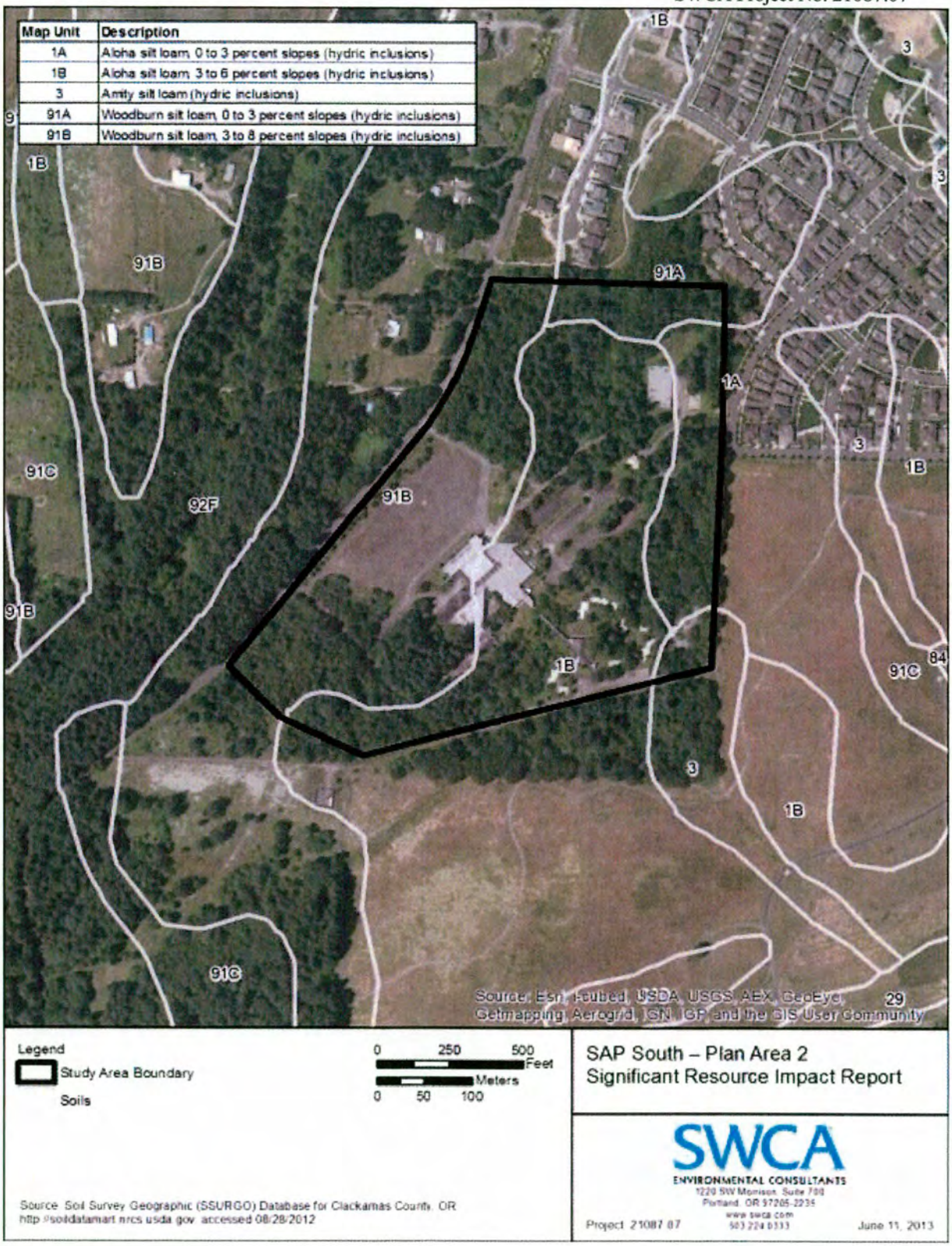

Figure 3. Soils map.

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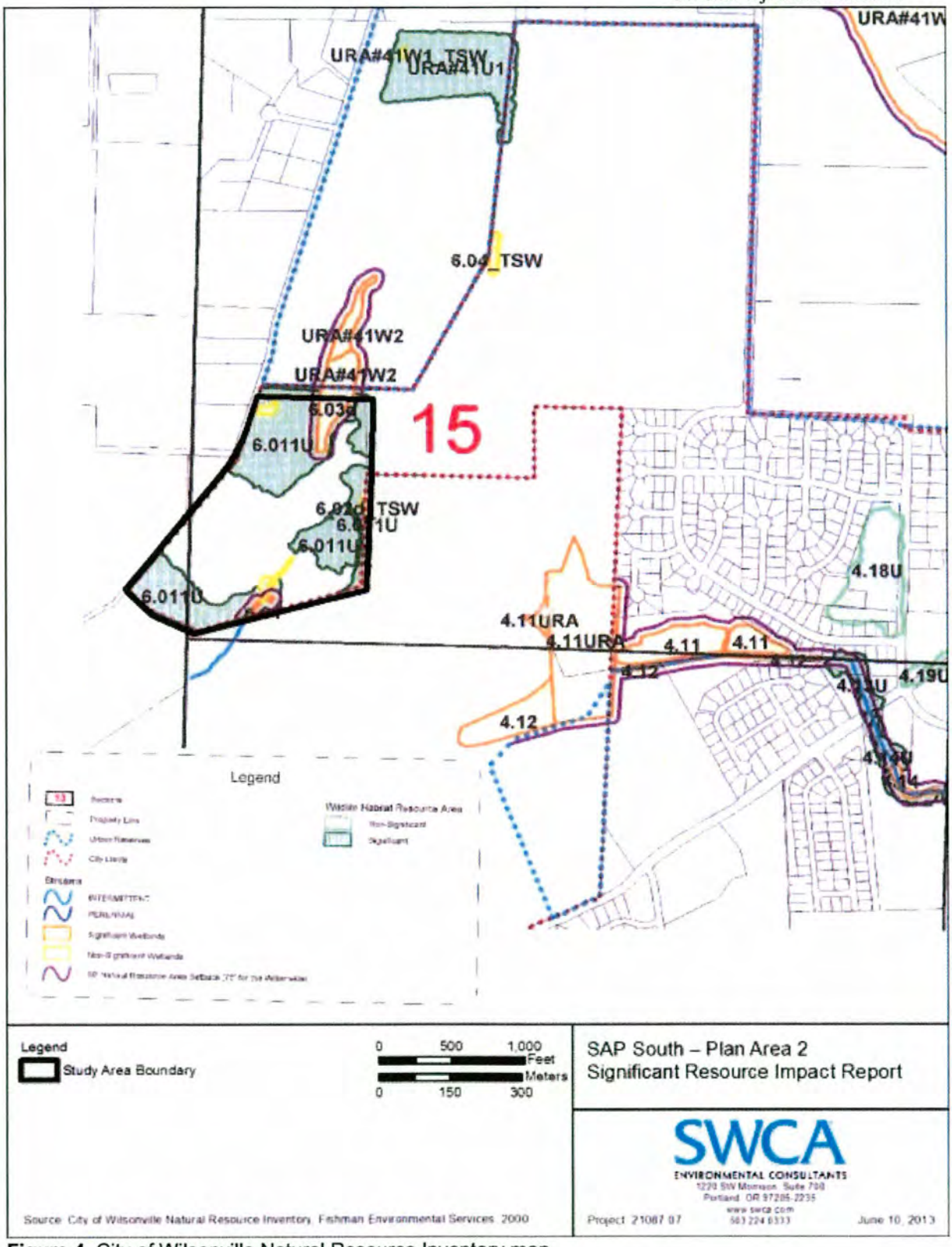

Figure 4. City of Wilsonville Natural Resource Inventory map.

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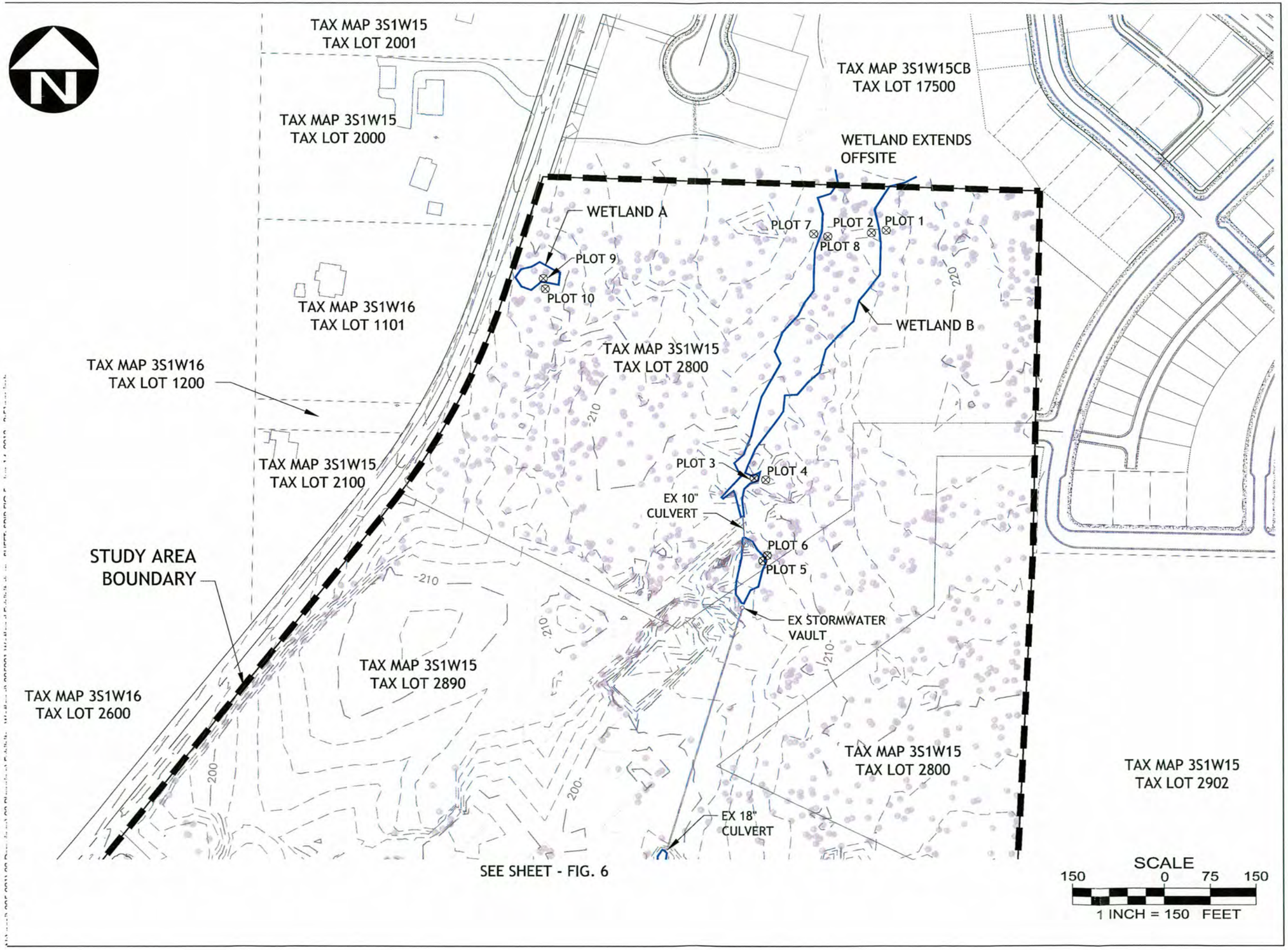

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DATE: 06/21/2013

REVISIONS

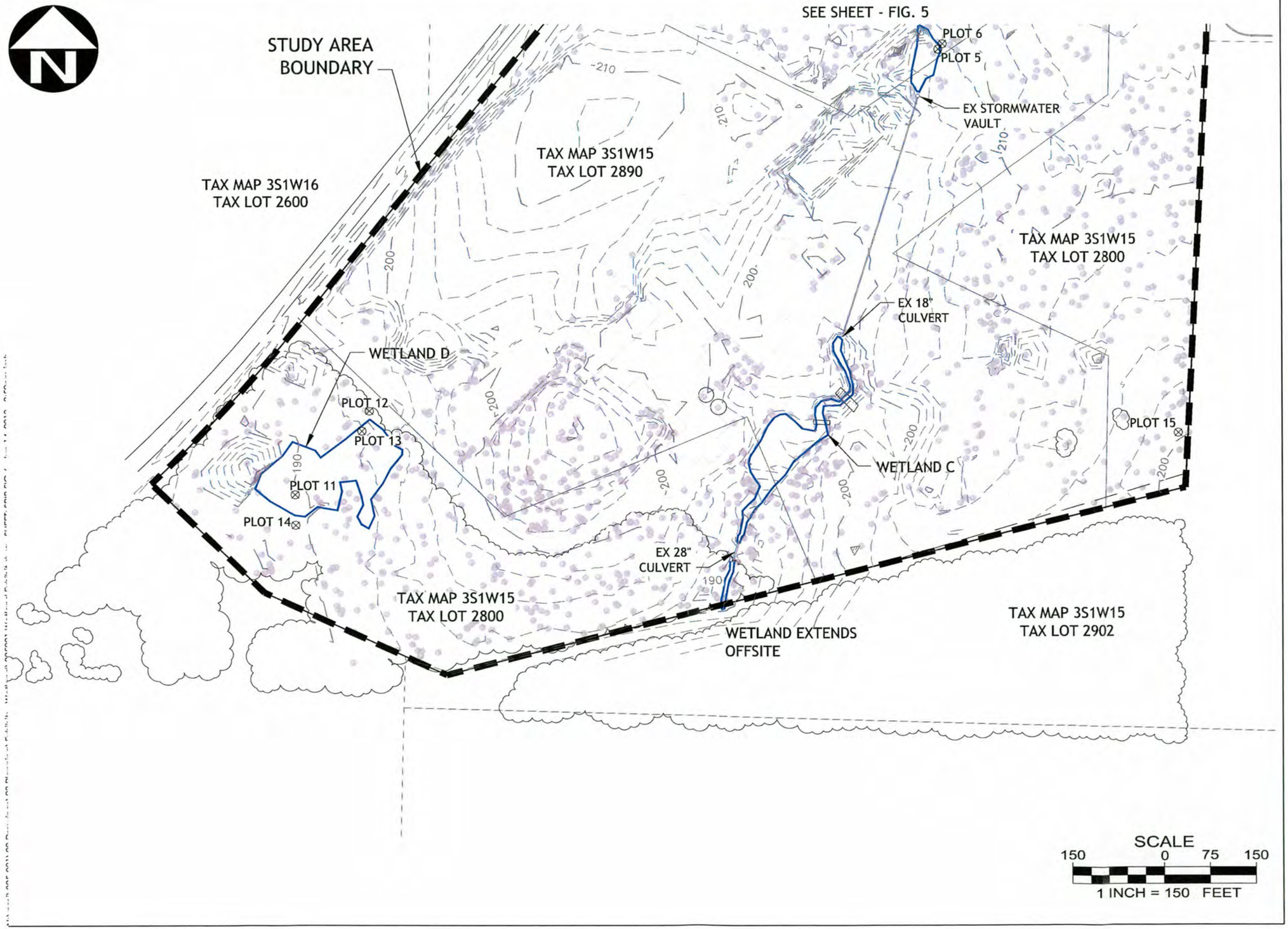
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

EXISTING
CONDITIONS
&
WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 5



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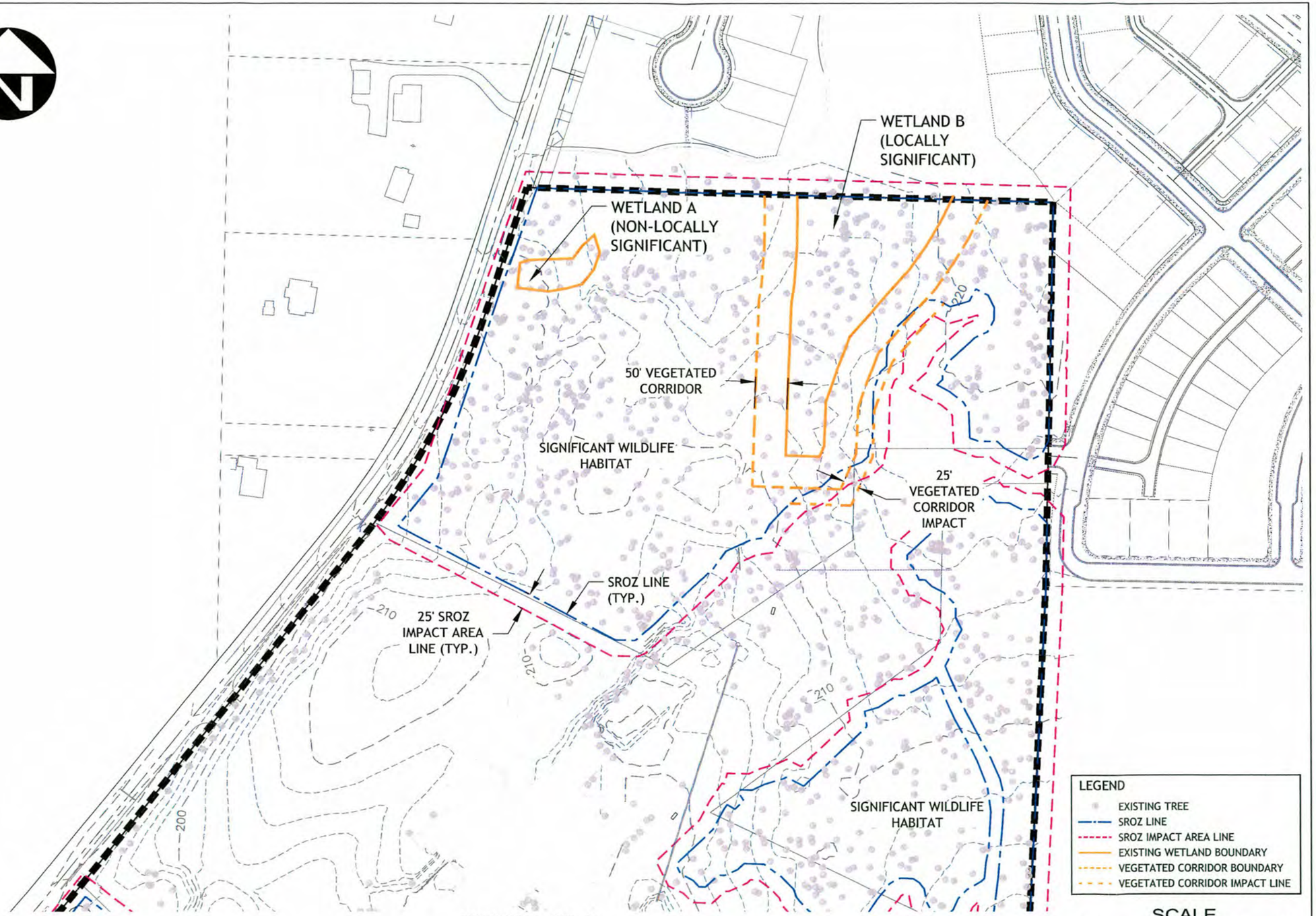
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

EXISTING CONDITIONS & WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 6



SEE SHEET - FIG. 8

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DATE: 08/06/2013

REVISIONS

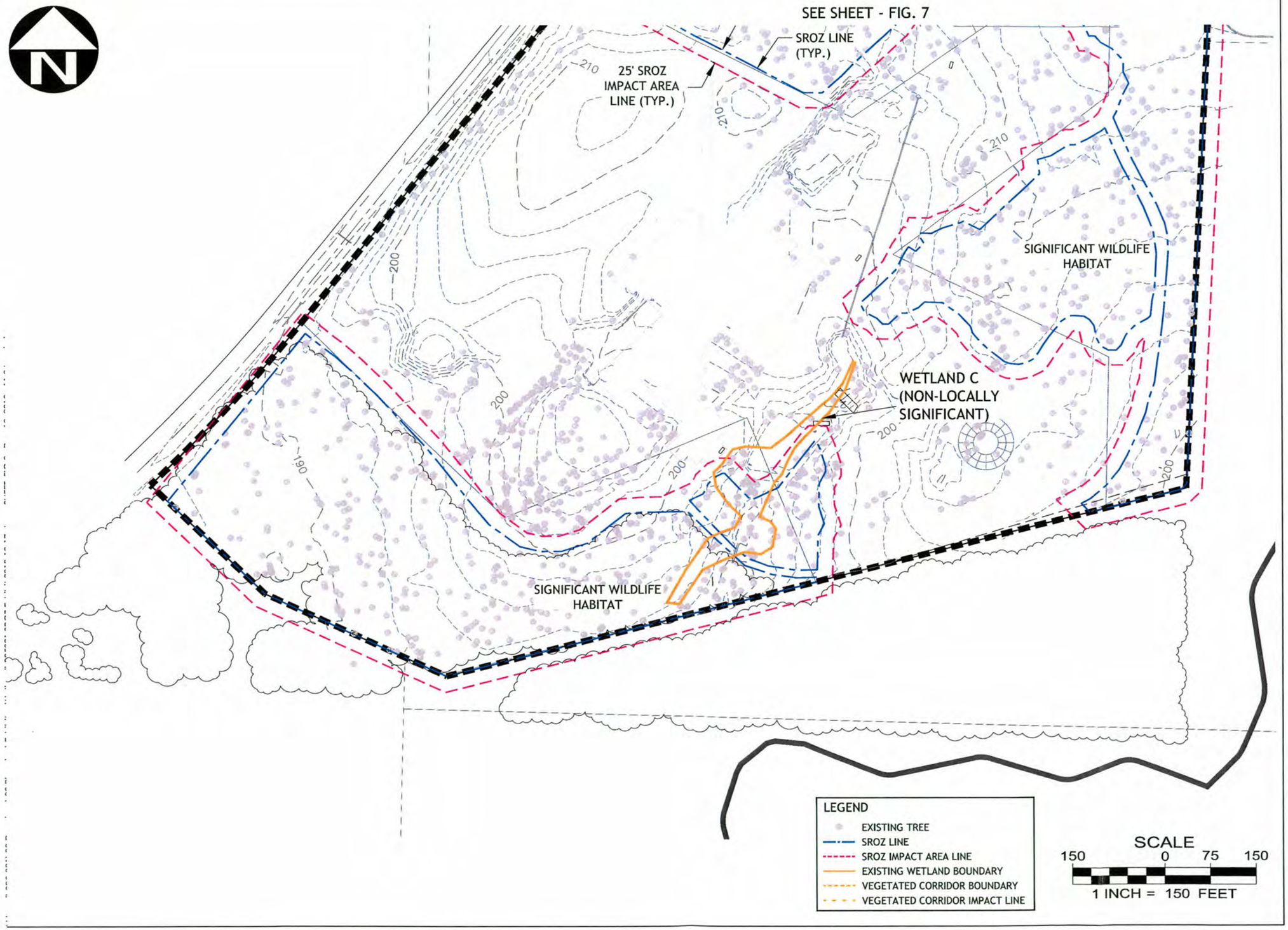
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
EXISTING
CONDITIONS

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 7



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REVISIONS

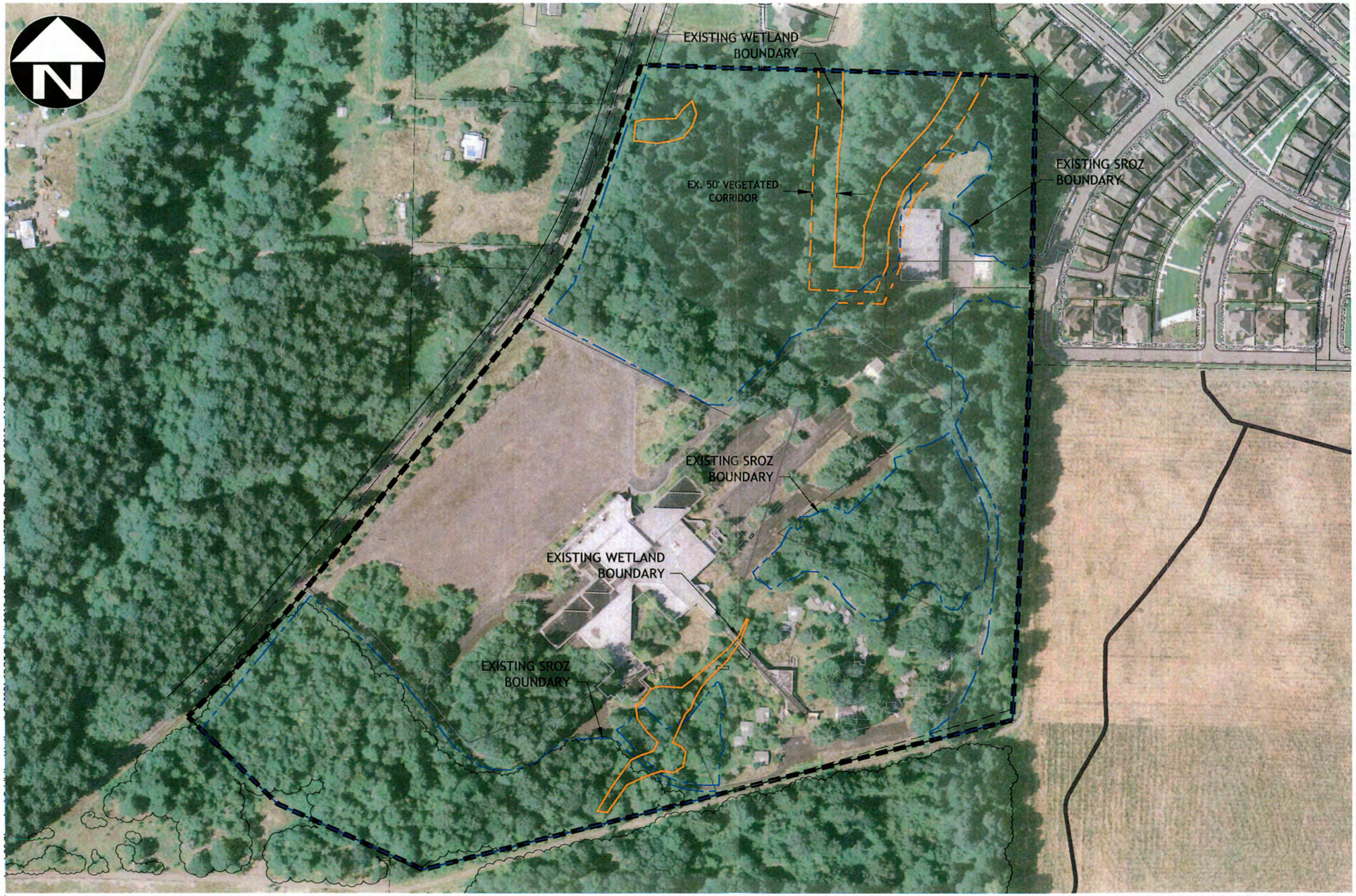
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
EXISTING
CONDITIONS

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 8



SCALE
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1 INCH = 200 FEET

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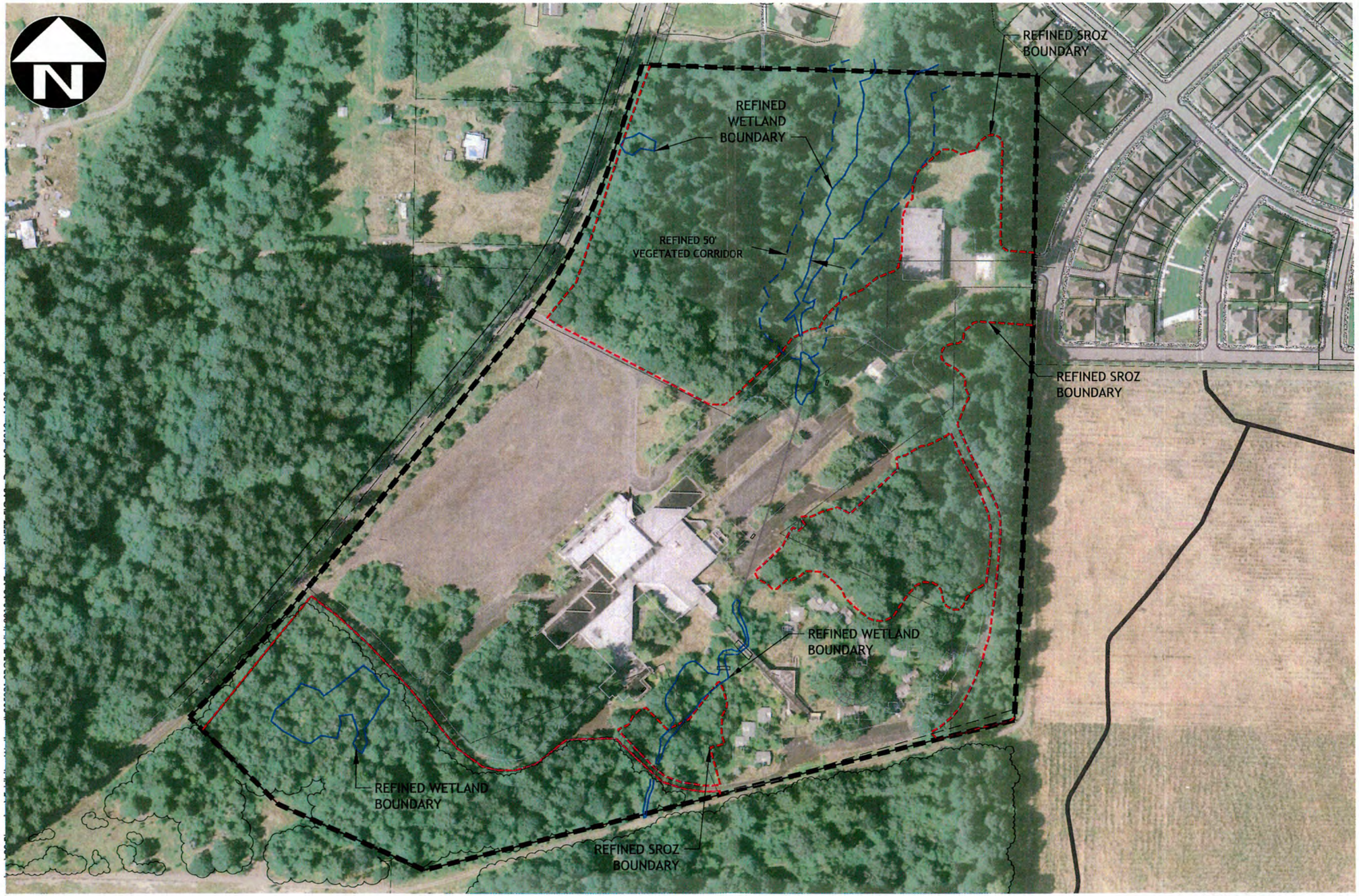
REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
EXISTING SROZ
BOUNDARY

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 9



SCALE
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1 INCH = 200 FEET

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DATE: 08/06/2013

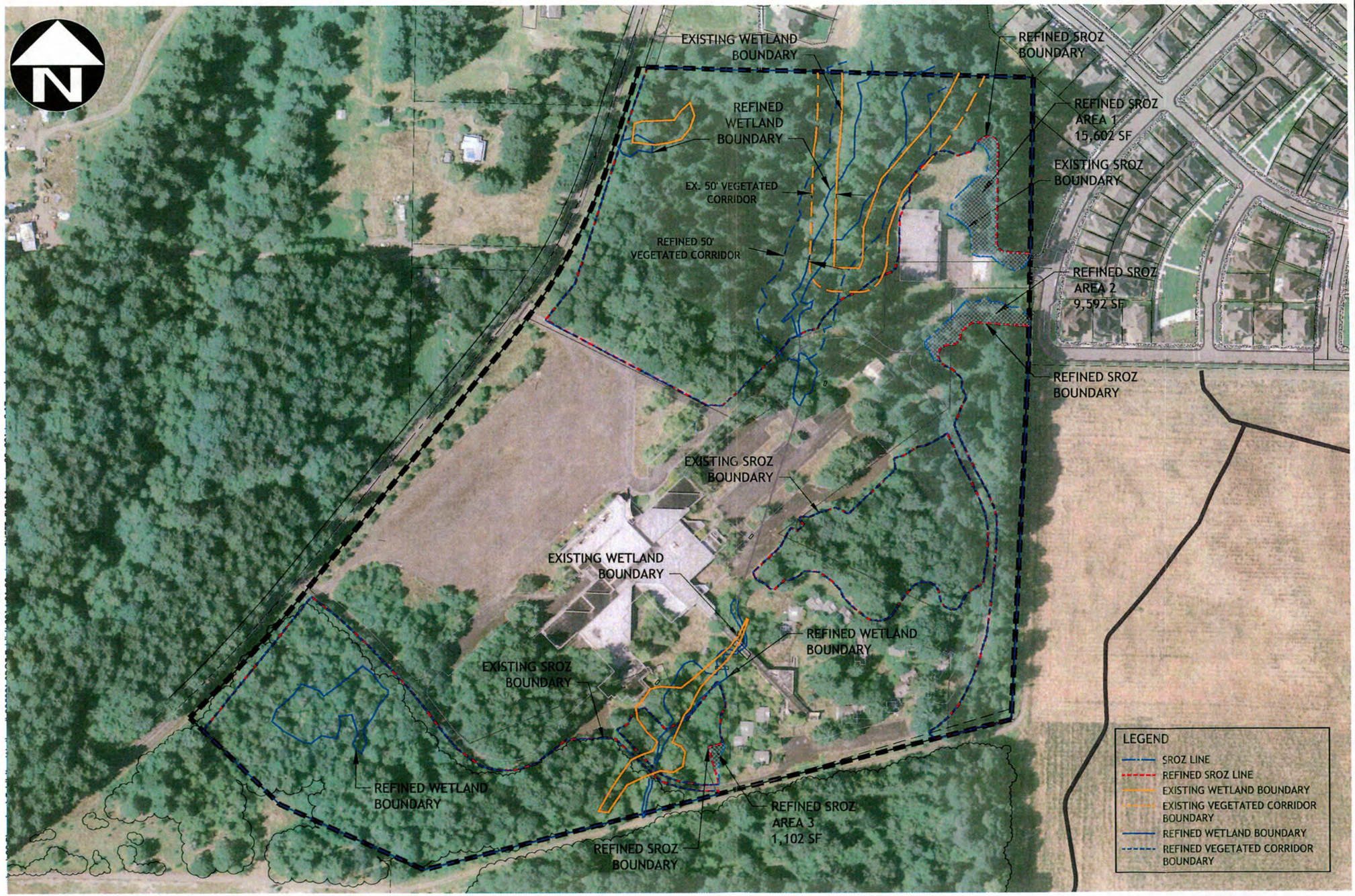
REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
REFINED SROZ
BOUNDARY

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 10



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ENVIRONMENTAL CONSULTANTS

DATE: 08/06/2013

REVISIONS

NO.	DATE	DESCRIPTION

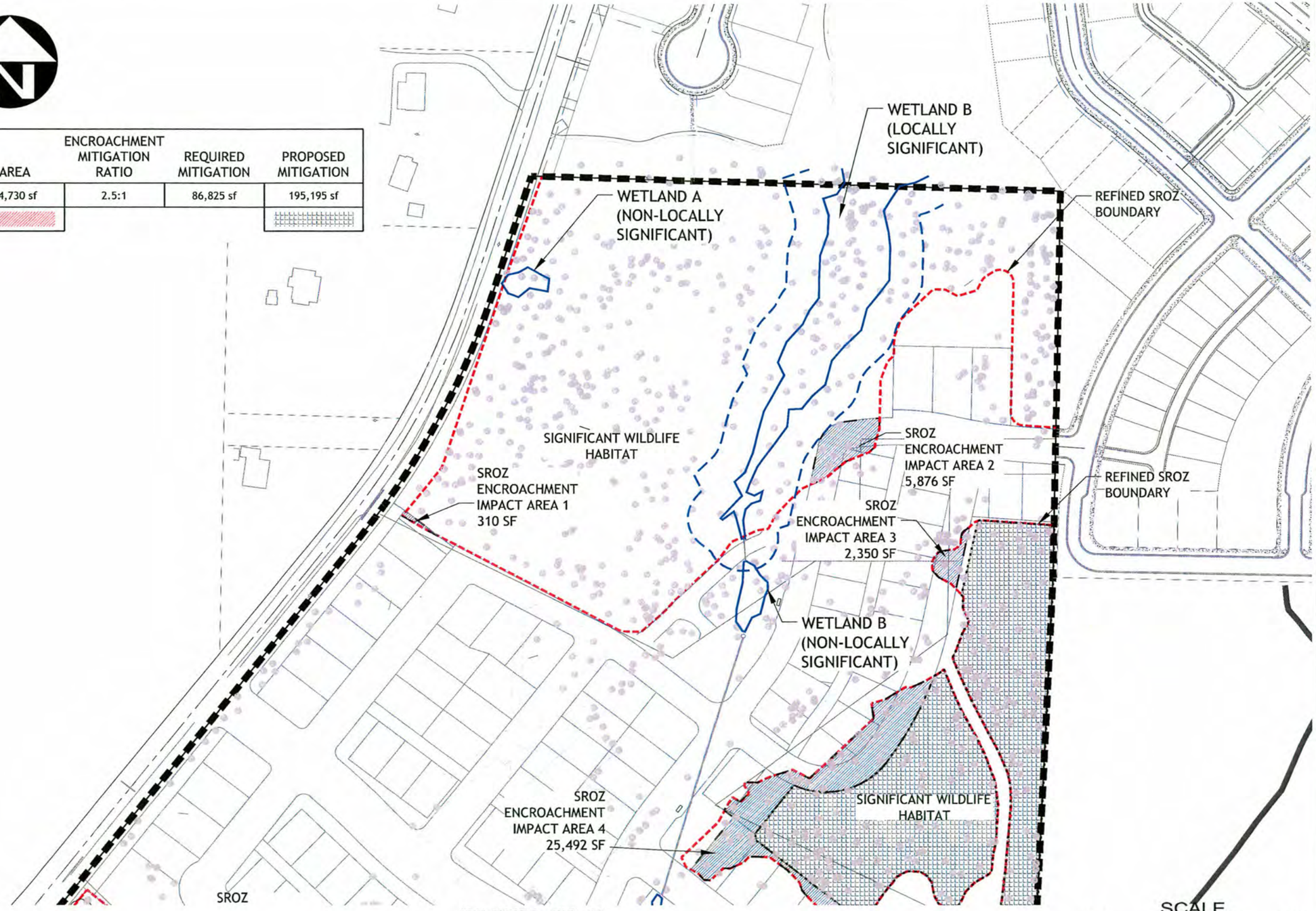
SAP South
Plan Area 2

SROZ MAP COMPARISON OF EXISTING & REFINED SROZ BOUNDARY

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 11

AREA	ENCROACHMENT MITIGATION RATIO	REQUIRED MITIGATION	PROPOSED MITIGATION
34,730 sf	2.5:1	86,825 sf	195,195 sf



SCALE
150 0 75 150
1 INCH = 150 FEET

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DATE: 08/06/2013

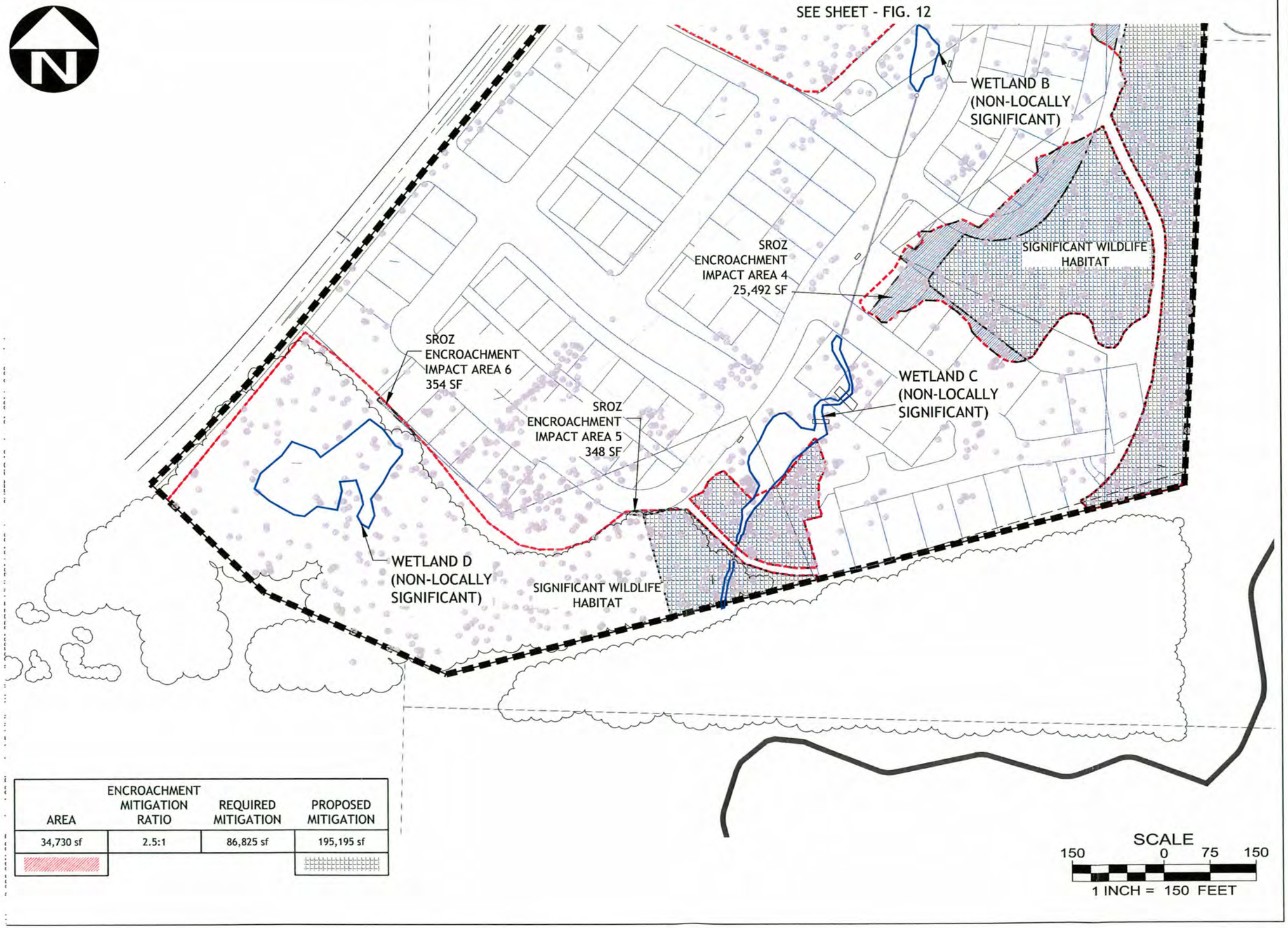
REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
PROPOSED
ENCROACHMENTS
&
MITIGATION

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 12



AREA	ENCROACHMENT MITIGATION RATIO	REQUIRED MITIGATION	PROPOSED MITIGATION
34,730 sf	2.5:1	86,825 sf	195,195 sf

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SWCA
ENVIRONMENTAL CONSULTANTS

DATE: 08/06/2013

REVISIONS

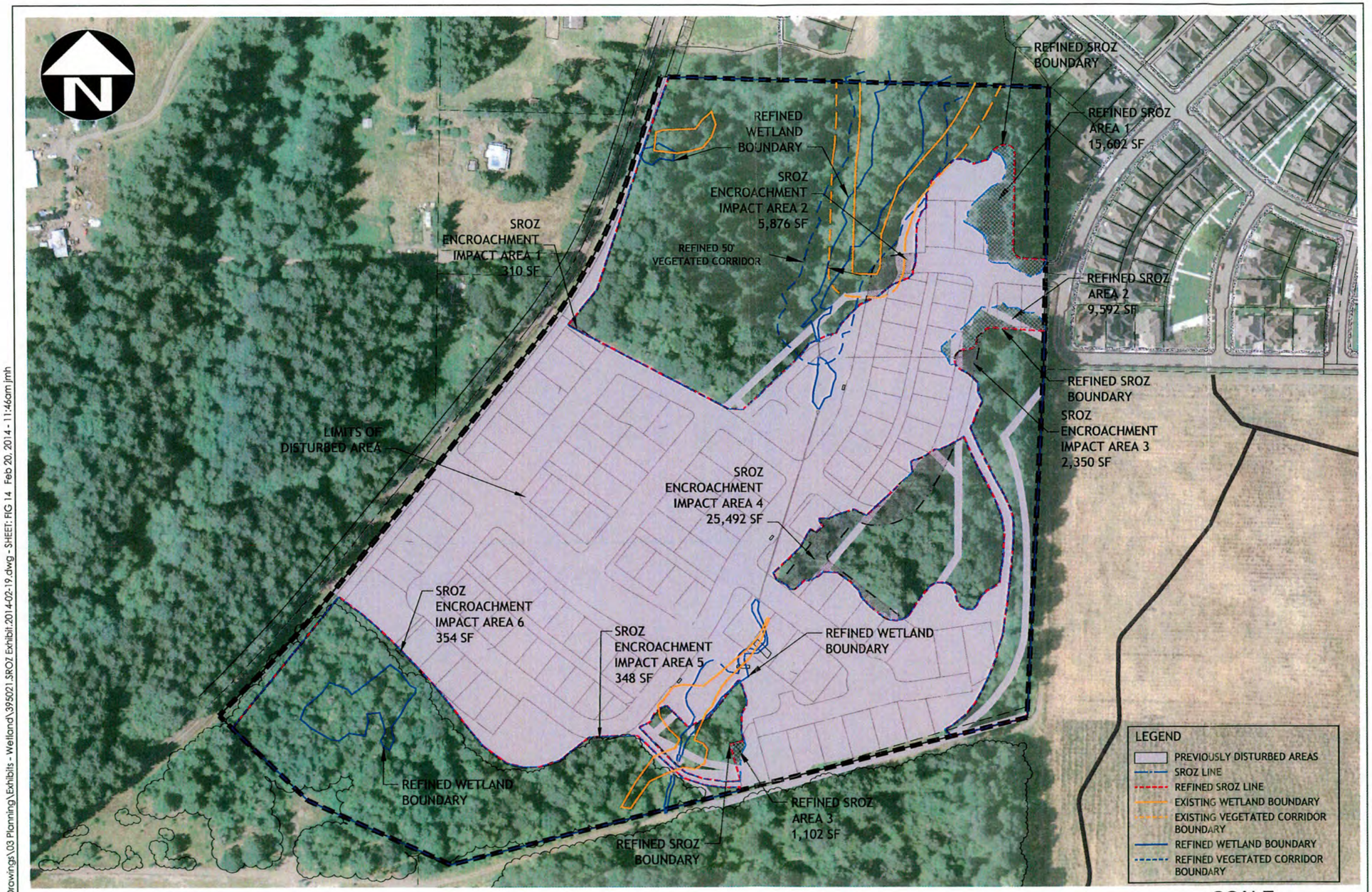
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
PROPOSED
ENCROACHMENTS
&
MITIGATION

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 13



N:\proj\395-021\09 Drawings\03 Planning\Exhibits - Wetland\395021 SROZ Exhibit 2014-02-19.dwg - SHEET: FIG 14 Feb 20, 2014 - 11:46am jmh

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DATE: 08/06/2013

REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
COMPARISON OF
REFINED SROZ
BOUNDARY &
ENCROACHMENTS
AND PREVIOUS
DISTURBED AREAS

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 14

LEGEND		AREA
	IMPACTS TO SROZ AREA	34,730 sf
	CREATED SROZ AREA	61,967 sf
	NET SROZ AREA CREATED	27,237 sf

SCALE
200 0 100 200
1 INCH = 200 FEET

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SWCA
ENVIRONMENTAL CONSULTANTS

DATE: 08/06/2013

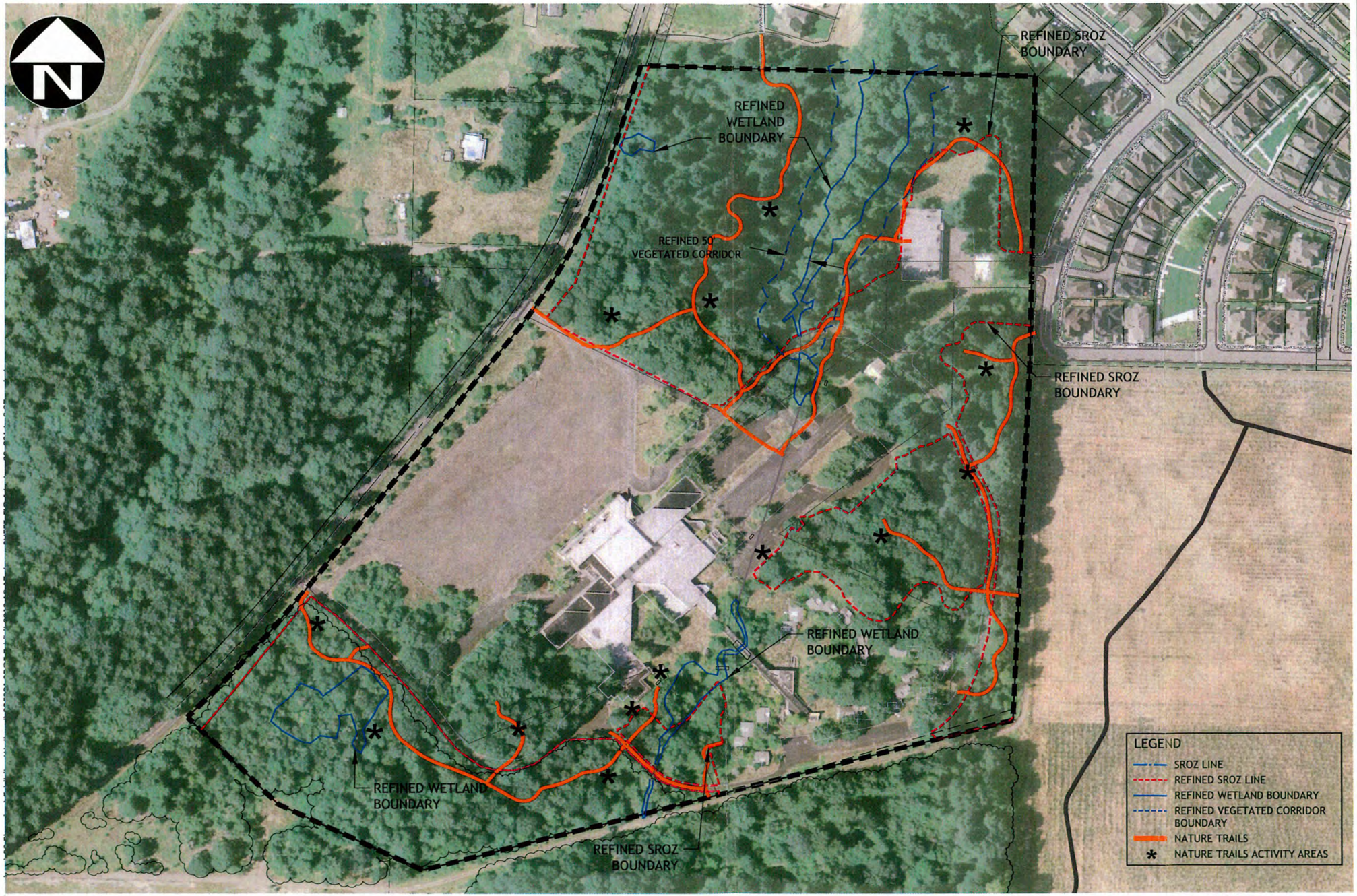
REVISIONS
NO. DATE DESCRIPTION

SAP South Plan Area 2

SROZ MAP COMPARISON OF REFINED SROZ BOUNDARY & ENCROACHMENTS AND CREATED SROZ AREAS

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 15



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DATE: 08/06/2013

REVISIONS

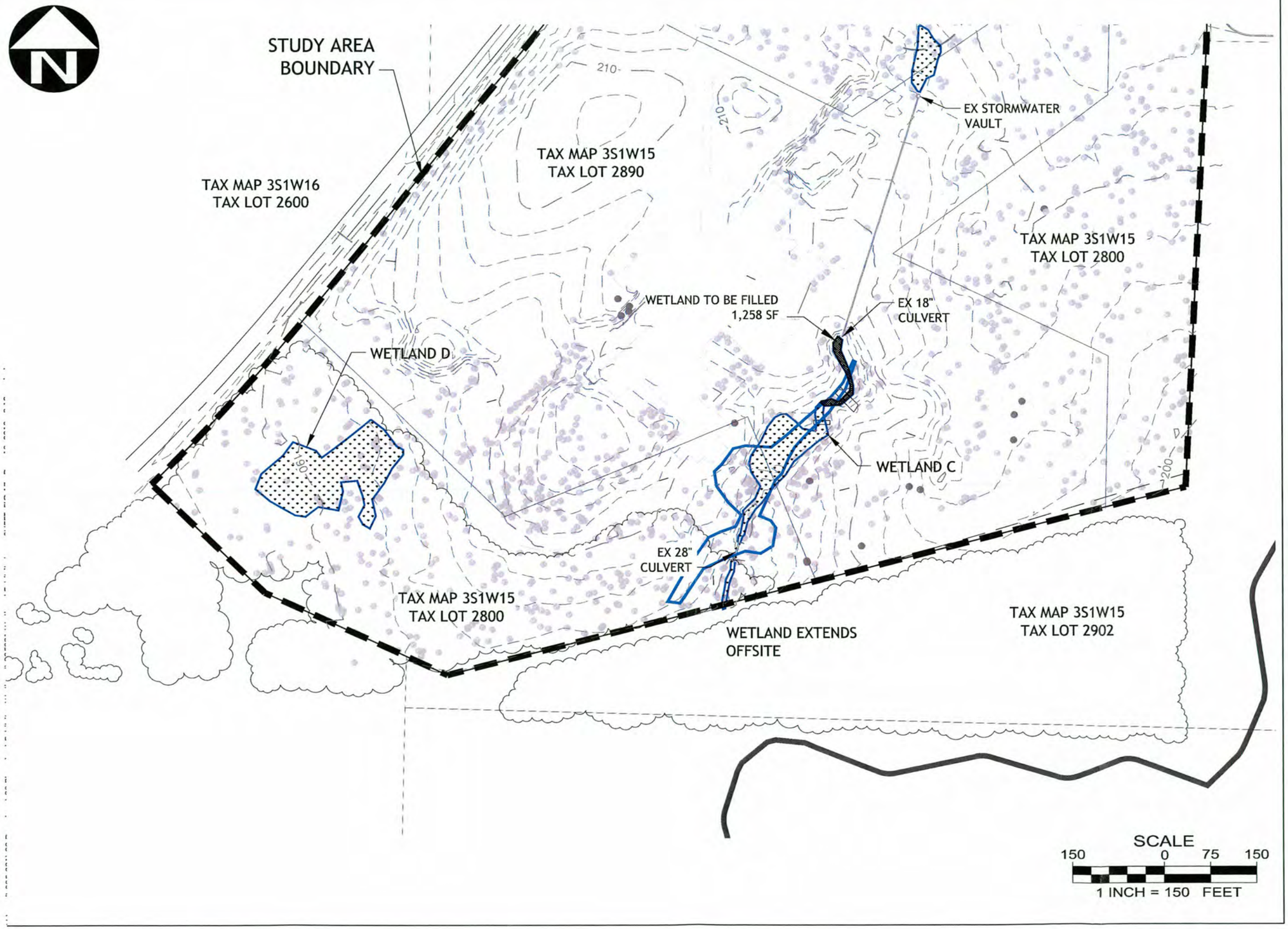
NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

SROZ MAP
NATURE
TRAIL PLAN

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 16



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DATE: 06/21/2013

REVISIONS

NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

PROPOSED
WETLAND
IMPACTS

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 17

APPENDIX B

Wetland Delineation Report

Oregon
John A. Kitzhaber, MD, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us

State Land Board

John A. Kitzhaber, MD
Governor

Kate Brown
Secretary of State

Ted Wheeler
State Treasurer

October 8, 2013

Polygon Northwest Company
Attn: Fred Gast, President
109 East 13th Street
Vancouver, WA 98660

Re: Wetland Delineation Report for SAP South- Plan Area 2 Project Area, Clackamas County; T 3S R 1W S 15 TL 2800 and 2890; WD #2013-0196; City of Wilsonville Local Wetlands Inventory, Wetlands 6.01, 6.02, and 6.03

Dear Mr. Gast:

The Department of State Lands has reviewed the wetland delineation report prepared by SWCA Environmental Consultants for the site referenced above. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and wetland/water boundaries as mapped in Figures 6 and 7 of the report. Within the study area, two wetlands and two wetland/waters (including portions of a headwater tributary to Mill Creek) totaling approximately 1.69 acres, were identified. These features are all subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high water line (OHWL) of a waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter, unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon

request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity, or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5232 if you have any questions.

Sincerely,

Peter Ryan, PWS
Wetland Specialist

Approved by

Kathy Verble, CPSS
Acting Wetlands Program Manager

Enclosures

ec: Stacy Benjamin, SWCA Environmental Consultants
City of Wilsonville Planning Department (Maps enclosed for updating LWI)
Karla Ellis, Corps of Engineers
Anita Huffman, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach the form to the front of an unbound report and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279**
Mail a copy of the completed form with payment of the required report review fee to: **Oregon Department of State Lands, P.O. Box 4395, Unit 18, Portland, OR 97208-4395.** For new credit card payment option, see DSL web site.

RECEIVED
JUN 18 2013
DEPARTMENT OF STATE LANDS

☒ Applicant ☐ Owner Name, Firm and Address: **Fred Gast, President** **Polygon Northwest Company** **109 East 13th Street** **Vancouver, WA 98660**	Business phone # **360-695-7700** Mobile phone # (optional) FAX # **360-693-4442** E-mail: **Fred.Gast@PolygonHomes.com**
☐ Authorized Legal Agent, Name and Address:	Business phone # FAX # Mobile phone # E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.
Typed/Printed Name: **Fred Gast** Signature: [redacted]
Date: Special instructions regarding site access:

Project and Site Information (for latitude & longitude, use centroid of site or start & end points of linear project)

Project Name: **SAP South – Plan Area 2**	Latitude: **45.305039**	Longitude: **-122.803426**	
Proposed Use: **Residential Development**	Tax Map # **31W15**		
Project Street Address (or other descriptive location): **South of the intersection of Boeckman-Tooze Road and SW 110th Avenue, east of Grahams Ferry Road** City: **Wilsonville** County: **Clackamas**	Township **3S** Range **1W** Section 15 QQ **SW** Tax Lot (s) **2800 & 2890**		
	Waterway: **None**	River Mile: **NA**	
	NWI Quad(s): **Sherwood, OR**		

Wetland Delineation Information

Wetland Consultant Name, Firm and Address: **C. Mirth Walker, PWS, CWD, Senior Wetland Scientist** **Stacy Benjamin, Senior Wetland Ecologist** **SWCA Environmental Consultants** **1220 SW Morrison Street, Suite 700** **Portland, OR 97205-2235**	Phone # **503-224-0333 x6250** Mobile phone # FAX # **503-224-1851** E-mail: **cmwalker@swca.com, sbenjamin@swca.com**

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: [redacted] Date: **June 6, 2013**

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No | Study Area size: **42.75 acres** | Total Wetland Acreage: **1.69 acres**

Check Box Below if Applicable:		**Fees:**
☐ R-F permit application submitted	☒	Fee payment submitted **$ 378 (by credit card)**
☐ Mitigation bank site	☐	Fee ($100) for resubmittal of rejected report
☐ Wetland restoration/enhancement project (not mitigation)		Name of Payor: **Polygon Northwest Company**
☐ Industrial Land Certification Program Site		

Other Information:	Y	N	
Has previous delineation/application been made on parcel?	☐	☒	If known, previous DSL #
Does LWI, if any, show wetland or waters on parcel?	☒	☐	

For Office Use Only

DSL Reviewer: PR Fee Paid Date: 6 / 26 / 13 DSL WD # 2013-0176

Date Delineation Received: 6 / 18 / 13 DSL Project # _____ DSL Site # _____

Scanned: ☒ Final Scan: ☐ DSL WN # _____ DSL App. # _____

WD# 13-0196

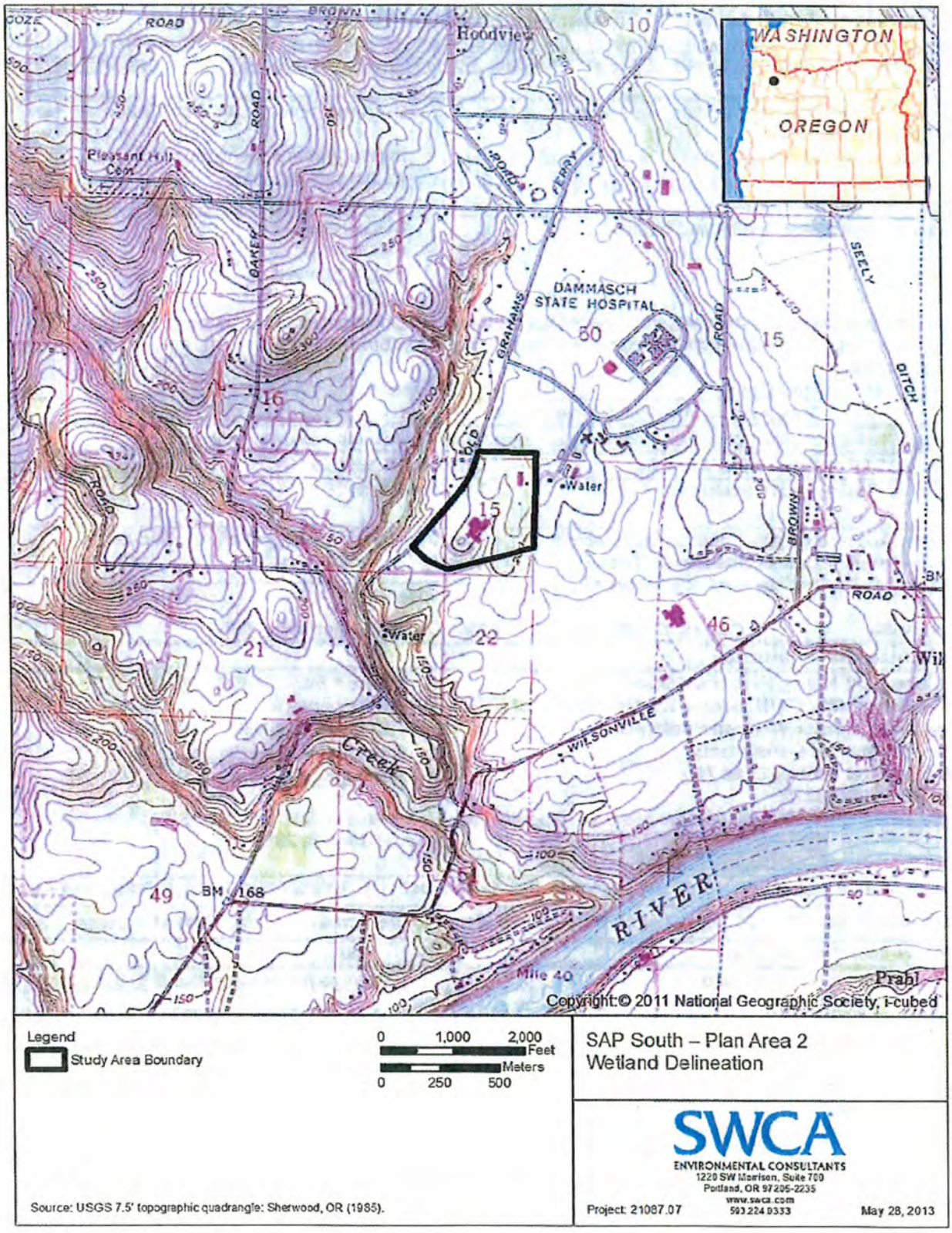

Figure 1. Site location map.

DSL WD # 13-0196
Approval Issued 10/08/2013
Approval Expires 10/08/2018

TAX MAP 3S1W15
TAX LOT 2001

TAX MAP 3S1W15
TAX LOT 2000

TAX MAP 3S1W15CB
TAX LOT 17500

WETLAND EXTENDS
OFFSITE

WETLAND A

PLOT 9

PLOT 10

PLOT 7

PLOT 2

PLOT 1

PLOT 8

TAX MAP 3S1W16
TAX LOT 1101

WETLAND B
waters

TAX MAP 3S1W15
TAX LOT 2800

TAX MAP 3S1W16
TAX LOT 1200

TAX MAP 3S1W15
TAX LOT 2100

PLOT 3

PLOT 4

EX 10"
CULVERT

PLOT 6

PLOT 5

STUDY AREA
BOUNDARY

EX STORMWATER
VAULT

TAX MAP 3S1W15
TAX LOT 2890

TAX MAP 3S1W16
TAX LOT 2600

TAX MAP 3S1W15
TAX LOT 2800

TAX MAP 3S1W15
TAX LOT 2902

EX 18"
CULVERT

SEE SHEET - FIG. 7

SCALE
150 0 75 150
1 INCH = 150 FEET

Sample plots and onsite boundaries were flagged in the field by SWCA, and professionally land surveyed by PCD.

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SWCA
ENVIRONMENTAL CONSULTANTS

DATE: 06/21/2013

REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

EXISTING
CONDITIONS
&
WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 6

DSL WD # 13-0196
Approval Issued 10/08/2013
Approval Expires 10/08/2018

SEE SHEET - FIG. 6

STUDY AREA BOUNDARY

TAX MAP 3S1W16
TAX LOT 2600

TAX MAP 3S1W15
TAX LOT 2890

TAX MAP 3S1W15
TAX LOT 2800

PLOT 6
PLOT 5
EX STORMWATER VAULT
EX 18" CULVERT
WETLAND D
PLOT 12
PLOT 13
PLOT 11
PLOT 14
PLOT 15
WETLAND C
EX 28" CULVERT
TAX MAP 3S1W15
TAX LOT 2800
WETLAND EXTENDS OFFSITE
TAX MAP 3S1W15
TAX LOT 2902

SCALE
150 0 75 150
1 INCH = 150 FEET

sample plots and onsite boundaries were flagged in the field by SWCA, and professionally land surveyed by PCD.

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SWCA
ENVIRONMENTAL CONSULTANTS

DATE: 06/21/2013

REVISIONS
NO. DATE DESCRIPTION

SAP South
Plan Area 2

EXISTING CONDITIONS & WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 7

Stacy N. Benjamin

From: Stacy N. Benjamin
Sent: Wednesday, October 02, 2013 2:15 PM
To: 'RYAN Peter'; C. Mirth Walker
Subject: RE: SAP South Plan Area 2 - WD#13-0196
Attachments: 014.JPG; 006.JPG

Hi Pete,

Sorry for not getting back to you sooner. In response to the items in your email below:

1) Yes, we did check the area near the eastern edge of TL 2800 looking for LWI wetland 6.02d, and we did not find any Oregon ash/slough sedge areas or potential wetland depressional areas in the vicinity of the LWI-mapped wetland. We did document one slight depressional area in the forest further to the south at Plot 15 which was determined to be upland, and this plot is also representative of the condition of the forest in the vicinity of the LWI-mapped wetland 6.02d.
2) Wetland C was delineated based on a very abrupt and steep topographic break and corresponding change from OBL vegetation with ponding to upland vegetation on dry steep slopes. The best photos of the wetland boundary and corresponding changes in vegetation and topography were included in the report as Photos 7 and 8, but I have attached a couple more photos in case they show the hydrology/vegetation/topographic break more clearly.

Please let me know if you need anything further to issue the concurrence letter.

Thanks, Pete!

Stacy Benjamin
Senior Ecologist

SWCA Environmental Consultants
1220 SW Morrison, Suite 700
Portland, OR 97205
P 503.224.0333 ext. 6230 | F 503.224.1851

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Visit Our Website: http://www.swca.com

From: RYAN Peter [mailto:peter.ryan@state.or.us]
Sent: Wednesday, September 18, 2013 9:45 AM
To: C. Mirth Walker; Stacy N. Benjamin
Subject: SAP South Plan Area 2 - WD#13-0196

Hi Mirth and Stacy,
I just completed my review of the report you two prepared for the SAP South Plan Area 2, and I have a couple of questions:

1. The report did not mention checking the location of LWI wetland "6.02d" near the eastern edge of TL 2800 (see SP-94 in LWI). Did you guys do that?
2. It's problematic that no SP's were used to document Wetland C. DSL rules require sample plots characterizing the boundary of each wetland present. Although it's true that the supplement allow you to use the "rapid test

for hydrophytic vegetation" if the right mix of dominants are present and the "87 Manual" allows you to skip the soil characterization step (digging a soil pit) if you have the right mix of dominants and/ or an abrupt boundary; I can't find any reference to skipping the data form documentation step entirely. I don't need you to go back out there if you have other information from on-the-ground that supports your boundary delineation.....any ground based photographs of the Wetland C's boundary?

3. The delineation figures did not include mapping precision statements or show the location and direction of the ground based photographs.

That's it guys, please provide responses for 1 and 2, and I can hand edit the drawings to address 3.
-Pete

Peter Ryan, Wetlands Specialist, PWS
Oregon Department of State Lands
775 Summer Street NE, Suite 100
Salem, Oregon 97301

503.986.5232 office | 503.779.4159 cell | 503.378.4844 fax

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SAP SOUTH – PLAN AREA 2
WETLAND DELINEATION REPORT
WILSONVILLE, OREGON
T3S, R1W, SECTION 15, TAX LOTS 2800 AND 2890
CLACKAMAS COUNTY, W.M.

Prepared for

Polygon Northwest Company
109 East 13th Street
Vancouver, Washington 98660

Prepared by

SWCA®
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1220 SW Morrison Street, Suite 700
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503.224.0333
www.swca.com

June 2013

SWCA Project No. 21087.07

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B. SITE ALTERATIONS 1

C. PRECIPITATION DATA AND ANALYSIS 1

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INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by Polygon Northwest Company to conduct a wetland delineation for the SAP South – Plan Area 2 project located in Wilsonville, Clackamas County, Oregon (Appendix A, Figure 1). The site is located east of SW Grahams Ferry Road and south of SW Boeckman-Tooze Road. The study area for the SAP South – Plan Area 2 wetland delineation includes tax lots 2800 and 2890 (Appendix A, Figure 2). The total study area is approximately 42.75 acres. Two palustrine forested (PFO) wetlands (referred to as Wetlands A and B) and two palustrine emergent (PEM) wetlands (referred to as Wetlands C and D) were delineated and are presented in this report.

A. LANDSCAPE SETTING AND LAND USE

OAR141-090-0035 (7)(a)

The study area is located immediately east of SW Grahams Ferry Road and immediately south of the existing Villebois development. The Graham Oaks Nature Park borders the site to the south and east. The project site consists of a mixed coniferous/deciduous forest with several previously developed areas in the central portion of the site. The site topography is level, and it has a subtle slope down toward the south. The waterbody closest to the site is Pristine Creek, a tributary to Mill Creek, which is located immediately south of the project site. Mill Creek is a tributary to Corral Creek, which flows into the Willamette River to the south.

B. SITE ALTERATIONS

OAR141-090-0035 (7)(c)

The site was occupied until approximately 2004 by the Living Enrichment Center. It contained a large central complex of buildings, several smaller cottages, and numerous paved roads and trails. The buildings were vacant for nearly a decade until they were recently demolished to allow for site redevelopment.

C. PRECIPITATION DATA AND ANALYSIS

OAR141-090-0035 (7)(i)

The WETS (short for wetlands climate analysis) station used to obtain precipitation data for the project vicinity is the Portland Weather Service Forecast Office (WSFO) station. Average annual rainfall according to the WETS table for the Portland WSFO station is 37.07 inches. Precipitation data were obtained from the Portland, Oregon, weather station via the National Weather Service (NWS). Precipitation data are shown below, and raw data are included in Appendix B. The growing season according to the WETS table is February 15 to November 29.

Table 1 shows the precipitation on the day of and for the two weeks prior to the May 20 and 23, 2013, site visits. According to the NWS Portland station, 0.51 inch of rainfall was recorded for the two weeks prior to the May 20 site visit, and 2.19 inches was recorded for the two weeks prior to the May 23 site visit. Rainfall prior to the second site visit on May 23, 2013, was above normal but did not interfere with the delineation of wetlands on the site.

Rainfall received year-to-date as of the May 23 site visit was 11.34 inches. Rainfall received for the water year-to-date as of the May 23 site visit was 33.27 inches, which, according to the NWS, is 2.41 inches above normal.

Table 2 shows the monthly precipitation averages according to the WETS Portland WSFO station for the three months prior to the May 2013 site visits. Rainfall in February and March was below normal, and rainfall in April was within the normal range.

Table 1. Precipitation Data—Observed (inches)

Field Date	Observed Rainfall on Field Date	Observed Rainfall Two Weeks Prior to Field Date	Observed Rainfall for the Water Year-to-Date	Departure from Normal
May 20, 2013	0.00	0.51	30.84	+0.22
May 23, 2013	0.75	2.19	33.27	+2.41

Data Sources: Observed precipitation data were obtained from the Preliminary Climatology Data table of the National Oceanic and Atmospheric Administration (NOAA)/NWS station at the Portland WSFO Station. Departure from normal data is based on climate period 1981 to 2010.

Table 2. Precipitation Data—Monthly Averages (inches)

Prior Months	Average	30% Chance Will Have		Observed Precipitation	Within Normal Range?
		Less Than	More Than		
February	4.18	2.84	4.98	1.26	No, below normal
March	3.71	2.85	4.31	1.46	No, below normal
April	2.64	1.93	3.10	2.19	Yes

WETS table averages are based on climate period 1971 to 2000; within normal range data are based on climate period 1981 to 2010.

D. METHODS

OAR141-090-0035 (7)(d-e), (g-h), (16)(a-b), (f), (d) or (g), (17), and (19-20)

The methodology used for determining the presence of wetlands and delineating wetland boundaries followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (U.S. Army Corps of Engineers [USACE] 2010) used by both the USACE and the Oregon Department of State Lands (DSL). Fieldwork was conducted on May 20 and 23, 2013, by Stacy Benjamin and Stacey Reed. Soils, vegetation, and indicators of hydrology were recorded at 15 sample plot locations to document site conditions (Appendix C).

The National Wetland Plant List (NWPL) was used as required by the USACE Portland District and the DSL. A list of vegetation observed on the site, with common and scientific names and wetland indicator status, is included in Appendix D.

The following soil units are mapped within the study area according to the Natural Resources Conservation Service (NRCS) Clackamas County Area Soil Survey map (Appendix A, Figure 3):

- Aloha silt loam (Unit 1A): 0–3% slopes; hydric Huberly and Dayton inclusions
- Aloha silt loam (Unit 1B): 3–6% slopes; hydric Huberly and Dayton inclusions
- Amity silt loam (Unit 3); hydric Huberly and Dayton inclusions
- Woodburn silt loam (Unit 91A): 0–3% slopes; hydric Huberly, Dayton, and Aquolls inclusions
- Woodburn silt loam (Unit 91B): 3–8% slopes; hydric Huberly, Dayton, and Aquolls inclusions (NRCS 2013a)

Wetlands that were not previously mapped in the City of Wilsonville's (the City's) Local Wetlands Inventory (LWI; Fishman Environmental Services 2000) were evaluated under the City's methodology to determine if these wetlands met the criteria for addition to the Significant Resource Overlay Zone (SROZ) maps. The existing site conditions and functions provided by wetlands that were previously mapped in the City's LWI were evaluated to determine whether any change to the locally significant wetland determination was recommended. The Oregon Freshwater Wetland Assessment Methodology (OFWAM)—the same methodology that was used for the determination of locally significant wetlands in the City's LWI—was used to evaluate wetland functions. Wetland summary sheets are included in Appendix E.

Representative ground-level site photographs are included in Appendix F. References cited are listed in Appendix G.

E. DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

OAR141-090-0035 (2), (7)(b), and (17)

Wetlands

Wetland A

Wetland A is a small 0.05-acre isolated forested wetland with a seasonally saturated/shallowly ponded hydrologic regime located in the northwest corner of the site. Wetland A was dominated by slough sedge (*Carex obnupta*), red osier (*Cornus alba*), and Oregon ash (*Fraxinus latifolia*). Wetland soils met the Redox Dark Surface (F6) hydric soil indicator. Wetland hydrology indicators included algal mats and water-stained leaves. The wetland boundary was delineated based on a change in the dominant vegetation community to sword fern (*Polystichum munitum*), snowberry (*Symphoricarpos albus*), beaked hazelnut (*Corylus cornuta*), poison oak (*Toxicodendrum diversilobum*), Oregon white oak (*Quercus garryana*), and Douglas fir (*Pseudotsuga menziesii*).

Wetland A was mapped in the City's LWI; however, due to it being less than 0.5 acre in size it was determined to be a non-locally significant wetland. Site conditions of this wetland are unchanged, and it remains a non-locally significant wetland.

Wetland B

Wetland B (0.89 acre) is a PFO wetland with a seasonally saturated water regime, located in the north-central portion of the site. Wetland B forms the headwaters of a tributary to Mill Creek and extends off-site (upstream) to the north. The delineated wetland is dominated by slough sedge and Pacific water-dropwort (*Oenanthe sarmentosa*) with a canopy of Oregon ash. Red osier, rose (*Rosa* species), and cascara false buckthorn (*Frangula purshiana*) are present in the shrub layer.

Wetland soils met the Redox Dark Surface (F6) hydric soil indicator. Primary indicators of hydrology were not observed in Wetland B during the May 20, 2013, site visit; however, this wetland was observed to be shallowly ponded during a site reconnaissance conducted on February 15, 2013. Secondary indicators of hydrology observed during the May 20, 2013, site visit included water-stained leaves (B9), drainage patterns (B10), geomorphic position (D2), and the FAC-neutral test (D5).

The wetland boundary was delineated based on a change in the vegetation community from the hydrophytic species described above to an upland-dominated community including sword fern, snowberry, beaked hazelnut, poison oak, Oregon white oak, and Douglas fir.

The northern portion of Wetland B was mapped in the City's LWI (as Unit 6.03d) and was determined to be a locally significant wetland. The southern, approximately 75-foot section of Wetland B, located south of an existing paved road, was not mapped in the City's LWI. This southern section of Wetland B is 0.07 acre and does not meet the City's criteria for adding wetlands to the SROZ maps according to section 4.139.10 (.02) in the City's development code. This section of the wetland consists of an emergent wetland community dominated by Pacific water-dropwort, Siberian springbeauty (*Claytonia sibirica*), and lamp rush (*Juncus effusus*). This section of the wetland is much more open and sparsely vegetated in the tree and shrub layers and does not provide the diverse wildlife habitat that is provided by the northern portion of the wetland determined to be locally significant in the City's LWI. This feature is surrounded on all sides by existing paved roads and former Living Enrichment Center developed areas, which isolate this feature from the larger contiguous complex of wetlands and uplands to the north.

The results of the OFWAM assessment for the southern section of Wetland B are that the wetland provides wildlife habitat for some species and has degraded water quality and hydrologic control functions (Appendix E). The southern section of Wetland B does not provide any fish habitat due to the long section of culvert that separates this wetland from downstream waters. The southern portion of Wetland B was determined to be a non-locally significant wetland, and it does not meet the criteria for adding wetlands to the SROZ maps.

Wetland C

Wetland C (0.27 acre) is the downslope continuation of Wetland B. The two wetlands are connected through a stormwater pipe. The majority of Wetland C is vegetated with yellow flag iris (*Iris pseudacorus*), Pacific water-dropwort, and reed canarygrass (*Phalaris arundinacea*). A fringe of red alder (*Alnus rubra*) and western arborvitae (*Thuja plicata*) overhang the wetland but are rooted in uplands. This feature was confined within steep, approximately 5-foot-tall slopes dominated by non-hydrophytic vegetation including English ivy (*Hedera helix*), beaked hazelnut, Himalayan blackberry (*Rubus armeniacus*), oso-berry (*Oemleria cerasiformis*), big leaf maple (*Acer macrophyllum*), and Douglas fir. Due to the majority of the wetland being dominated by obligate wetland vegetation and the obvious transition to uplands based on the abrupt change to non-hydrophytic vegetation in conjunction with steep topography, no sample plots were located in this wetland. The downslope-most portion of this feature consisted of a non-vegetated 2-foot-wide channel that was flowing 6 inches deep after the heavy rainfall received in the two days prior to the May 23, 2013, site visit; however, since the majority of the feature was vegetated, it is considered to be a wetland not a water. The southern portion of Wetland C is culverted under an existing paved road. Wetland C drains off-site to the south onto the Graham Oaks Nature Park as Pristine Creek. Since the LWI, the drain tile that conveyed Pristine Creek through the former agricultural portion of the park has been removed by Metro and the creek is daylighted.

Wetland C was mapped in the City's LWI (as Unit 6.01) and was determined to be a non-locally significant wetland due to being smaller than 0.5 acre. Site conditions of this wetland are unchanged, and it remains a non-locally significant wetland.

Wetland D

Wetland D is an isolated 0.48-acre emergent wetland with a seasonally saturated water regime located in the southwest corner of the site. Wetland D was dominated by lamp rush, taper-fruit short-scale sedge (*C. leptopoda*), thick-head sedge (*C. pachystachya*), dense sedge (*C. densa*), fringed willowherb (*Epilobium ciliatum*), and scattered Scouler's willow (*Salix scouleriana*) around the perimeter of the wetland. Wetland soils met the Redox Dark Surface (F6) and Depleted Matrix (F3) hydric soil indicators. Wetland hydrology indicators included a high water table and saturation within 12 inches of the soil surface. The wetland boundary was delineated based on a change in the dominant vegetation community to sword fern, snowberry, poison oak, Oregon white oak, and Douglas fir.

Wetland D was not mapped in the City's LWI. This wetland is less than 0.5 acre in size and does not meet the criteria for addition to the SROZ maps in section 4.139.10 (.02) of the City's development code.

Uplands

Uplands in the study area generally consisted of a mixed deciduous/coniferous forest dominated by Douglas fir and Oregon white oak in the tree canopy and beaked hazelnut, snowberry, sword fern, California dewberry (*R. ursinus*), and bedstraw (*Galium aparine*) in the understory. Poison oak, Siberian springbeauty, and English ivy were also dominant in portions of the upland. Upland soils did not meet any hydric soil indicators, and no hydrology indictors were observed in uplands.

F. DEVIATION FROM LWI OR NWI

OAR141-090-0035 (16)(e)

No wetlands were mapped on the site in the National Wetlands Inventory (NWI; Appendix A, Figure 4). Several wetlands were mapped on the site in the City of Wilsonville's LWI (Appendix A, Figure 5) including a locally significant wetland in the north portion of the site (Unit 6.03) and three small, isolated, and non-locally significant wetlands (Units 6.01, 6.02, and a wetland within Unit 6.011U). Additional wetland areas were delineated in the north and southwest portions of the project area.

G. MAPPING METHOD

OAR141-090-0035 (7)(f), (11), (12), (13), (18), and (22)

Sample plots and the on-site boundaries of Wetlands A, B, C, and D were flagged in the field by SWCA and professionally land surveyed by Pacific Community Design. The surveyed delineation map is included as Figures 6 and 7 in Appendix A.

H. ADDITIONAL INFORMATION

OAR141-090-0035 (6)(c), (16)(c), and (21)

Wetlands B and C have a direct surface water connection to a seasonal tributary to Mill Creek and would likely be determined jurisdictional by DSL and the USACE. Mill Creek flows to Corral Creek, a tributary to the Willamette River, which is a traditional navigable water.

Wetlands A and D are isolated wetlands. No surface connection of these wetlands to other nearby wetlands and waters was observed. There does not appear to be a significant nexus between Wetland A and Wetland D and other wetlands on the site. Wetlands A and D therefore may not be determined jurisdictional by the USACE.

I. RESULTS AND CONCLUSIONS

OAR141-090-0035 (7)(j)

The on-site boundaries of four wetlands totaling 1.69 acres were delineated in the study area. Table 3 below provides a summary of the on-site size of each feature, the Cowardin and hydrogeomorphic (HGM) classifications, the hydrologic connection to other nearby waters, and our prediction of whether the feature would likely be determined jurisdictional by DSL and the USACE.

Table 3. Summary of Potentially Jurisdictional Features in the Study Area

Wetland ID	Acres	Cowardin Class	HGM Class	Connection to Other Waters	Predicted Jurisdiction
Wetland A	0.05	PFO	Flats	Isolated	DSL
Wetland B	0.89	PFO	Slope	Headwaters of Pristine Creek	DSL and USACE
Wetland C	0.27	PEM	Slope	Headwaters of Pristine Creek	DSL and USACE
Wetland D	0.48	PEM	Flats	Isolated	DSL

J. REQUIRED DISCLAIMER

OAR141-009-0035 (7)(k)

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

K. LIST OF PREPARERS

Stacy Benjamin

Stacy Benjamin
Senior Wetland Ecologist
Fieldwork and Report Preparation

C. Mirth Walker

C. Mirth Walker, PWS, CWD
Senior Wetland Scientist
Report Quality Assurance/Quality Control

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APPENDIX A

Maps

Figure 1. Site location map.

Figure 2. Tax lot map.

Figure 3. Soils map.

Figure 4. National Wetlands Inventory map.

Figure 5. City of Wilsonville Natural Resource Inventory map.

Figures 6 and 7. Wetland map.

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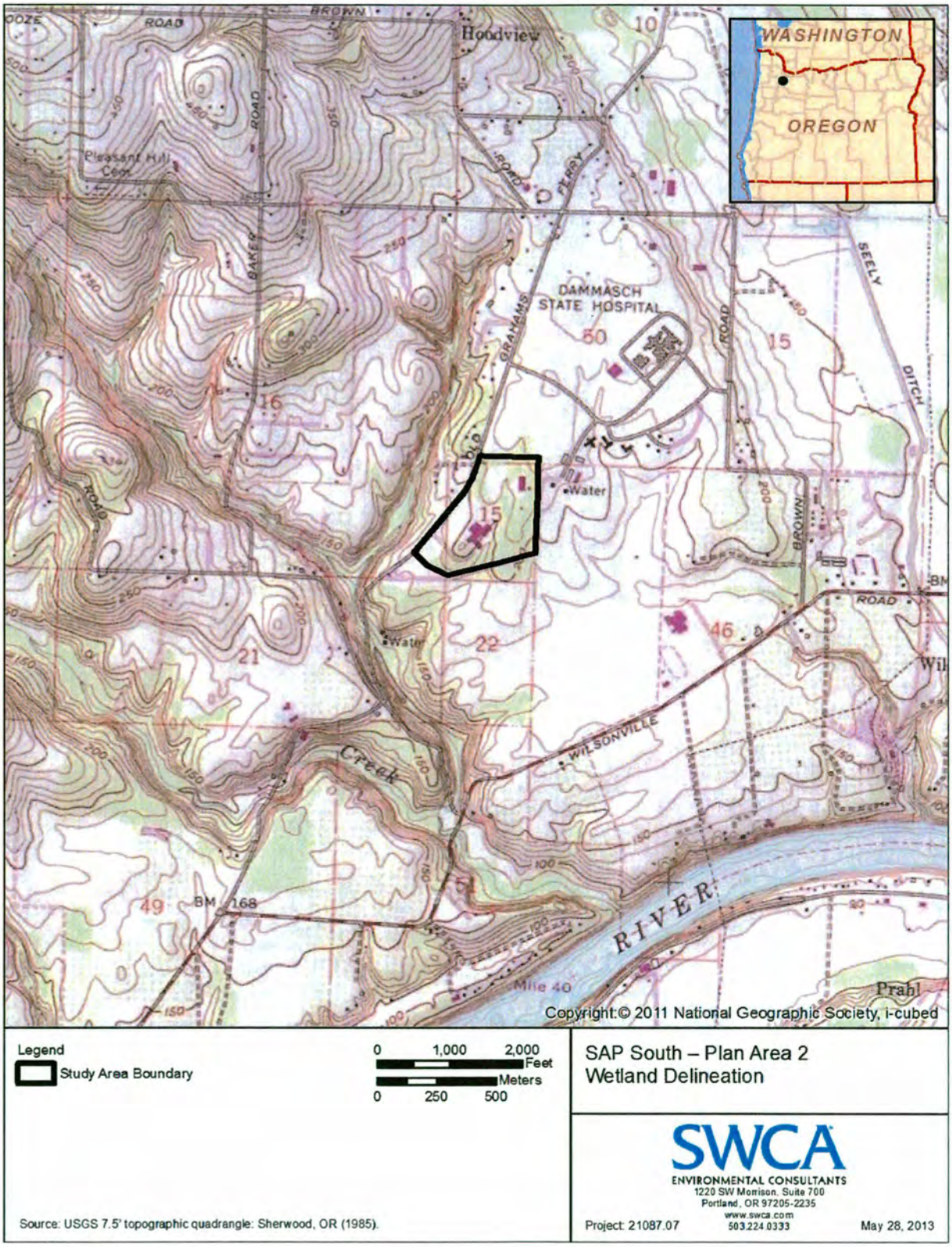

Figure 1. Site location map.

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Figure 2. Tax lot map.

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Figure 3. Soils map.

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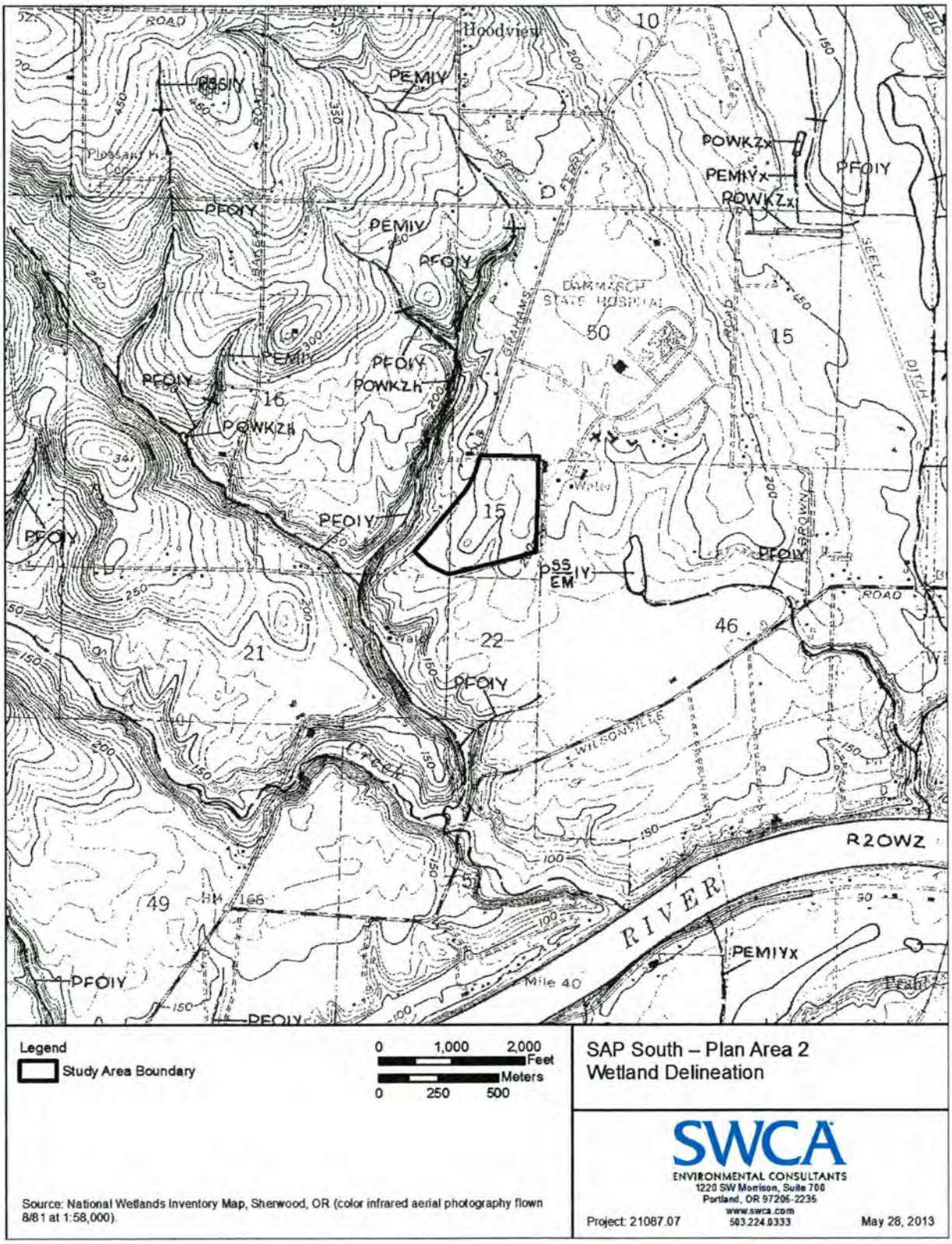

Figure 4. National Wetlands Inventory map.

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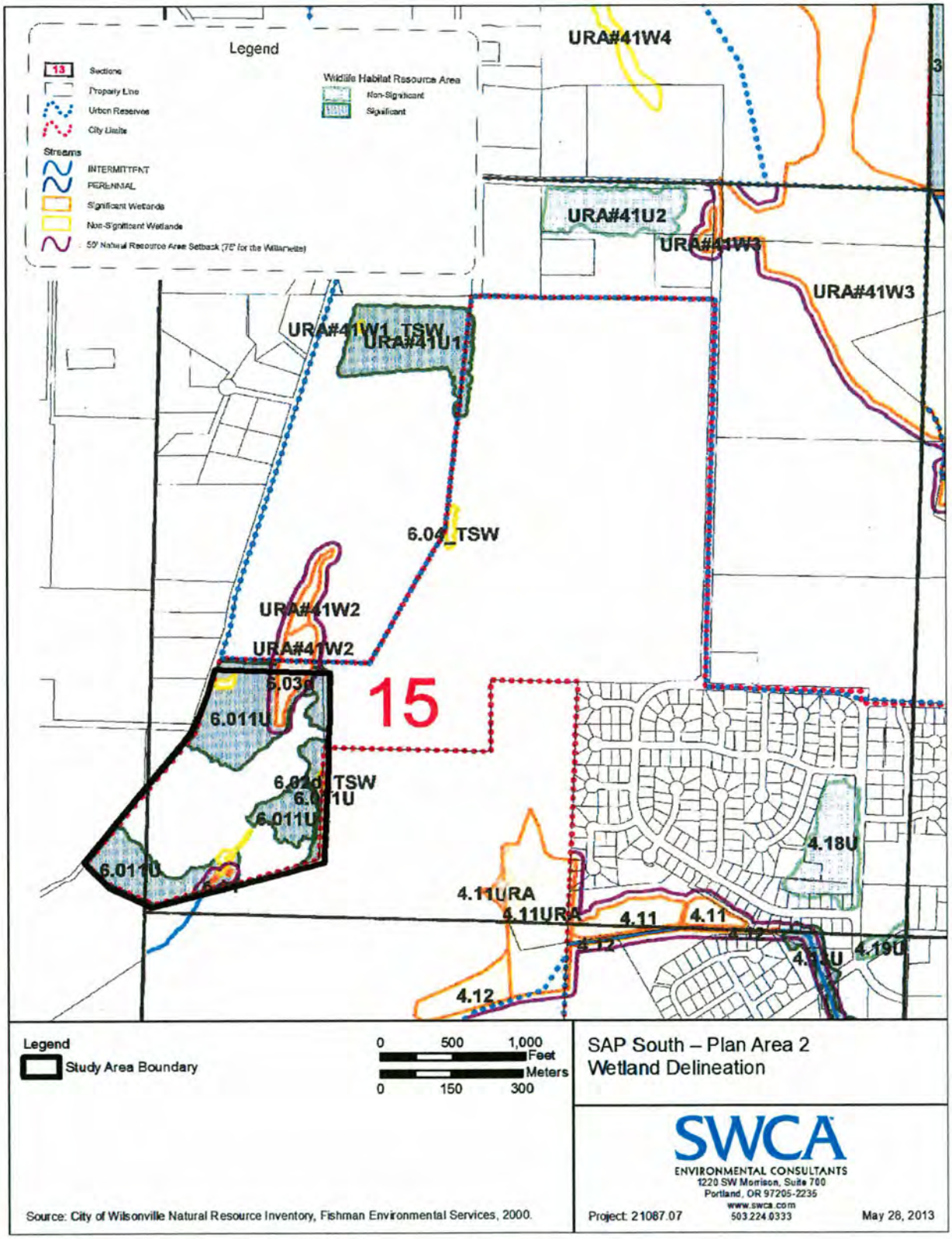

Figure 5. City of Wilsonville Natural Resource Inventory map.

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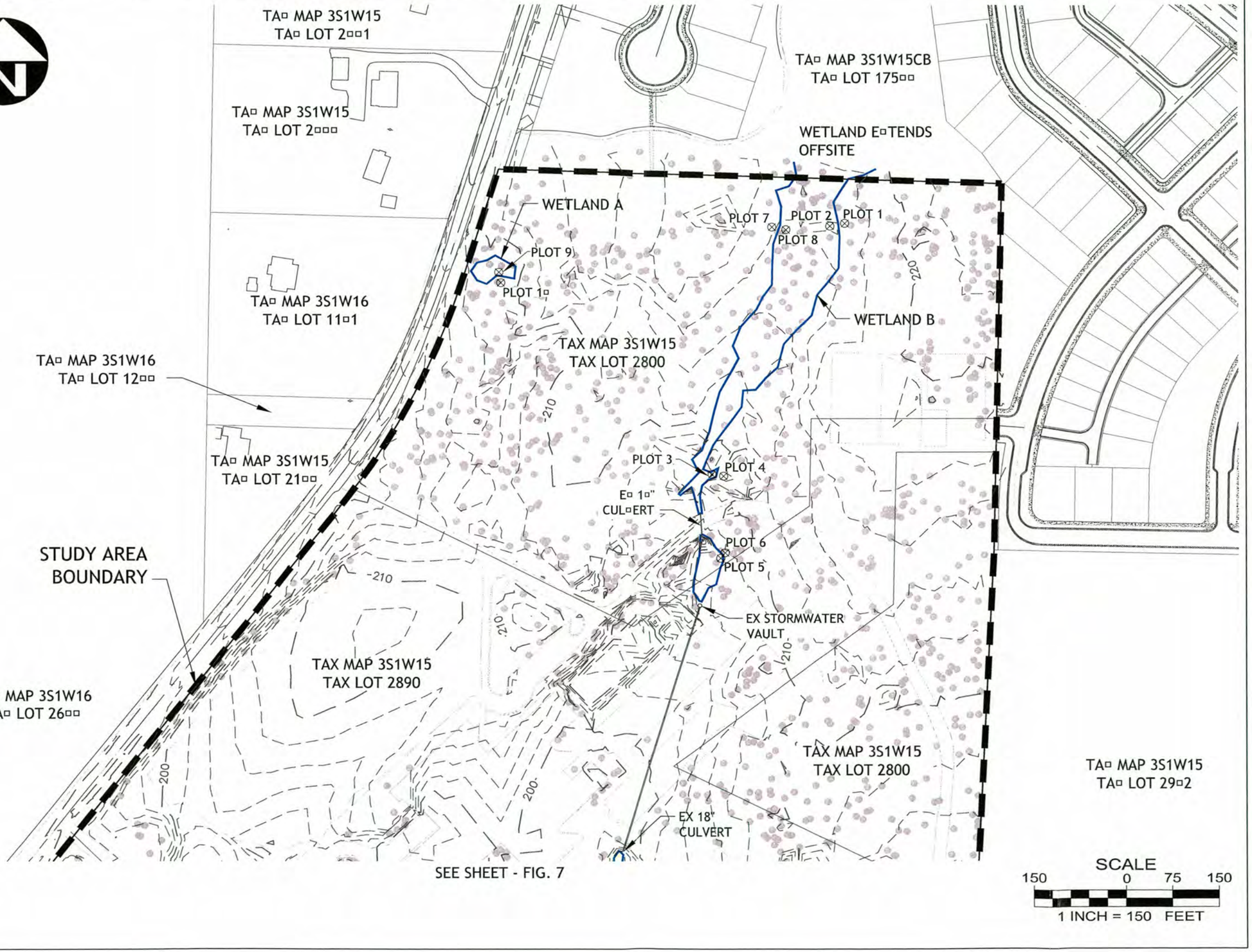

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POLYGON NW COMPANY
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Pacific Community Design
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SWCA
ENVIRONMENTAL CONSULTANTS

DATE: 06/21/2013

REVISIONS

NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

EXISTING CONDITIONS & WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 6

SEE SHEET - FIG. 6

STUDY AREA BOUNDARY

TAX MAP 3S1W15
TAX LOT 2890

TA□ MAP 3S1W16
TA□ LOT 26□□

TAX MAP 3S1W15
TAX LOT 2800

PLOT 6

PLOT 5

EX STORMWATER VAULT

EX 18" CULVERT

WETLAND D

PLOT 12

PLOT 13

PLOT 11

PLOT 14

PLOT 15

WETLAND C

E□ 28" CUL□ERT

TA□ MAP 3S1W15
TA□ LOT 28□□

WETLAND E□TENDS OFFSITE

TA□ MAP 3S1W15
TA□ LOT 29□2

-210

210

200

190

SCALE
150 0 75 150
1 INCH = 150 FEET

N:\proj\395-021\09 Drawings\03 Planning\Exhibits - Wetland\395021.Wetland Exhibit.dwg - SHEET: FIG 7 □□ 14, 2013 - 3:50pm jmh

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DATE: 06/21/2013

REVISIONS

NO.	DATE	DESCRIPTION

SAP South
Plan Area 2

EXISTING CONDITIONS & WETLAND MAP

PROJECT NO.: 395-021
TYPE: PLANNING
REVIEWED BY:

FIG 7

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APPENDIX B

Precipitation Data

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WETS Station : PORTLAND WSFO, OR6751 Creation Date: 09/09/2002
Latitude: 4536 Longitude: 12236 Elevation: 00020
State FIPS/County(FIPS): 41051 County Name: Multnomah
Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.)			Precipitation (Inches)				
					30% chance will have		avg # of days w/.1 or more	avg total snow fall
	avg daily max	avg daily min	avg	avg	less than	more than		
January	46.0	34.6	40.3	5.07	2.98	6.16	11	1.1
February	50.8	36.4	43.6	4.18	2.84	4.98	10	1.4
March	56.4	39.3	47.8	3.71	2.85	4.31	10	0.1
April	61.4	42.6	52.0	2.64	1.93	3.10	7	0.0
May	67.7	48.1	57.9	2.38	1.44	2.88	6	0.0
June	73.6	53.2	63.4	1.59	0.94	1.93	4	0.0
July	80.1	57.4	68.7	0.72	0.31	0.89	1	0.0
August	80.6	57.7	69.1	0.93	0.33	1.13	2	0.0

September	75.6	52.8	64.2	1.65	0.65	2.06	3	0.0
October	64.3	45.4	54.8	2.88	1.57	3.52	7	0.0
November	52.5	40.0	46.3	5.61	3.72	6.73	12	0.6
December	46.0	35.3	40.6	5.71	3.89	6.82	11	1.3
Annual	-----	-----	-----	------	32.85	40.58	--	----
Average	62.9	45.2	54.1	------	------	------	--	----
Total	-----	-----	-----	37.07	------	------	84	4.4

GROWING SEASON DATES

Probability	Temperature: 24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	1/22 to 12/27 340 days	2/15 to 11/29 288 days	3/22 to 11/13 236 days
70 percent *	> 365 days > 365 days	2/ 6 to 12/ 8 306 days	3/15 to 11/19 249 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

total 1942-2002 prcp

Station : OR6751, PORTLAND WSFO
Unit = inches

yr	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annl
42	3.63	M3.53	1.63								11.57	9.37	29.73
43	M5.50	3.27	5.54								M2.20	2.70	19.21
44	2.81	3.11	1.93								5.00	1.90	14.75
45	4.10	4.36	5.30								8.58	5.61	27.95
46	5.12	4.99	4.23								7.57	5.47	27.38
47	3.72	2.77	4.11								4.08	4.64	19.32
48	5.87	5.02	4.24						3.28	2.39	M6.64	M7.84	35.28
49	1.02	9.46	2.78	0.72	M2.12	0.68	0.91	0.24	1.66	2.35	5.56	4.86	32.36
50	10.10	5.77	4.76	2.74	0.57	M2.31	0.50	0.72	M1.45	M6.29	M8.55	6.31	50.07
51	7.71	M4.29	3.86	1.14	1.75	0.03	0.28	0.02	2.55	6.81	5.31	5.06	38.81
52	4.40	3.59	3.82	M2.55	0.78	2.23	M0.00	0.18	0.33	0.72	M1.25	6.76	26.61
53	12.78	3.71	M3.81	1.89	M3.41	2.04	0.03	1.79	1.16	3.56	6.46	M7.84	48.48
54	M8.85	4.57	2.55	2.54	1.83	3.58	M1.23	1.92	0.85	3.40	5.09	5.01	41.42
55	M2.03	M3.26	3.06	4.72	1.24	M1.78	0.89	0.00	2.86	M6.53	7.34	10.14	43.85
56	11.66	2.04	M3.93	0.53	M2.22	2.03	0.01	2.56	M0.73	5.10	1.47	3.64	35.92
57	M2.14	4.14	7.52	1.84	1.97	0.73	0.19	0.69	0.49	3.53	M2.79	6.15	32.18
58	6.56	5.13	2.20	3.33	1.35	3.04	0.00	0.02	1.05	1.49	6.39	5.06	35.62
59	7.57	4.18	3.22	0.92	2.89	2.38	0.56	M0.09	2.81	3.51	3.30	3.08	34.51
60	3.93	4.00	4.77	3.33	3.37	0.52	0.00	1.00	1.37	2.39	8.63	2.61	35.92

61	4.50	M6.86	M5.32	3.59	2.80	0.47	0.42	1.07	0.64	2.89	4.67	5.94	39.17
62	1.58	3.43	4.25	3.15	2.56	0.78	0.06	1.49	1.66	M3.03	9.32	2.59	33.90
63	2.27	3.48	4.69	3.78	2.74	1.71	1.17	0.87	0.75	3.04	5.64	3.60	33.74
64	9.51	0.78	2.28	1.56	1.04	1.96	0.68	0.90	1.61	0.84	6.78	9.92	37.86
65	7.44	2.22	1.10	2.20	1.31	0.83	0.44	0.73	0.01	2.03	5.64	7.34	31.29
66	5.74	1.70	4.71	0.85	0.91	1.02	1.19	0.59	1.70	3.06	5.50	6.89	33.86
67	6.21	2.02	4.31	2.17	1.02	1.01	0.00	0.00	0.76	4.72	2.27	4.75	29.24
68	4.58	6.64	2.68	1.91	3.63	2.20	0.14	4.53	2.20	5.03	6.23	11.12	50.89
69	7.61	3.14	1.13	2.28	1.61	2.99	0.14	0.04	3.86	3.02	3.18	8.12	37.12
70	11.81	4.77	2.58	2.94	1.55	0.49	0.05	0.00	1.10	2.85	5.72	7.49	41.35
71	7.09	3.36	4.87	2.72	1.00	1.76	0.26	0.95	3.53	2.37	5.76	8.05	41.72
72	5.71	4.08	5.41	2.98	2.23	0.68	0.56	0.67	3.06	0.87	3.78	8.79	38.82
73	3.69	1.94	2.45	1.33	1.43	1.45	0.06	1.41	3.29	3.14	11.55	9.93	41.67
74	8.51	4.61	5.65	1.76	1.74	0.80	2.01	0.07	0.21	2.14	6.73	6.05	40.28
75	8.43	4.75	3.45	1.88	1.35	1.13	0.43	2.10	0.00	4.76	4.10	6.68	39.06
76	5.14	4.92	2.93	2.34	2.29	0.78	0.66	3.29	0.73	1.48	0.77	1.38	26.71
77	1.07	2.49	3.50	1.04	4.30	0.83	0.39	3.26	3.33	2.28	5.56	8.98	37.03
78	4.85	3.28	1.49	3.96	3.17	1.69	1.36	2.05	2.07	0.36	3.83	2.51	30.62
79	2.59	6.53	2.51	2.47	2.41	0.64	0.25	1.18	1.75	4.85	3.38	7.23	35.79
80	8.51	4.01	3.11	2.58	2.19	2.50	0.19	0.39	1.56	1.18	6.47	9.72	42.41
81	1.47	3.86	2.33	1.79	2.25	3.23	0.24	0.15	1.86	4.12	4.62	8.37	34.29
82	6.31	5.98	2.38	3.56	0.46	1.66	0.94	1.66	3.98	4.44	3.51	8.16	43.04
83	6.23	7.78	6.80	1.87	1.30	1.95	2.68	2.29	0.39	1.95	8.65	5.30	47.19
84	2.01	3.93	3.19	3.20	3.41	4.06	0.00	0.09	1.46	3.85	9.74	2.56	37.50
85	0.06	1.79	3.08	1.07	1.52	2.34	0.55	0.48	2.76	2.75	3.89	2.19	22.48
86	4.65	5.31	2.60	1.91	2.19	0.23	1.20	0.10	4.30	1.99	6.26	4.30	35.04
87	6.93	2.45	4.91	1.94	1.63	0.14	1.03	0.35	0.30	0.27	1.96	8.00	29.91
88	4.95	1.17	3.13	4.57	2.53	2.34	0.69	0.10	1.76	0.19	7.92	2.37	31.72
89	3.30	2.84	6.73	2.08	2.87	0.78	0.91	1.07	1.48	1.73	3.18	3.08	30.05
90	7.95	3.43	2.52	2.31	2.37	1.94	0.32	0.95	0.34	4.65	3.68	2.40	32.86
91	2.56	3.65	4.64	4.05	3.34	2.31	0.07	0.70	0.02	1.51	6.36	4.34	33.55
92	4.31	4.12	1.87	3.82	0.10	0.60	0.67	0.49	1.12	2.87	4.55	4.98	29.50
93	3.06	0.72	4.39	5.26	4.36	1.69	2.41	0.37	0.00	1.59	1.50	5.01	30.36
94	3.56	4.92	1.84	1.91	0.56	1.67	0.07	0.13	1.13	8.41	5.91	4.85	34.96
95	5.56	3.19	3.82	3.49	1.65	2.62	1.23	0.81	1.31	3.15	10.74	5.91	43.48
96	7.15	10.03	3.24	5.12	4.88	0.44	0.73	0.25	3.05	5.38	9.58	13.35	63.20
97	7.32	1.63	7.14	3.73	3.63	2.83	0.52	1.58	1.98	6.40	4.02	3.03	43.81
98	6.77	5.27	4.06	1.04	5.55	1.73	0.59	0.00	1.09	2.16	11.02	6.74	46.02
99	6.63	8.73	4.03	1.56	1.97	1.73	0.51	0.75	0.10	2.44	6.81	3.62	38.88
0	5.66	4.50	3.21	1.82	2.70	1.19	0.15	0.12	1.67	3.25	2.46	3.47	30.20
1	1.47	1.29	3.11	2.85	0.91	1.79	0.95	0.74	0.70	3.12	6.89	6.62	30.44
2													

Explanation of the Preliminary Monthly Climate Data (F6) Product

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WFO Monthly/Daily Climate Data

```
000
CXUS55 KPQR 281230
CF6PDX
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                        STATION:   PORTLAND OR
                                        MONTH:     MAY
                                        YEAR:      2013
                                        LATITUDE:   45 35 N
                                        LONGITUDE: 122 36 W
```

TEMPERATURE IN F:							:PCPN:	SNOW:	WIND				:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	72	40	56	1	9	0	0.00	0.0	0	5.1	13	290	M	M	3		16	360
2	79	43	61	6	4	0	0.00	0.0	0	7.6	17	320	M	M	4		25	340
3	79	49	64	8	1	0	0.00	0.0	0	6.9	17	320	M	M	1		24	320
4	83	47	65	9	0	0	0.00	0.0	0	8.9	28	80	M	M	1		36	80
5	85	49	67	11	0	2	0.00	0.0	0	9.4	28	90	M	M	1		33	90
6	84	53	69	13	0	4	0.00	0.0	0	5.4	14	170	M	M	1		17	160
7	75	50	63	7	2	0	0.00	0.0	0	4.5	14	180	M	M	1		20	190
8	70	53	62	5	3	0	0.00	0.0	0	2.2	7	260	M	M	6	1	9	290
9	79	51	65	8	0	0	0.00	0.0	0	3.9	13	320	M	M	5		17	330
10	83	53	68	11	0	3	0.00	0.0	0	4.4	12	280	M	M	4		14	280
11	85	57	71	14	0	6	0.00	0.0	0	3.7	12	320	M	M	7		15	320
12	71	59	65	7	0	0	0.17	0.0	0	4.1	13	80	M	M	9	1	16	90
13	70	51	61	3	4	0	T	0.0	0	9.6	26	230	M	M	8		36	230
14	67	46	57	-1	8	0	0.00	0.0	0	4.0	14	290	M	M	5		17	290
15	59	50	55	-3	10	0	0.03	0.0	0	3.8	10	110	M	M	10		12	100
16	66	53	60	2	5	0	0.16	0.0	0	4.1	16	270	M	M	9	1	22	290
17	66	49	58	-1	7	0	0.02	M	0	4.8	16	270	M	M	8		20	270
18	58	52	55	-4	10	0	0.13	0.0	0	3.5	10	220	M	M	10	1	13	190
19	66	50	58	-1	7	0	0.00	0.0	0	5.6	17	310	M	M	7	1	21	310
20	73	48	61	2	4	0	0.00	0.0	0	3.1	10	310	M	M	6		15	320
21	58	45	52	-7	13	0	0.49	M	0	8.0	20	290	M	M	10	1	26	300
22	50	43	47	-13	18	0	1.19	M	0	12.1	20	210	M	M	10	1	25	190
23	55	47	51	-9	14	0	0.75	M	0	9.2	16	190	M	M	10	18	23	190
24	59	48	54	-6	11	0	0.30	M	M	7.2	20	230	M	M	9	1	23	240
25	68	50	59	-1	6	0	T	M	M	4.9	13	210	M	M	8		17	220
26	65	54	60	0	5	0	0.11	M	M	8.5	18	230	M	M	9	1	24	200
27	67	40	54	-6	11	0	0.88	M	M	10.7	24	250	M	M	9	1	31	250
SM	1892	1330			152	15	4.23		0.0	165.2			M		171			

```
AV 70.1 49.3                                  6.1 FASTST   M    M   6    MAX(MPH)
                                    MISC ----> # 28  80                # 36   80
================================================================================
NOTES:
# LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

                                          STATION:  PORTLAND OR
                                          MONTH:    MAY
                                          YEAR:     2013
                                          LATITUDE:   45 35 N
                                          LONGITUDE: 122 36 W

[TEMPERATURE DATA]      [PRECIPITATION DATA]       SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 59.7   TOTAL FOR MONTH:   4.23    1 = FOG OR MIST
DPTR FM NORMAL:   1.8   DPTR FM NORMAL:    2.10    2 = FOG REDUCING VISIBILITY
HIGHEST:    85 ON 11, 5 GRTST 24HR  1.39 ON 22-23      TO 1/4 MILE OR LESS
LOWEST:     40 ON 27, 1                            3 = THUNDER
                        SNOW, ICE PELLETS, HAIL    4 = ICE PELLETS
                        TOTAL MONTH:   0.0 INCH    5 = HAIL
                        GRTST 24HR     0.0         6 = FREEZING RAIN OR DRIZZLE
                        GRTST DEPTH:   0           7 = DUSTSTORM OR SANDSTORM:
                                                       VSBY 1/2 MILE OR LESS
                                                   8 = SMOKE OR HAZE
[NO. OF DAYS WITH]      [WEATHER - DAYS WITH]      9 = BLOWING SNOW
                                                   X = TORNADO
MAX 32 OR BELOW:   0    0.01 INCH OR MORE:  11
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   9
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   3
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   1

[HDD (BASE 65) ]
TOTAL THIS MO.   152    CLEAR  (SCALE 0-3)   6
DPTR FM NORMAL   -51    PTCLDY (SCALE 4-7)   9
TOTAL FM JUL 1  3919    CLOUDY (SCALE 8-10) 12
DPTR FM NORMAL  -247

[CDD (BASE 65) ]
TOTAL THIS MO.    15
DPTR FM NORMAL     7    [PRESSURE DATA]
TOTAL FM JAN 1    15    HIGHEST SLP M ON M
DPTR FM NORMAL     6    LOWEST  SLP 29.70 ON  5

[REMARKS]
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Climatological Report (Daily)

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000
CDUS46 KPQR 241143
CLIPDX


CLIMATE REPORT
NATIONAL WEATHER SERVICE PORTLAND OREGON
442 AM PDT FRI MAY 24 2013


.....................................

...THE PORTLAND OR CLIMATE SUMMARY FOR MAY 23 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1940 TO 2013
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	55	228 PM	90	1947	70	-15	64
MINIMUM	47	742 AM	35	1964	50	-3	49
AVERAGE	51				60	-9	57
PRECIPITATION (IN)							
YESTERDAY	0.75		0.96	1997	0.08	0.67	0.01
MONTH TO DATE	2.94				1.79	1.15	1.85
SINCE OCT 1	33.27				30.86	2.41	33.86
SINCE JAN 1	11.34				16.74	-5.40	22.64
SNOWFALL (IN)							
YESTERDAY	MM						
MONTH TO DATE	0.0						
SINCE MAR 1	0.0						
SINCE JUL 1	0.0						
SNOW DEPTH	0						

DEGREE DAYS

HEATING				
YESTERDAY	14	6	8	8
MONTH TO DATE	119	181	-62	181
SINCE MAR 1	989	1086	-97	1146
SINCE JUL 1	3886	4144	-258	4234
COOLING				
YESTERDAY	0	1	-1	0
MONTH TO DATE	15	4	11	11
SINCE MAR 1	15	5	10	16
SINCE JAN 1	15	5	10	16

.....

WIND (MPH)

HIGHEST WIND SPEED	16	HIGHEST WIND DIRECTION	S (190)
HIGHEST GUST SPEED	23	HIGHEST GUST DIRECTION	S (190)
AVERAGE WIND SPEED	9.2		

SKY COVER

POSSIBLE SUNSHINE MM
AVERAGE SKY COVER 1.0

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.

RAIN
LIGHT RAIN
FOG
HAZE

RELATIVE HUMIDITY (PERCENT)

HIGHEST	93	1200 AM
LOWEST	71	1200 PM
AVERAGE	82	

.....

THE PORTLAND OR CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	70	93	1992
MINIMUM TEMPERATURE (F)	50	37	1955

SUNRISE AND SUNSET

MAY 24 2013.....SUNRISE 530 AM PDT SUNSET 845 PM PDT

```
MAY 25 2013..........SUNRISE   529 AM PDT   SUNSET   846 PM PDT


-  INDICATES NEGATIVE NUMBERS.
R  INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T  INDICATES TRACE AMOUNT.
```

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (http://www.usno.navy.mil). See http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation for information on using these data for legal purposes.

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Climatological Report (Daily)

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000
CDUS46 KPQR 211150
CLIPDX


CLIMATE REPORT
NATIONAL WEATHER SERVICE PORTLAND OREGON
449 AM PDT TUE MAY 21 2013


.....................................

...THE PORTLAND OR CLIMATE SUMMARY FOR MAY 20 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1940 TO 2013
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	73	536 PM	91	1963	69	4	65
MINIMUM	48	419 AM	37	1975	50	-2	57
AVERAGE	61				59	2	61
PRECIPITATION (IN)							
YESTERDAY	0.00		0.68	1998	0.08	-0.08	0.07
MONTH TO DATE	0.51				1.55	-1.04	1.19
SINCE OCT 1	30.84				30.62	0.22	33.20
SINCE JAN 1	8.91				16.50	-7.59	21.98
SNOWFALL (IN)							
YESTERDAY	0.0						
MONTH TO DATE	0.0						
SINCE MAR 1	0.0						
SINCE JUL 1	0.0						
SNOW DEPTH	0						

DEGREE DAYS

HEATING				
YESTERDAY	4	6	-2	4
MONTH TO DATE	74	163	-89	156
SINCE MAR 1	944	1068	-124	1121
SINCE JUL 1	3841	4126	-285	4209
COOLING				
YESTERDAY	0	1	-1	0
MONTH TO DATE	15	1	14	11
SINCE MAR 1	15	2	13	16
SINCE JAN 1	15	2	13	16

.....

WIND (MPH)

HIGHEST WIND SPEED	10	HIGHEST WIND DIRECTION	NW (310)
HIGHEST GUST SPEED	15	HIGHEST GUST DIRECTION	NW (320)
AVERAGE WIND SPEED	3.1		

SKY COVER

POSSIBLE SUNSHINE MM
AVERAGE SKY COVER 0.6

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
NO SIGNIFICANT WEATHER WAS OBSERVED.

RELATIVE HUMIDITY (PERCENT)

HIGHEST	86	200 AM
LOWEST	31	300 PM
AVERAGE	59	

.....

THE PORTLAND OR CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	69	87	1988
MINIMUM TEMPERATURE (F)	50	38	1955

SUNRISE AND SUNSET

MAY 21 2013.....	SUNRISE	533 AM PDT	SUNSET	842 PM PDT
MAY 22 2013.....	SUNRISE	532 AM PDT	SUNSET	843 PM PDT

```
-  INDICATES NEGATIVE NUMBERS.
R  INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T  INDICATES TRACE AMOUNT.
```

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (http://www.usno.navy.mil). See http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation for information on using these data for legal purposes.

Explanation of the Preliminary Monthly Climate Data (F6) Product

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WFO Monthly/Daily Climate Data

```
000
CXUS55 KPQR 011230
CF6PDX
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                        STATION:   PORTLAND OR
                                        MONTH:     APRIL
                                        YEAR:      2013
                                        LATITUDE:   45 35 N
                                        LONGITUDE: 122 36 W
```

TEMPERATURE IN F:							:PCPN:		SNOW:	WIND			:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	65	51	58	8	7	0	0.00	0.0	0	4.9	14	200	M	M	8		17	180
2	66	49	58	8	7	0	T	M	0	3.3	12	320	M	M	7		14	320
3	65	44	55	5	10	0	0.00	0.0	0	1.2	7	110	M	M	8	18	8	110
4	62	52	57	6	8	0	0.19	0.0	0	7.9	20	200	M	M	9	1	25	200
5	60	51	56	5	9	0	0.20	0.0	0	12.1	23	220	M	M	10	1	30	220
6	57	44	51	0	14	0	0.61	M	0	10.4	22	230	M	M	8	1	31	220
7	53	42	48	-3	17	0	0.15	M	0	12.8	30	210	M	M	9	1	41	200
8	54	42	48	-3	17	0	0.01	M	0	3.5	9	190	M	M	8		12	280
9	56	39	48	-3	17	0	0.00	0.0	0	2.8	8	110	M	M	9	12	9	110
10	59	45	52	1	13	0	0.14	M	0	11.7	23	200	M	M	8	1	29	330
11	58	39	49	-2	16	0	T	M	0	3.7	13	320	M	M	5		17	320
12	54	39	47	-5	18	0	0.09	M	0	6.1	18	220	M	M	8	1	25	220
13	53	39	46	-6	19	0	0.05	M	0	10.2	24	240	M	M	7	1	29	250
14	52	41	47	-5	18	0	0.07	M	0	5.5	20	310	M	M	9	1	22	310
15	56	38	47	-5	18	0	0.08	M	0	5.1	14	60	M	M	7		18	300
16	59	37	48	-4	17	0	0.01	M	0	4.7	21	110	M	M	4	1	24	110
17	60	36	48	-4	17	0	0.01	M	0	5.0	12	310	M	M	6		14	300
18	59	46	53	1	12	0	0.06	M	0	2.9	9	320	M	M	10	1	12	310
19	58	50	54	1	11	0	0.41	0.0	0	8.0	20	210	M	M	10	1	24	210
20	59	48	54	1	11	0	0.01	M	0	4.0	13	350	M	M	9	1	18	350
21	55	43	49	-4	16	0	0.03	M	0	1.9	9	330	M	M	9	1	13	330
22	65	37	51	-2	14	0	0.00	0.0	0	4.6	17	80	M	M	1		23	90
23	68	38	53	0	12	0	0.00	0.0	0	5.8	18	320	M	M	2		23	320
24	75	39	57	3	8	0	0.00	0.0	0	5.8	17	330	M	M	1		23	320
25	77	44	61	7	4	0	0.00	0.0	0	3.9	12	340	M	M	4		17	350
26	78	46	62	8	3	0	0.00	0.0	0	3.6	10	280	M	M	4	1	99	99
27	73	45	59	5	6	0	T	M	0	4.2	15	340	M	M	6		24	350
28	67	52	60	6	5	0	T	0.0	0	7.6	24	220	M	M	9		30	220
29	59	44	52	-3	13	0	0.07	M	0	13.3	22	310	M	M	6	1	29	320
30	58	42	50	-5	15	0	T	M	0	7.2	20	300	M	M	6		24	300

```
==============================================================================
SM 1840 1302       372   0  2.19     0.0 183.7          M      207
==============================================================================
AV 61.3 43.4                                 6.1 FASTST   M    M   7    MAX(MPH)
                                  MISC ----> # 30 210                # 99   99
==============================================================================
NOTES:
# LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

                                          STATION:  PORTLAND OR
                                          MONTH:    APRIL
                                          YEAR:     2013
                                          LATITUDE:   45 35 N
                                          LONGITUDE: 122 36 W

[TEMPERATURE DATA]      [PRECIPITATION DATA]       SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 52.4   TOTAL FOR MONTH:   2.19    1 = FOG OR MIST
DPTR FM NORMAL:   0.1   DPTR FM NORMAL:   -0.54    2 = FOG REDUCING VISIBILITY
HIGHEST:    78 ON 26    GRTST 24HR  0.61 ON  6- 6      TO 1/4 MILE OR LESS
LOWEST:     36 ON 17                               3 = THUNDER
                        SNOW, ICE PELLETS, HAIL    4 = ICE PELLETS
                        TOTAL MONTH:   0.0 INCH    5 = HAIL
                        GRTST 24HR     0.0         6 = FREEZING RAIN OR DRIZZLE
                        GRTST DEPTH:   0           7 = DUSTSTORM OR SANDSTORM:
                                                       VSBY 1/2 MILE OR LESS
                                                   8 = SMOKE OR HAZE
[NO. OF DAYS WITH]      [WEATHER - DAYS WITH]      9 = BLOWING SNOW
                                                   X = TORNADO
MAX 32 OR BELOW:   0    0.01 INCH OR MORE:  17
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   6
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   1
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   0

[HDD (BASE 65) ]
TOTAL THIS MO.   372    CLEAR  (SCALE 0-3)   3
DPTR FM NORMAL   -11    PTCLDY (SCALE 4-7)  13
TOTAL FM JUL 1  3767    CLOUDY (SCALE 8-10) 14
DPTR FM NORMAL  -196

[CDD (BASE 65) ]
TOTAL THIS MO.     0
DPTR FM NORMAL    -1    [PRESSURE DATA]
TOTAL FM JAN 1     0    HIGHEST SLP 30.51 ON 17
DPTR FM NORMAL    -1    LOWEST  SLP 29.54 ON  7

[REMARKS]
#FINAL-04-13#
```

Explanation of the Preliminary Monthly Climate Data (F6) Product

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WFO Monthly/Daily Climate Data

```
000
CXUS55 KPQR 011230
CF6PDX
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                        STATION:   PORTLAND OR
                                        MONTH:     MARCH
                                        YEAR:      2013
                                        LATITUDE:   45 35 N
                                        LONGITUDE: 122 36 W
```

TEMPERATURE IN F:							:PCPN:		SNOW:	WIND			:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9 12Z	10 AVG	11 MX	12 2MIN	13	14	15	16	17	18
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	61	51	56	10	9	0	0.00	0.0	0	4.4	12	200	M	M	10		15	130
2	57	42	50	4	15	0	T	M	0	5.4	21	330	M	M	10	1	28	320
3	51	35	43	-3	22	0	T	M	0	2.4	10	280	M	M	5		13	280
4	57	29	43	-3	22	0	0.00	0.0	0	7.7	18	100	M	M	4	1	23	100
5	46	41	44	-2	21	0	0.14	M	0	10.3	18	120	M	M	9	1	22	120
6	46	41	44	-2	21	0	0.36	M	0	6.9	17	200	M	M	10	1	21	200
7	56	36	46	-1	19	0	0.00	0.0	0	4.4	10	280	M	M	3		12	280
8	59	30	45	-2	20	0	0.00	0.0	0	4.3	12	300	M	M	2	1	17	60
9	59	31	45	-2	20	0	0.00	0.0	0	2.1	6	120	M	M	3	18	8	310
10	49	34	42	-5	23	0	T	M	0	2.4	7	80	M	M	9		9	60
11	53	44	49	2	16	0	T	0.0	0	3.3	12	110	M	M	10	18	13	110
12	62	46	54	6	11	0	0.00	0.0	0	6.2	14	170	M	M	9	1	17	230
13	63	46	55	7	10	0	0.00	0.0	0	4.4	10	110	M	M	9		13	130
14	62	48	55	7	10	0	T	M	0	7.6	18	220	M	M	10		23	220
15	63	47	55	7	10	0	T	M	0	5.1	15	200	M	M	8		16	190
16	52	40	46	-2	19	0	0.05	M	0	7.8	25	290	M	M	10	18	31	290
17	50	38	44	-4	21	0	T	M	0	6.3	14	290	M	M	9		18	270
18	54	37	46	-3	19	0	0.00	0.0	0	2.9	12	210	M	M	7		17	190
19	52	36	44	-5	21	0	0.50	M	0	9.7	23	110	M	M	10	1	29	110
20	55	40	48	-1	17	0	0.39	M	0	14.2	29	260	M	M	8	15	39	250
21	50	38	44	-5	21	0	T	M	0	8.1	21	260	M	M	8		25	250
22	46	35	41	-8	24	0	0.01	M	0	3.2	15	290	M	M	8		20	280
23	50	34	42	-7	23	0	0.00	0.0	0	2.4	9	120	M	M	8	1	12	280
24	55	36	46	-3	19	0	0.00	0.0	0	7.1	20	100	M	M	8		23	90
25	62	39	51	1	14	0	0.01	M	0	2.5	9	90	M	M	8		12	100
26	54	39	47	-3	18	0	T	M	0	2.3	9	110	M	M	9		12	110
27	65	42	54	4	11	0	T	M	0	3.9	14	260	M	M	7	1	15	130
28	67	46	57	7	8	0	T	M	0	4.4	10	310	M	M	8		14	320
29	69	48	59	9	6	0	T	M	0	3.7	10	280	M	M	5		13	280
30	77	43	60	10	5	0	0.00	0.0	0	3.2	10	300	M	M	1		13	300

```
31  77  46  62  12   3   0 0.00  0.0    0  3.8 15 260   M    M   5        18 260
==========================================================================================
SM 1779 1238       498   0  1.46     0.0 162.4          M      230
==========================================================================================
AV 57.4 39.9                                  5.2 FASTST   M    M   7    MAX(MPH)
                                  MISC ----->  # 29 260                # 39  250
==========================================================================================
NOTES:
# LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

                                          STATION:  PORTLAND OR
                                          MONTH:    MARCH
                                          YEAR:     2013
                                          LATITUDE:   45 35 N
                                          LONGITUDE: 122 36 W

[TEMPERATURE DATA]      [PRECIPITATION DATA]      SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 48.7   TOTAL FOR MONTH:   1.46   1 = FOG OR MIST
DPTR FM NORMAL:   0.5   DPTR FM NORMAL:   -2.22   2 = FOG REDUCING VISIBILITY
HIGHEST:    77 ON 31,30 GRTST 24HR  0.50 ON 19-19     TO 1/4 MILE OR LESS
LOWEST:     29 ON  4                              3 = THUNDER
                        SNOW, ICE PELLETS, HAIL   4 = ICE PELLETS
                        TOTAL MONTH:   0.0 INCH   5 = HAIL
                        GRTST 24HR     0.0        6 = FREEZING RAIN OR DRIZZLE
                        GRTST DEPTH:   0          7 = DUSTSTORM OR SANDSTORM:
                                                      VSBY 1/2 MILE OR LESS
                                                  8 = SMOKE OR HAZE
[NO. OF DAYS WITH]      [WEATHER - DAYS WITH]     9 = BLOWING SNOW
                                                  X = TORNADO
MAX 32 OR BELOW:   0    0.01 INCH OR MORE:   7
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   4
MIN 32 OR BELOW:   3    0.50 INCH OR MORE:   1
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   0

[HDD (BASE 65) ]
TOTAL THIS MO.   498    CLEAR  (SCALE 0-3)   3
DPTR FM NORMAL   -24    PTCLDY (SCALE 4-7)  12
TOTAL FM JUL 1  3395    CLOUDY (SCALE 8-10) 16
DPTR FM NORMAL  -185

[CDD (BASE 65) ]
TOTAL THIS MO.     0
DPTR FM NORMAL     0    [PRESSURE DATA]
TOTAL FM JAN 1     0    HIGHEST SLP 30.51 ON 10
DPTR FM NORMAL     0    LOWEST  SLP 29.53 ON 20

[REMARKS]
#FINAL-03-13#
```

Explanation of the Preliminary Monthly Climate Data (F6) Product

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - http://www.ncdc.noaa.gov.

WFO Monthly/Daily Climate Data

```
000
CXUS55 KPQR 011230
CF6PDX
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                        STATION:   PORTLAND OR
                                        MONTH:     FEBRUARY
                                        YEAR:      2013
                                        LATITUDE:   45 35 N
                                        LONGITUDE: 122 36 W
```

TEMPERATURE IN F:							:PCPN:	SNOW:	WIND				:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	53	38	46	3	19	0	T	M	0	3.0	12	290	M	M	7	12	14	280
2	55	34	45	2	20	0	0.00	0.0	0	5.0	18	120	M	M	5	12	22	120
3	47	35	41	-2	24	0	0.00	0.0	0	1.5	7	100	M	M	9	128	8	100
4	52	41	47	4	18	0	0.00	0.0	0	1.7	10	110	M	M	10	1	12	120
5	52	43	48	5	17	0	0.14	M	0	9.4	22	200	M	M	9		28	210
6	52	43	48	5	17	0	0.04	M	0	9.8	24	230	M	M	9		33	230
7	50	35	43	0	22	0	0.02	M	0	4.7	16	200	M	M	6		21	200
8	47	30	39	-4	26	0	0.00	0.0	0	2.7	10	330	M	M	7	12	15	340
9	45	33	39	-4	26	0	0.00	0.0	0	3.8	8	190	M	M	9	1	9	180
10	48	38	43	0	22	0	0.00	0.0	0	3.2	8	310	M	M	10	1	9	310
11	46	42	44	1	21	0	T	M	0	3.5	12	150	M	M	10	1	13	190
12	55	43	49	6	16	0	0.01	M	0	4.3	13	230	M	M	10	1	15	220
13	53	43	48	4	17	0	0.01	M	0	3.4	13	200	M	M	9	1	16	200
14	51	37	44	0	21	0	0.00	0.0	0	3.2	10	300	M	M	8	1	12	300
15	61	38	50	6	15	0	0.00	0.0	0	3.8	18	120	M	M	4	12	23	120
16	51	38	45	1	20	0	0.05	M	0	5.5	18	310	M	M	6	1	21	310
17	46	37	42	-2	23	0	0.00	0.0	0	2.6	10	90	M	M	8		12	70
18	48	35	42	-2	23	0	T	M	0	6.4	16	210	M	M	9		20	200
19	55	37	46	2	19	0	0.09	M	0	5.8	15	50	M	M	7	1	20	50
20	49	34	42	-2	23	0	0.04	M	0	4.6	18	200	M	M	9		22	240
21	46	40	43	-1	22	0	0.03	M	0	9.1	17	200	M	M	10	1	22	200
22	48	37	43	-1	22	0	0.39	M	0	12.8	24	180	M	M	9	1	35	180
23	48	36	42	-3	23	0	0.06	M	0	7.4	18	280	M	M	8	8	23	320
24	52	37	45	0	20	0	0.01	M	0	7.4	21	170	M	M	9		26	170
25	50	37	44	-1	21	0	0.12	M	0	9.2	25	310	M	M	8	18	32	310
26	49	37	43	-2	22	0	0.00	0.0	0	5.3	15	110	M	M	9		18	110
27	53	42	48	3	17	0	0.10	M	0	6.9	16	200	M	M	10	1	20	190
28	57	46	52	6	13	0	0.15	M	0	9.6	17	210	M	M	10	1	21	210
SM	1419	1066			569	0	1.26		0.0	155.6			M		234			

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==============================================================================
AV 50.7 38.1                              5.6 FASTST   M    M   8    MAX(MPH)
                                MISC ----> # 25 310                 # 35  180
==============================================================================
NOTES:
# LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

                                          STATION:  PORTLAND OR
                                          MONTH:    FEBRUARY
                                          YEAR:     2013
                                          LATITUDE:   45 35 N
                                          LONGITUDE: 122 36 W

[TEMPERATURE DATA]      [PRECIPITATION DATA]       SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 44.4   TOTAL FOR MONTH:   1.26    1 = FOG OR MIST
DPTR FM NORMAL:   0.6   DPTR FM NORMAL:   -2.40    2 = FOG REDUCING VISIBILITY
HIGHEST:    61 ON 15    GRTST 24HR  0.39 ON 22-22     TO 1/4 MILE OR LESS
LOWEST:     30 ON  8                               3 = THUNDER
                        SNOW, ICE PELLETS, HAIL    4 = ICE PELLETS
                        TOTAL MONTH:   0.0 INCH    5 = HAIL
                        GRTST 24HR     0.0         6 = FREEZING RAIN OR DRIZZLE
                        GRTST DEPTH:   0           7 = DUSTSTORM OR SANDSTORM:
                                                       VSBY 1/2 MILE OR LESS
                                                   8 = SMOKE OR HAZE
[NO. OF DAYS WITH]      [WEATHER - DAYS WITH]      9 = BLOWING SNOW
                                                   X = TORNADO
MAX 32 OR BELOW:   0    0.01 INCH OR MORE:  15
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   5
MIN 32 OR BELOW:   1    0.50 INCH OR MORE:   0
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   0

[HDD (BASE 65) ]
TOTAL THIS MO.   569    CLEAR  (SCALE 0-3)   0
DPTR FM NORMAL   -25    PTCLDY (SCALE 4-7)  11
TOTAL FM JUL 1  2897    CLOUDY (SCALE 8-10) 17
DPTR FM NORMAL  -161

[CDD (BASE 65) ]
TOTAL THIS MO.     0
DPTR FM NORMAL     0    [PRESSURE DATA]
TOTAL FM JAN 1     0    HIGHEST SLP 30.58 ON 14
DPTR FM NORMAL     0    LOWEST  SLP 29.72 ON 19

[REMARKS]
#FINAL-02-13#
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APPENDIX C

Wetland Determination Data Forms

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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 1

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91A - Woodburn silt loam, 0 - 3% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus garryana*	50%	Yes	FACU
2. *Pseudotsuga menziesii*	30%	Yes	FACU
3. *Fraxinus latifolia*	20%	Yes	FACW
4.			
	100%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Corylus cornuta*	80%	Yes	FACU
2. *Symphoricarpos albus*	40%	Yes	FACU
3. *Amelanchier alnifolia*	10%	No	FACU
4. *Rubus armeniacus*	5%	No	FACU
5. *Toxicodendron diversilobum*	5%	No	NOL
	140%	= Total Cover	
Herb Stratum (Plot size: 5' r)			
1. *Carex leptopoda*	25%	Yes	FAC
2. *Galium aparine*	20%	Yes	FACU
3. *Claytonia sibirica*	10%	No	FAC
4. *Polystichum munitum*	10%	No	FACU
5. *Tellima grandiflora*	1%	No	FACU
6. *Hedera helix*	1%	No	NOL
7. *Dicentra formosa*	1%	No	FACU
8.			
9.			
10.			
11.			
	68%	= Total Cover	
Woody Vine Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	10%	Yes	FACU
2.			
	10%	= Total Cover	

% Bare Ground in Herb Stratum 32%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 20	x 2 =	40
FAC species 35	x 3 =	105
FACU species 207	x 4 =	828
UPL species 6	x 5 =	30
Column Totals: 268 (A)		1003 (B)

Prevalence Index = B/A = 3.74

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 3/2	100	none				sil	
13-17	10YR 4/1	80	7.5YR 4/6	20	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >17
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >17

Wetland Hydrology Present? Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center | City/County: Wilsonville / Clackamas | Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company | State: OR | Sampling Point: 2

Investigator(s): Stacy Benjamin and Stacey Reed | Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast | Lat: | Long: | Datum: WGS 1984

Soil Map Unit Name: 91A - Woodburn silt loam, 0 - 3% slopes | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	90%	Yes	FACW
2.			
3.			
4.			
	90% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Symphoricarpos albus*	20%	Yes	FACU
2. *Rubus ursinus*	20%	Yes	FACU
3. *Frangula purshiana*	15%	Yes	FAC
4. *Cornus alba*	10%	No	FACW
5. *Rosa species*	5%	No	FACW to NOL
	70% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Carex obnupta*	60%	Yes	OBL
2. *Galium aparine*	10%	No	FACU
3. *Claytonia sibirica*	10%	No	FAC
4. *Ranunculus orthorhynchus*	5%	No	FACW
5. *Veratrum californicum*	5%	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	90% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 60	x 1 =	60
FACW species 105	x 2 =	210
FAC species 30	x 3 =	90
FACU species 50	x 4 =	200
UPL species 0	x 5 =	0
Column Totals: 245 (A)		560 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: **2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100	none				sil	
4-13	10YR 3/2	90	7.5YR 3/4	10	C	M	sil	
13-18	10YR 4/1	80	7.5YR 4/6	20	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes ___	No X	Depth (inches): >18	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >18	**Yes X**	**No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center | City/County: Wilsonville / Clackamas | Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company | State: OR | Sampling Point: 3

Investigator(s): Stacy Benjamin and Stacey Reed | Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast | Lat: | Long: | Datum: WGS 1984

Soil Map Unit Name: 1B - Aloha silt loam, 3 - 6% slopes | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	10%	Yes	FACU
2.			
3.			
4.			
5.			
	10% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Oenanthe sarmentosa*	50%	Yes	OBL
2. *Poa trivialis*	25%	Yes	FAC
3. *Carex leptopoda*	10%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 15%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	50	x 1 =	50
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	95 (A)		195 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 3/1	80	7.5YR 4/6	20	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): >17	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >17	**Yes X No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 4

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 1B - Aloha silt loam, 3 - 6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus garryana*	60%	Yes	FACU
2. *Pseudotsuga menziesii*	30%	Yes	FACU
3. *Fraxinus latifolia*	10%	No	FACW
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	40%	Yes	FACU
2. *Rubus armeniacus*	5%	No	FACU
3. *Rubus laciniatus*	5%	No	FACU
4.			
5.			
	50% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Claytonia sibirica*	30%	Yes	FAC
2. *Polystichum munitum*	10%	Yes	FACU
3. *Carex leptopoda*	10%	Yes	FAC
4. *Phalaris arundinacea*	10%	Yes	FACW
5. *Poa trivialis*	10%	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 30%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 20	x 2 =	40
FAC species 50	x 3 =	150
FACU species 90	x 4 =	360
UPL species 0	x 5 =	0
Column Totals: 160 (A)		550 (B)
Prevalence Index = B/A =		3.44

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **4**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100	none				sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	_____
Water Table Present?	Yes _____	No X	Depth (inches):	>16
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):	>16

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 5

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 1B - Aloha silt loam, 3 - 6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	30%	Yes	FACW
2.			
3.			
4.			
	30% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Juncus effusus*	40%	Yes	FACW
2. *Oenanthe sarmentosa*	30%	Yes	OBL
3. *Claytonia sibirica*	30%	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	70	x 2 =	140
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		260 (B)
Prevalence Index = B/A =			2.00

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **5**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10 YR 3/2	90	7.5YR 4/4	10	C	M	sil	
13-17	10YR 3/1	80	7.5YR 4/4	20	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** _____

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes ___	No X	Depth (inches): >17	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >17	**Yes** X	**No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 6

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 1B - Aloha silt loam, 3 - 6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' r)			
1. *Pseudotsuga menziesii*	50%	Yes	FACU
2. *Quercus garryana*	20%	Yes	FACU
3. *Populus balsamifera*	10%	No	FAC
4.			
	80%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Toxicodendron diversilobum*	20%	Yes	NOL
2. *Rosa species*	20%	Yes	FACW to NOL
3. *Corylus cornuta*	10%	No	FACU
4. *Malus fusca*	5%	No	FACW
5. *Gaultheria shallon*	5%	No	FACU
	60%	= Total Cover	
Herb Stratum (Plot size: 5' r)			
1. *Pteridium aquilinum*	25%	Yes	FACU
2. *Hedera helix*	5%	No	NOL
3. *Poa trivialis*	5%	No	FAC
4. *Claytonia sibirica*	5%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40%	= Total Cover	
Woody Vine Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	50%	Yes	FACU
2.			
	50%	= Total Cover	

% Bare Ground in Herb Stratum 60%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 17% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	20	x 3 =	60
FACU species	110	x 4 =	440
UPL species	25	x 5 =	125
Column Totals:	160 (A)		635 (B)
Prevalence Index = B/A =			3.97

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **6**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100	none				sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: roots

Depth (inches): 14

Hydric Soil Present? Yes ___ No X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes ___	No X	Depth (inches): >14	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >14	**Yes** ___	**No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 7

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91A - Woodburn silt loam, 0 - 3% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No	X	
Wetland Hydrology Present?	Yes	No	X	

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii*	50%	Yes	FACU
2. *Quercus garryana*	30%	Yes	FACU
3. *Fraxinus latifolia*	20%	Yes	FACW
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Corylus cornuta*	90%	Yes	FACU
2. *Gaultheria shallon*	25%	Yes	FACU
3. *Symphoricarpos albus*	10%	No	FACU
4. *Rubus spectabilis*	5%	No	FAC
5. *Toxicodendron diversilobum*	5%	No	NOL
	135% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Polystichum munitum*	40%	Yes	FACU
2. *Hedera helix*	20%	Yes	NOL
3. *Carex obnupta*	5%	No	OBL
4. *Trillium ovatum*	1%	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	66% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	10%	Yes	FACU
2.			
	10% = Total Cover		

% Bare Ground in Herb Stratum 34%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 13% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	20	x 2 =	40
FAC species	5	x 3 =	15
FACU species	206	x 4 =	824
UPL species	25	x 5 =	125
Column Totals:	261 (A)		1009 (B)
Prevalence Index = B/A =			3.87

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: **7**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100	none				sil	
14-18	10YR 4/2	80	7.5YR 3/4	20	C	M	sicl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____	
Water Table Present?	Yes _____	No X	Depth (inches): >18	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): >18	**Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 8

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91A - Woodburn silt loam, 0 - 3% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?**	**Yes X** **No**
Hydric Soil Present?	Yes X	No		
Wetland Hydrology Present?	Yes X	No		

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	95%	Yes	FACW
2.			
3.			
4.			
	95% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	5%	Yes	FACU
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Carex obnupta*	90%	Yes	OBL
2. *Hedera helix*	1%	No	NOL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	91% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 9%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 90	x 1 =	90
FACW species 95	x 2 =	190
FAC species 0	x 3 =	0
FACU species 5	x 4 =	20
UPL species 1	x 5 =	5
Column Totals: 191 (A)		305 (B)
Prevalence Index = B/A =		1.60

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **8**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 3/2	90	7.5YR 3/4	10	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____		
Water Table Present?	Yes _____	No X	Depth (inches): >17	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): >17	**Yes** X	**No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 9

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?**	**Yes X** **No**
Hydric Soil Present?	Yes X	No		
Wetland Hydrology Present?	Yes X	No		

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' r)			
1. *Fraxinus latifolia*	90%	Yes	FACW
2.			
3.			
4.			
	90% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Cornus alba*	50%	Yes	FACW
2. *Spiraea douglasii*	10%	No	FACW
3. *Toxicodendron diversilobum*	10%	No	NOL
4.			
5.			
	70% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Carex obnupta*	90%	Yes	OBL
2. *Galium aparine*	5%	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 5%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 90	x 1 =	90
FACW species 150	x 2 =	300
FAC species 0	x 3 =	0
FACU species 5	x 4 =	20
UPL species 10	x 5 =	50
Column Totals: 255 (A)		460 (B)
Prevalence Index = B/A =		1.80

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **9**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	80	7.5YR 3/4	20	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** _____

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >16
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >16

Wetland Hydrology Present? Yes X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/20/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 10

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X
Hydric Soil Present?	Yes	No X
Wetland Hydrology Present?	Yes	No X

Is the Sampled Area within a Wetland? Yes No X

Precipitation prior to fieldwork: 0.51 inch two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status
1. *Fraxinus latifolia*	40%	Yes	FACW
2. *Acer macrophyllum*	30%	Yes	FACU
3. *Pseudotsuga menziesii*	10%	No	FACU
4.			
	80%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Toxicodendron diversilobum*	50%	Yes	NOL
2. *Symphoricarpos albus*	20%	Yes	FACU
3.			
4.			
5.			
	70%	= Total Cover	
Herb Stratum (Plot size: 5' r)			
1. *Polystichum munitum*	30%	Yes	FACU
2. *Carex obnupta*	5%	No	OBL
3. *Galium aparine*	5%	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40%	= Total Cover	
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 60%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 5	x 1 =	5
FACW species 40	x 2 =	80
FAC species 0	x 3 =	0
FACU species 95	x 4 =	380
UPL species 50	x 5 =	250
Column Totals: 190 (A)		715 (B)
Prevalence Index = B/A =		3.76

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: **10**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100	none				sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____		
Water Table Present?	Yes _____	No X	Depth (inches): >16	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): >16	**Yes** _____	**No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/23/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 11

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 2.19 inches two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix scouleriana*	10%	Yes	FAC
2.			
3.			
4.			
	5% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Crataegus douglasii*	10%	Yes	FAC
2. *Rubus armeniacus*	5%	Yes	FACU
3. *Rubus laciniatus*	5%	Yes	FACU
4. *Spiraea douglasii*	1%	No	FACW
5.			
	21% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Juncus effusus*	50%	Yes	FACW
2. *Carex pachystachya*	10%	No	FAC
3. *Carex densa*	10%	No	OBL
4. *Epilobium ciliatum*	10%	No	FACW
5. *Holcus lanatus*	5%	No	FAC
6. *Poa trivialis*	5%	No	FAC
7. *Carex leptopoda*	1%	No	FAC
8. *Geranium molle*	1%	No	NOL
9.			
10.			
11.			
	92% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 8%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 10	x 1 =	10
FACW species 61	x 2 =	122
FAC species 41	x 3 =	123
FACU species 10	x 4 =	40
UPL species 1	x 5 =	5
Column Totals: 123 (A)		300 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	95	10YR 4/4	5	C	M	sil	
7-16	10YR 4/1	80	7.5YR 4/6	20	C	M	sicl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes X	No ___	Depth (inches): 1	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): Surface	**Yes X**	**No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
ch ponding near plot.

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/23/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 12

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Precipitation prior to fieldwork: 2.19 inches two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus garryana*	75%	Yes	FACU
2.			
3.			
4.			
	75% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Symphoricarpos albus*	30%	Yes	FACU
2. *Rubus ursinus*	20%	Yes	FACU
3. *Toxicodendron diversilobum*	10%	No	NOL
4. *Rubus armeniacus*	5%	No	FACU
5.			
	65% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Carex leptopoda*	20%	Yes	FAC
2. *Galium aparine*	20%	Yes	FACU
3. *Polystichum munitum*	5%	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 55%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 0	x 2 =	0
FAC species 20	x 3 =	60
FACU species 80	x 4 =	320
UPL species 10	x 5 =	50
Column Totals: 110 (A)		430 (B)
Prevalence Index = B/A =		3.91

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **12**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100	none				sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	_____
Water Table Present?	Yes _____	No X	Depth (inches):	>16
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):	>16

Wetland Hydrology Present?

Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/23/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 13

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 2.19 inches two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix scouleriana*	10%	Yes	FAC
2.			
3.			
4.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rubus armeniacus*	5%	Yes	FACU
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Juncus effusus*	25%	Yes	FACW
2. *Carex leptopoda*	10%	Yes	FAC
3. *Melica smithii*	5%	No	NOL
4. *Epilobium ciliatum*	5%	No	FACW
5. *Carex pachystachya*	5%	No	FAC
6. *Cirsium arvense*	1%	No	FAC
7. *Hypochaeris radicata*	1%	No	FACU
8. *Geranium molle*	1%	No	NOL
9. *Cirsium vulgare*	1%	No	FACU
10. *Lupinus species*	1%	No	FAC to NOL
11.			
	55% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 45%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 30	x 2 =	60
FAC species 26	x 3 =	78
FACU species 7	x 4 =	28
UPL species 6	x 5 =	30
Column Totals: 69 (A)		196 (B)
Prevalence Index = B/A =		2.84

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: **13**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	90	10YR 3/4	10	C	M	sil	
8-16	10YR 4/1	80	7.5YR 3/4	15	C	M	sil	
			10YR 5/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes X	No ___	Depth (inches): 9	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 6	**Yes X**	**No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
ps at 9 inches.

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/23/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 14

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 91B - Woodburn silt loam, 3 - 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	
Hydric Soil Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes X	No	

Precipitation prior to fieldwork: 2.19 inches two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status
1. *Salix scouleriana*	10%	Yes	FAC
2. *Pseudotsuga menziesii*	5%	Yes	FACU
3. *Quercus garryana*	5%	Yes	FACU
4.			
	20% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rubus ursinus*	10%	Yes	FACU
2. *Symphoricarpos albus*	5%	Yes	FACU
3. *Rubus armeniacus*	5%	Yes	FACU
4.			
5.			
	20% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Polystichum munitum*	20%	Yes	FACU
2. *Holcus lanatus*	10%	Yes	FAC
3. *Poa trivialis*	5%	Yes	FAC
4. *Pteridium aquilinum*	5%	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 60%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 0	x 2 =	0
FAC species 25	x 3 =	75
FACU species 55	x 4 =	220
UPL species 0	x 5 =	0
Column Totals: 80 (A)		295 (B)

Prevalence Index = B/A = 3.69

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks: Entered by: SNB QC by: CMW

SOIL

Sampling Point: **14**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 3/2	100	none				sil	
13-16	10YR 3/2	90	10YR 4/4	10	C	M	sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	_____	No	X	Depth (inches): _____
Water Table Present?	Yes	X	No	_____	Depth (inches): 14
Saturation Present? (includes capillary fringe)	Yes	X	No	_____	Depth (inches): 11

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Former Living Enrichment Center City/County: Wilsonville / Clackamas Sampling Date: 5/23/2013

Applicant/Owner: Polygon Northwest Company State: OR Sampling Point: 15

Investigator(s): Stacy Benjamin and Stacey Reed Section, Township, Range: Sec. 15, T3S, R1W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum: WGS 1984

Soil Map Unit Name: 1A - Aloha silt loam, 0 - 3 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	
Hydric Soil Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes	No X	

Precipitation prior to fieldwork: 2.19 inches two weeks prior in Portland

Remarks: NA means Not Applicable (used on plowed and planted agricultural crop sites in reference to the vegetation).

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	85%	Yes	FACW
2.			
3.			
4.			
	85% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Rosa species*	50%	Yes	FAC?
2. *Rubus ursinus*	25%	Yes	FACU
3.			
4.			
5.			
	75% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Hedera helix*	25%	Yes	NOL
2. *Carex leptopoda*	20%	Yes	FAC
3. *Galium aparine*	10%	No	FACU
4. *Juncus effusus*	5%	No	FACW
5. *Veratrum californicum*	5%	No	FAC
6. *Phalaris arundinacea*	5%	No	FACW
7. *Poa trivialis*	5%	No	FAC
8.			
9.			
10.			
11.			
	75% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 25%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 95	x 2 =	190
FAC species 30	x 3 =	90
FACU species 35	x 4 =	140
UPL species 25	x 5 =	125
Column Totals: 185 (A)		545 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

Entered by: SNB QC by: CMW

SOIL

Sampling Point: **15**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100	none				sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Roots

Depth (inches): 14

Hydric Soil Present? Yes ___ **No** X

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >14
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >14

Wetland Hydrology Present?

Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: SNB QC by: CMW

APPENDIX D

Vegetation Table

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SAP South - Plan Area 2 Vegetation Table May 20 & 23, 2013			
Common Name	**Scientific Name**	**Wetland Indicator Status**	**Native / Introduced and Noxious**
WETLAND VEGETATION			
Red Alder	*Alnus rubra*	FAC	native
Dense Sedge	*Carex densa*	OBL	native
Taper-Fruit Short-Scale Sedge	*Carex leptopoda*	FAC	native
Slough Sedge	*Carex obnupta*	OBL	native
Thick-Head Sedge	*Carex pachystachya*	FAC	native
Canadian Thistle	*Cirsium arvense*	FAC	noxious
Bull Thistle	*Cirsium vulgare*	FACU	noxious
Siberian Springbeauty	*Claytonia sibirica*	FAC	native
Red Osier	*Cornus alba*	FACW	native
Black Hawthorn	*Crataegus douglasii*	FAC	native
Fringed Willowherb	*Epilobium ciliatum*	FACW	native
Oregon Ash	*Fraxinus latifolia*	FACW	native
Cascara False Buckthorn	*Frangula purshiana*	FAC	native
Sticky-Willy	*Galium aparine*	FACU	native
dovefoot geranium	*Geranium molle*	NOL	introduced
Large-Leaf Avens	*Geum macrophyllum*	FAC	native
English ivy	*Hedera helix*	NOL	noxious
Common Velvet Grass	*Holcus lanatus*	FAC	introduced
Hairy Cat's-Ear	*Hypochaeris radicata*	FACU	introduced
Pale-Yellow Iris	*Iris pseudacorus*	OBL	noxious
Lamp Rush	*Juncus effusus*	FACW	native
lupine	*Lupinus species*	FAC to NOL	-
Pacific Water-Dropwort	*Oenanthe sarmentosa*	OBL	native
Reed Canary Grass	*Phalaris arundinacea*	FACW	introduced
Rough-Stalk Blue Grass	*Poa trivialis*	FAC	introduced
Western Buttercup	*Ranunculus occidentalis*	FACW	native
rose	*Rosa species*	FACW to NOL	-
Himalayan Blackberry	*Rubus armeniacus*	FACU	noxious
Cut-Leaf Blackberry	*Rubus laciniatus*	FACU	introduced
California Dewberry	*Rubus ursinus*	FACU	native
Scouler's Willow	*Salix scouleriana*	FAC	native
Douglas' Meadowsweet	*Spiraea douglasii*	FACW	native
Coastal Hedge-Nettle	*Stachys chamissonis*	FACW	native
Common Snowberry	*Symphoricarpos albus*	FACU	native
Western Arborvitae	*Thuja plicata*	FAC	native
Pacific poison oak	*Toxicodendron diversilobum*	NOL	native
California False Hellebore	*Veratrum californicum*	FAC	native
UPLAND VEGETATION			
Big-Leaf Maple	*Acer macrophyllum*	FACU	native
Saskatoon Service-Berry	*Amelanchier alnifolia*	FACU	native
Dense Sedge	*Carex densa*	OBL	native
Taper-Fruit Short-Scale Sedge	*Carex leptopoda*	FAC	native
Slough Sedge	*Carex obnupta*	OBL	native
Thick-Head Sedge	*Carex pachystachya*	FAC	native
Siberian Springbeauty	*Claytonia sibirica*	FAC	native
Beaked Hazelnut	*Corylus cornuta*	FACU	native

SAP South - Plan Area 2
Vegetation Table
May 20 & 23, 2013

Common Name	Scientific Name	Wetland Indicator Status	Native / Introduced and Noxious
Black Hawthorn	*Crataegus douglasii*	FAC	native
Pacific Bleedinghearts	*Dicentra formosa*	FACU	native
tall fescue	*Festuca arundinacea*	FAC	introduced
Oregon Ash	*Fraxinus latifolia*	FACW	native
Sticky-Willy	*Galium aparine*	FACU	native
Salal	*Gaultheria shallon*	FACU	native
Large-Leaf Avens	*Geum macrophyllum*	FAC	native
English ivy	*Hedera helix*	NOL	noxious
Creambush	*Holodiscus discolor*	FACU	native
Common Velvet Grass	*Holcus lanatus*	FAC	introduced
false lily of the valley	*Maianthemum species*	FAC	native
Oregon Crabapple	*Malus fusca*	FACW	native
Oso-Berry	*Oemleria cerasiformis*	FACU	native
Common Timothy	*Phleum pratense*	FAC	introduced
Rough-Stalk Blue Grass	*Poa trivialis*	FAC	introduced
Pineland Sword Fern	*Polystichum munitum*	FACU	native
Balsam Poplar	*Populus balsamifera*	FAC	native
Douglas-Fir	*Pseudotsuga menziesii*	FACU	native
Northern Bracken Fern	*Pteridium aquilinum*	FACU	native
Oregon White Oak	*Quercus garryana*	FACU	native
rose	*Rosa species*	FACW to NOL	-
Himalayan Blackberry	*Rubus armeniacus*	FACU	noxious
Cut-Leaf Blackberry	*Rubus laciniatus*	FACU	introduced
Salmon Raspberry	*Rubus spectabilis*	FAC	native
California Dewberry	*Rubus ursinus*	FACU	native
Scouler's Willow	*Salix scouleriana*	FAC	native
Common Snowberry	*Symphoricarpos albus*	FACU	native
Fragrant Fringecup	*Tellima grandiflora*	FACU	native
Pacific poison oak	*Toxicodendron diversilobum*	NOL	native
Western Wakerobin	*Trillium ovatum*	FACU	native
vetch	*Vicia species*	FAC to UPL	-

Native per Hitchcock & Cronquist 1973 and http://plants.usda.gov/
Noxious per ODA 2012: http://www.oregon.gov/ODA/PLANT/WEEDS/lists.shtml

WETLAND INDICATOR STATUS - Western Mountains, Valleys, and Coast Region	
OBL	**Obligate Wetland** – Plants that occur almost always under natural conditions in wetlands (estimated probability >99%), but which may also rarely occur in non-wetlands. Examples: broadleaf cattail, skunk cabbage
FACW	**Facultative Wetland** - Plants that usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands. Examples: Oregon ash, red-osier dogwood
FAC	**Facultative** – Plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%). Examples: red alder, salmonberry
FACU	**Facultative Upland** - Plants that usually occur in non-wetlands (estimated probability 67-99%), but occasionally found in wetlands. Examples: bigleaf maple, Himalayan blackberry
UPL	**Upland** - Plants that occur in wetlands in another region, but occur almost always under natural conditions in non-wetlands in this region.
NOL	**Not Listed** - Plants that are not on the list and assumed to be UPL.

APPENDIX E

Wetland Summary Sheets

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WETLAND SUMMARY SHEET

WETLAND: SAP South – Plan Area 2; Wetland B (southern continuation of LWI Unit 6.03)
Drainage Basin: Corral Creek
Acreage: 0.07
Location: Former Living Enrichment Center, north-central portion of site
Field Date(s): 5/20/2013
Tax Lots: 2900
T 1N, R 2W Section: 15

General Description: Narrow emergent wetland swale not previously mapped in the City's natural resource inventory. This feature is connected to the south end of Unit 6.03 via a culvert under a paved road. This section of the wetland is sparsely vegetated in the tree and shrub layers and does not provide the diverse wildlife habitat that is provided by the northern portion of the wetland which was determined to be locally significant in the City's inventory. This section of wetland is surrounded on all sides by existing paved roads and former Living Enrichment Center developed areas which isolate this feature from the larger contiguous complex of wetlands and uplands to the north.

NWI Classification, water regime modifier, and special modifier: PEMC

Mapped Soils; On-site Soils: 1B – Aloha silt loam, 3-6% slope; 10YR 3/2 silt loam with 7.5YR 4/4 mottles near the surface.

Hydrologic Source and Description: Precipitation, seasonally saturated.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
* Oregon ash	* Red osier	*Lamp rush
	Douglas spirea	*Siberian springbeauty
	Poison oak	*Pacific water dropwort
		*Rough-stalk bluegrass

Boundary Information: Upland dominated by big-leaf maple, Douglas fir, poison oak, snowberry, beaked hazelnut, sword fern, and California dewberry.

Wetland Functions:
Wildlife Habitat – Provides habitat for some species
Fish Habitat – n/a
Water Quality – Degraded
Hydrologic Control – Degraded

Significance: Non-locally Significant Wetland

Villebois SAP South - Plan Area 2
Wetland B - South portion
(South of LWI unit 6.03)

Answer sheets & summary sheets

Wetland assessment questions: answer sheet				
Wetland identifier				
Wildlife habitat				
Question 1	c	PEM		
Question 2	c	emergent		
Question 3	c	low interspersion		
Question 4	c	<0.5 Ac open water		
Question 5	b	culverted @ north + south		
Question 6	b	no surface connection to wetlands in 3-mi		
Question 7	a	no adjacent WQ-limited streams		
Question 8	c	adjacent developed land use		
Question 9	a	>40% adjacent ↑ habitat		
Assessment descriptor	Provides habitat for some species			
Fish habitat	n/a			
Streams and rivers				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Lakes and ponds				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Water quality				
Question 1	b			
Question 2	b			
Question 3	a			
Question 4	b			
Question 5	a			
Question 6	c			
Assessment descriptor	Degraded			

Wetland B, cont.

Wetland assessment questions: answer sheet				
Wetland identifier				
Hydrologic control				
Question 1	b			
Question 2	b			
Question 3	c			
Question 4	c			
Question 5	c			
Question 6	a			
Question 7	a			
Assessment descriptor	Degraded			
Sensitivity to impact				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Assessment descriptor				
Enhancement potential				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Education				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				

OREGON FRESHWATER WETLAND METHOD

ASSESSMENT QUESTIONS AND CRITERIA

WILDLIFE HABITAT: Assessment Criteria	
The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

FISH HABITAT: Assessment Criteria	
The wetland's fish habitat function is intact if:	At least three questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is lost or not present if:	All questions are answered "c."

WATER QUALITY: Assessment Criteria	
A wetland's water-quality function is intact if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is lsot or not present if:	Five out of six questions are answered "c."

HYDROLOGIC CONTROL: Assessment Criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is impacted of degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

SENSITIVITY TO FUTURE IMPACTS: Assessment Criteria	
A wetland is sensitive to future impacts if:	Questions 1, 2, and 3 are answered "a," and one other question is answered "a."
A wetland is potentially sensitive to future impacts if:	Answers do not satisfy the above- or below-listed criteria.
A wetland is not sensitive to future impacts if:	Questions 1 and 2 are answered "b," and no other questions are answered "a."

ENHANCEMENT POTENTIAL: Assessment Criteria	
A wetland has high enhancement potential if:	Question 1 is answered "a," and not more than one other question is answered "c."
A wetland has moderate potential for enhancement if:	Answers do not satisfy the above- or below-listed criteria.
A wetland has little enhancement potential if:	Question 1 is answered "b," and two or more other questions are answered "c."

Wildlife habitat

Wetlands provide habitat for many wildlife species. A single wetland often cannot satisfy all requirements for wildlife use, so its proximity to other bodies of water or upland areas is important. Buffers and corridors are also essential for this reason, and they reduce human disturbance as well. Many species also have special habitat requirements: Good water quality is necessary for amphibians and mammals; structural diversity is important for birds; and a combination of open water and grazing areas is important for waterfowl.

For this assessment, **urban wetlands are those within urban growth boundaries or urban or rural service areas.** Because of the impacts of human activities, urban wetlands may not satisfy as many habitat requirements as wetlands in undeveloped areas. This should not be interpreted to mean that urban wetlands have limited value for all wildlife. The importance of an urban wetland may be increased because of its location and surroundings.

Notes

Assessment questions

Question 1

How many Cowardin wetland classes are present?

Directions

See question 21 in the Wetland Characterization.* Count only those Cowardin classes for which you answered "a," "b" or "c." For urban areas, also consider the mix of species (Question 22 in the Wetland Characterization.)

Rural areas:

a. Three or four.
b. Two.
c. One.

Urban areas:

a. Two or more.
b. One class with more than five plant species.
c. One class with five or fewer plant species.

Rationale

In Northwest wetlands, vegetation is the most important component of wildlife habitat. It is widely recognized that plant community diversity increases animal community diversity. The existence of two Cowardin classes adjacent to each other may also improve wildlife habitat value because some wetland wildlife species use the edge between plant communities. ("Edge" describes the border between vegetation types or between a vegetation type and open water.)

Structural diversity is also important. If several layers of vegetation are present, more diverse habitat types are provided. (Different birds nest in different layers.) In addition, the number of layers affects the amount of natural debris, which is necessary for amphibians and other wildlife.

Question 2

What is the dominant wetland vegetation cover type?

a. Woody vegetation.
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation or wet meadow.

Directions

See question 23 in the Wetland Characterization.

Rationale

Wooded and shrub wetlands provide habitat for the largest overall species assemblages. Emergent wetlands associated with open water are also an essential habitat for a large number of wetland species, particularly waterfowl, amphibians and wading birds. Emergent wetlands without open water provide habitat for wetland species to a lesser degree.

Question 3

What is the degree of Cowardin class interspersion for the wetland being observed?

a. High.
b. Moderate.
c. Low.

Directions

See question 24 in the Wetland Characterization.

Rationale

Interspersion occurs when two or more wetland types or upland inclusions create a mosaic or pattern. In a wetland composed of approximately concentric bands of vegetation, such as cattails ringed by shrubs, interspersion is low. At the opposite extreme, small patches of shrubs scattered throughout an emergent marsh represent a high degree of interspersion.

When two or more vegetation types are highly interspersed, a great deal of edge is created. Edge is important because many wildlife species are edge dwellers. Generally, the greater the edge, the greater the diversity of wildlife.

Notes

Question 4

If the wetland contains unvegetated open water, how many acres of unvegetated open water are present?

Directions

See question 28 in the Wetland Characterization.

Rural areas:

a. More than 3 acres .
b. Between 0.5 and 3 acres.
c. Less than 0.5 acres.

Urban areas:

a. More than 1 acre.
b. Between 0.5 and 1 acre.
c. Less than 0.5 acres.

Rationale

Open water is essential to a number of wetland wildlife species, including waterfowl, wading birds, amphibians and some reptiles.

Question 5

How is the wetland connected to another body of water, such as a stream, lake or pond?

Directions

See question 18 in the Wetland Characterization.

a. The wetland is connected by surface water to another body of water.
b. No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland.
c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.

Rationale

Wetland wildlife species will often use surface water to travel between a wetland and deep water. Also, water must be available during critical phases for the wildlife that use it. Water available during the nesting season is more valuable to wildlife than water available only during the winter.

Notes

Question 6 *(for Western OR only)*

How is the wetland connected to other wetlands?

Directions

See question 27 in the Wetland Characterization.

a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake.

b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius.

c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.

Rationale

Proximity to other wetlands increases a wetland's utility as habitat. Nearby wetlands sometimes contain features absent from the assessment wetland. For example, birds such as the great blue heron may roost near one wetland but travel to another to fish if the wetland where they roost doesn't have an ample supply of fish.

This criterion applies only in western Oregon. Because of the dry climate in eastern Oregon, isolated wetlands provide important habitat to both local and migratory species.

Question 7

What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?

Directions

See questions 7 and 8 in the Wetland Characterization. If both "a" and "b" apply, choose "a."

a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.

c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Rationale

Poor water quality can harm many terrestrial and aquatic species. The character of a wetland ecosystem can change when exposed to nutrients and other chemicals beyond tolerable limits. Excess nutrients, for example, can cause oxygen deficiencies, which in turn can cause a change in the species composition of both plant and animal communities. Studies in Washington and elsewhere have indicated that amphibians are especially sensitive to water quality.

Notes

Question 8

What is the dominant existing land use within 500 feet of the wetland's edge?

a. Exclusive Forest Use or Open Space.
b. Agriculture.
c. Developed uses.

Directions

See question 15 in the Wetland Characterization. If the responses you gave to question 15 in the Characterization indicate that two or more land-use categories are equally dominant, pick the one that will yield the lowest letter response for this question. (Example: In question 15 of the Wetland Characterization, you responded "b. Between 20% and 50%" to both *Exclusive Forest Use lands* and *developed uses,* and the remainder of your responses to question 15 were "a. Less than 20%." For this Wildlife Habitat question, you would respond "a. Exclusive Forest Use or Open Space.")

Rationale

Wildlife habitat generally deteriorates as land use changes from forested land to agricultural land to urban land. Certain game species, such as deer and some waterfowl, may benefit from land clearing. However, the majority of wildlife species are affected adversely when the land is developed because of fencing, lighting and loss of habitat.

Notes

Question 9a

For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide?

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

Question 9b

For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?

a. Greater than 40%.
b. Between 10 and 40%.
c. Less than 10%.

Directions

For rural areas, see question 25 in the Wetland Characterization. For urban areas, see question 26 in the Wetland Characterization.

Notes

Rationale

A buffer zone, an uncut or undisturbed area of vegetation providing wildlife cover, increases a wetland's wildlife habitat potential. It provides habitat for both upland animals and wetland dependent species that require upland habitat for parts of their life cycle. A buffer zone also decreases the impacts of disturbance on the wetland. This is particularly important for nesting birds, which may be disturbed by people and household pets.

Well-vegetated buffer areas and corridors are particularly significant in urban areas because of their beneficial effect on water quality as well as their value for wildlife.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Water quality (pollutant removal)

Notes

Sediment trapping

During periods of heavy rainfall, water runoff may cause erosion and increase solids suspended in receiving surface waters. The excess sediment entering water systems can damage aquatic ecosystems. For example, sediment accumulation in stream bottoms can smother spawning areas and kill aquatic insect larvae. It can also reduce the storage capacity of downstream water supply reservoirs.

Wetlands perform an important function by trapping sediment from waters that pass through them. As water flows through wetlands, it is slowed by vegetation, and sediment settles to the bottom before the water moves farther downstream. As much as 90% of the solids suspended in the water may be removed as the water moves through wetlands, resulting in cleaner water entering streams, rivers, lakes and estuaries.

Nutrient attenuation

Nitrogen and phosphorus are the two nutrients most often associated with water pollution. They are also main ingredients of fertilizers used on agricultural fields and lawns, and both are found in high concentrations in discharges from sewage treatment plants and livestock operations. Excessive amounts of nitrogen and phosphorus in lakes and slow-moving streams can cause algal blooms and subsequent oxygen deficiencies, which may kill fish and reduce water quality. The processes that occur as a result of excess nutrients are lumped together under the term "eutrophication." Within limits, wetlands can reduce nutrient levels so that the effects of eutrophication on downstream areas are prevented or reduced. This index considers only point and non-point pollutant sources that are due to land uses in the watershed.

Assessment questions

Question 1

What is the wetland's primary source of water?

Directions

See question 36 in the Wetland Characterization.

a. Surface flow, including streams and ditches.
b. Precipitation or sheet flow.
c. Groundwater, including seeps and springs.

Rationale

Wetlands bordering a perennial or intermittent stream or lake are areas into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants.

Question 2

Is there evidence of flooding or ponding during a portion of the growing season?

a. Yes.
b. Unable to determine or not applicable.
c. No.

Directions

See question 37 in the Wetland Characterization.

Rationale

Water level fluctuation in the wetland indicates the ability to retain water. Impounded or standing water acts as a sediment trap because it greatly slows the flow of the incoming water, allowing suspended solids to settle out. Additionally, the slower velocity increases the contact time of the water with vegetation, resulting in uptake of nutrients by the vegetation. These actions function to reduce pollutant loads.

Question 3

What is the degree of wetland vegetation cover?

a. High (greater than 60%).
b. Moderate (approximately 60%).
c. Low (less than 60%).

Directions

See question 21 in the Wetland Characterization. Add the lower end of the ranges for forest, scrub-shrub and emergent vegetation to get the result. If the result is 60% or more, answer "high." If the result is 60%, answer "moderate." Answer "low" for other results.

Rationale

The more dense the vegetation, the greater the wetland's ability to take up nutrients. A dense stand of persistent emergent plants (such as cattail and rush) along with floating and submerged aquatics would tend to provide maximum nutrient uptake during the growing season. Wooded and scrub-shrub wetlands remove nutrients mainly through settling of suspended solids in runoff and flood waters.

Notes

Question 4

What is the wetland's area in acres?

Directions

See questions 17 and 27 in the Wetland Characterization.

a. More than 5 acres.
b. Between 0.5 acres and 5 acres; or wetland area is less than 0.5 acres, and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.
c. Less than 0.5 acres, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.

Rationale

The larger the wetland, the greater its capacity and ability to filter pollutants. Small wetlands connected by surface water act as a series of filters and thus function similarly to a larger wetland.

Question 5

What is the dominant, existing land use within 500 feet of the wetland's edge?

Directions

Refer to the directions for question 8 of the wildlife habitat assessment questions.

a. Developed uses.
b. Agriculture.
c. Exclusive Forest Use or Open Space.

Rationale

Urbanized areas have more impervious surface areas and concentrate pollution sources. Wetlands in urban areas are important for filtering the runoff water before it enters a stream.

Notes

Question 6

What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?

Directions

See questions 7 and 8 in the Wetland Characterization. If both "a" and "b" apply, choose "a."

a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.

c. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

Notes

Rationale

A watershed with upstream pollutant loading sources needs wetlands to reduce pollutant levels in water before it is delivered downstream.

Water quality: assessment criteria

A wetland's water-quality function is intact if:	Question 1 is answered "a" or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's water-quality function is lost or not present if:	Four out of six questions are answered "c."

Hydrologic control
(flood control & water supply)

Wetlands function as natural water-storage areas during periods of high runoff and stream flooding. At times they act as flood regulators by holding floodwater then slowly releasing it downstream. This temporary storage reduces the amount of water downstream during floods, thereby reducing peak flows. Through this flood storage mechanism, wetlands associated with tributaries of streams or rivers can prevent water from all tributaries reaching the stream or river at the same time (this is called desynchronization). Wetlands can also act as floodwater "brakes." For example, water flowing through riverine wetlands during floods is slowed by trees, shrubs, reeds, rushes and other wetland vegetation. Wetlands acting as brakes can reduce flood peaks and thereby reduce flood damage, bank and bed erosion, and other adverse effects caused by fast moving water.

Wetlands also have long-term water holding abilities. Wetlands may store water for longer periods, sometimes for months. The slow draining of these wetlands to surface water or ground water as the water level in the wetland recedes may contribute to maintenance of baseflows in streams hydrologically connected to the wetland. The ability of this long-term water storage to maintain stream flows is called "flow conservation."

Notes

Assessment questions

Question 1

Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a. Yes.
b. No.

Directions

See question 19 in the Wetland Characterization.

Rationale

Wetlands located within a floodplain or enclosed basin have a greater opportunity to receive and store water from surface flows and to release it slowly downstream or into the groundwater.

Question 2

Is there evidence of flooding or ponding during a portion of the growing season?

a. Yes.
b. Unable to determine or not applicable.
c. No.

Directions

See question 37 in the Wetland Characterization.

Rationale

Water marks are valid indicators of seasonal and episodic stage fluctuations in wetlands and, as such, are strong indicators of storage function.

Question 3

What is the wetland's area in acres?

a. More than 5 acres.
b. Between .5 acres and 5 acres.
c. Less than .5 acres.

Directions

See question 17 in the Wetland Characterization.

Rationale

Generally, the larger the wetland, the greater its ability to store and attenuate flood flows.

Question 4

Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)?

a. Yes, the outlet is restricted or the wetland has no outlet.
b. Minor restrictions slow down the water (i.e., undersized culvert.)
c. No, the outlet has unrestricted flow.

Directions

See question 38 in the Wetland Characterization.

Rationale

Wetlands with no outlets or with restricted or controlled outlets generally will store greater amounts of water than wetlands with unrestricted flow outlets. Also, the wetland can store water for slower release into the water system.

Notes

Question 5

What is the dominant wetland vegetation cover type?

a. Woody vegetation.
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation or wet meadow.

Directions

See question 23 in the Wetland Characterization.

Rationale

Densely vegetated wetlands with vegetation greater than 6 feet tall are better able to control flood flows than wetlands dominated by open water or low growing vegetation, which generally offers little resistance.

Question 6

What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. Developed uses.
b. Agriculture.
c. Exclusive Forest Use and Open Space.

Directions

See question 16 in the Wetland Characterization.

Rationale

If the wetland is upstream from developed areas, its ability to control floods becomes more important.

Question 7

What is the dominant land use in the watershed upstream from the assessment area?

a. Urban or urbanizing.
b. Agriculture.
c. Forested or natural area.

Directions

See question 6 in the Wetland Characterization.

Rationale

Runoff volume is directly related to the level of development in the watershed. The more development, the more runoff. The opportunity for the wetland to provide flood control and flow conservation to a community is greater where runoff is greater.

Notes

Hydrologic control: assessment criteria

A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

APPENDIX F

Ground-level Site Photographs

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Photo 1. View north of Wetland Plot 2 and typical wetland community in Wetland B in the north portion of site.

Photo 2. View north of Upland Plot 1 and typical upland community in north portion of site.

Photo 3. View south of southern end of Wetland B in the northern portion of site.

Photo 4. Wetland Plot 5 in southern portion of Wetland B.

Photo 5. Wetland A in northwest portion of site.

Photo 6. Algal mats in Wetland A.

Photo 7. View south of Wetland C in southern portion of site.

Photo 8. Northern boundary of Wetland C and well-defined topographic break to Himalayan blackberry dominated uplands.

Photo 9. View south of Plot 13 in Wetland D and sedge dominated wetland community.

Photo 10. Upland Plot 14 adjacent to Wetland D.

APPENDIX G

Literature Cited

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APPENDIX C

Site Photographs

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Photo 1. Map refinement area 1 showing plantation-like spacing of planted Douglas fir.

Photo 2. Map refinement area containing Douglas fir trees planted in dense rows.

Photo 3. View of mitigation area east of SROZ encroachment area 4 in eastern portion of site.

Photo 4. Typical view of low functioning habitat in SROZ encroachment area 4.

Photo 5. Typical view of invasive species-dominated SROZ mitigation area adjacent to Wetland C in southern portion of site.

Photo 6. Non-locally significant portion of wetland in north portion of site removed from SROZ mapping.

APPENDIX D

City of Wilsonville Natural Resource Inventory Summary Sheets

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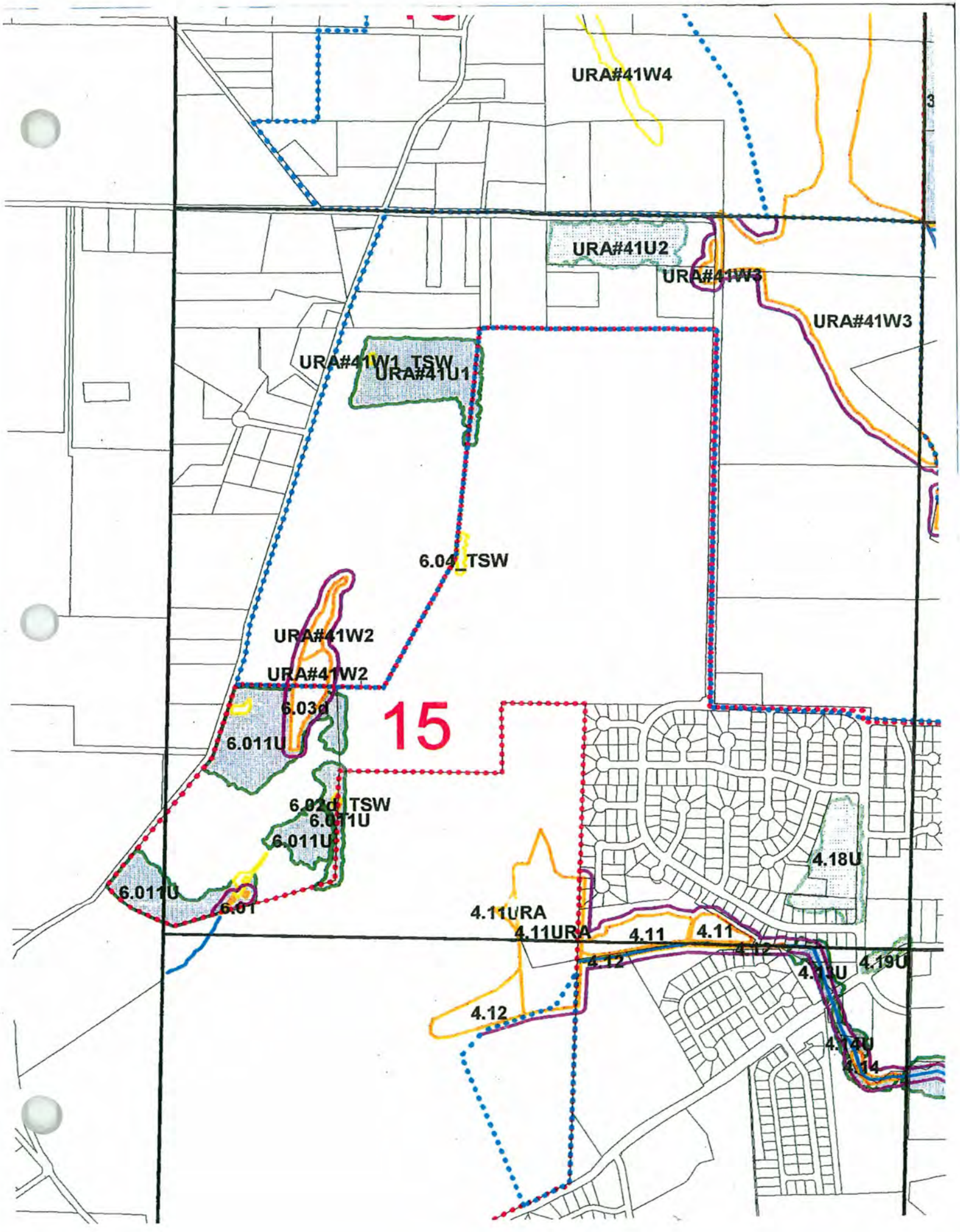
URA#41W4
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URA#41W1_TSW
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URA#41W2
6.03d
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15
6.02d_TSW
6.011U
6.011U
6.011U
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4.12
4.12
4.18U
4.19U
4.14U
4.14

CITY OF WILSONVILLE LOCAL WETLANDS INVENTORY

WETLAND SUMMARY SHEET

WETLAND: Living Enrichment Center, south (old Callahan Property)	**Site Number:** 6.01
Drainage Basin: Mill Creek to Corral Creek to Willamette River	**'91 B&W Aerial #:** 2-7, 2-9
Acreage: 0.29	**Field Date(s):** 6/2/92, 8/3/93
Location: East of Grahams Ferry Road, southern area	
Tax Lots / County: 15-2800 / Clackamas County	**Zoning:** PF
T3S R1W Quarter Section: 15 SW	**Delineation:** FES-1993 (93-288)

General Description: Oregon ash/western red cedar forest overstory with excavated lagoon and channel. Also Oregon ash forested wetland adjacent to stream in south of unit, south of culverted road crossing. Wetland goes offsite to south of property. (Site has approximately 20% excavated emergent pond, but covered by forest canopy.)

NWI Classification: 100% PFOC

Mapped Soils; On-site Soils: 1B Aloha silt loam, 3-6% slopes; N 4/0 silty clay loam with sand in stream bed; mottled 10YR 3/1 silt to silty clay loam south and east of stream.

Hydrologic Source and Description: Pond (lagoon) and drainage driven by stormwater runoff and pumping of groundwater well: receives inflow via pipe from well catchment of springs ir forested area at north end of property. Seasonally flooded-saturated wetland area.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
*Oregon ash	*Oregon ash	*reed canarygrass
	ornamental hawthorn	*knotweed or smartweed
	rose species	*slough sedge
	Pacific ninebark	*lesser duckweed
	Scouler's willow	*simplestem bur-reed
		indian plum
		mannagrass species

Boundary Information: Upland dominated by Oregon ash, hazelnut, cascara, bracken fern, evergreen blackberry, and sword fern. Break defined by vegetation.

Wetland Functions: Not included in OFWAM due to its small size and isolation.

Significance: Not included in the LSW test due to its small size and isolation; therefore not significant.

CITY OF WILSONVILLE LOCAL WETLANDS INVENTORY

WETLAND SUMMARY SHEET

WETLAND: Living Enrichment Center, east and west	**Site Number:** 6.02 **UNIT:** Isolated
Drainage Basin: Near Mill Creek - Corral Creek	**'91 B&W Aerial #:**2-7, 2-9
Acreage: 0.07	**Field Date(s):** 8/3/93, 1992
Location: East of Grahams Ferry Road, west and east woods (small wetland areas)	
Tax Lots / County: 15-2800,2902 / Clackamas County	**Zoning:** PF
T3S R1W Quarter Section: 15 SW	**Delineation:** FES-1993 (93-288)

General Description: Two small (0.02 and 0.05 acre) isolated wetlands comprised of Oregon ash forest overstory and slough sedge ground cover, one in eastern forest, one in northwestern forest. Slightly depressional areas

NWI Classification: 100% PFOC

Mapped Soils; On-site Soils: 3 Amity silt loam and 1A Aloha silt loam, 0-3% slopes to north; 10YR 3/2 silty clay loam with 7.5YR 4/6 mottles near surface, then hardpan.

Hydrologic Source and Description: Precipitation, possibly groundwater.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
*Oregon ash	-	*Slough sedge

Boundary Information: Lose slough sedge in upland areas; upland dominated by Oregon ash, Oregon white oak, Douglas fir, thimbleberry, poison oak, hazelnut, snowberry, Pacific blackberry, sword fern, and English ivy.

Wetland Functions: Not included in OFWAM due to its small size and isolation.

Significance: Not included in the LSW test due to its small size and isolation; therefore not significant.

CITY OF WILSONVILLE LOCAL WETLANDS INVENTORY

WETLAND SUMMARY SHEET

WETLAND: Living Enrichment Center (LEC), north woods	**Site Number:** 6.03 **UNIT:** LEC
Drainage Basin: Isolated, near Mill Creek	**'91 B&W Aerial #:** 2-7, 2-9
Acreage: 0.81	**Field Date(s):** 6/2/92, 8/3/93
Location: East of Grahams Ferry Road, northern area	
Tax Lots / County: 15-2800,2990 / Clackamas County	**Zoning:** PF/URA
T3S R1W Quarter Section: 15 SW	**Delineation:** FES-1993 (93-288)

General Description: Oregon ash forest with slough sedge that extends north out of the UGB onto the Dammasch property (now vacant). Upland Douglas fir forest surrounds wetland. This is the largest wetland on the LEC property and it provides excellent wildlife habitat.

NWI Classification: 100% PFOC

Mapped Soils; On-site Soils: 91A Woodburn silt loam, 0-3% slopes and 1B Aloha silt loam, 3-6% slopes in south; 10YR 4/1 silty clay loam with 7/5YR 5/8 mottles.

Hydrologic Source and Description: Seasonally saturated wetland area, may have groundwater seeps.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
*Oregon ash	Saskatoon serviceberry	*slough sedge
*Oregon white oak	western crabapple	

Boundary Information: Upland dominated by Douglas fir (vegetation break).

Wetland Functions: Educational opportunity and aesthetics (the LEC has enjoyable trails and a meditative atmosphere). Provides diverse wildlife habitat; has degraded water quality functions and hydrologic control functions, and fish habitat is not applicable. Has educational uses and provides recreational opportunities.

Significance: LSW (Locally Significant Wetland)

CITY OF WILSONVILLE NATURAL AREA INVENTORY
UPLAND SUMMARY SHEET

SITE: Living Enrichment Center Forests **Site ID Number:** 6.011U, 6.02U, and 6.03U
Location: Grahams Ferry Road southeast of Dammasch
Acreage: 2.23+9.45+2.98+5.83=20.50 **'91 B&W Aerial #:** 2-7, 2-9
Tax Lots / County: 15-2200,2800,2900,2902 / Clackamas County **Field Date(s):** 6/2/92
Adjacent Land Use: internally developed campus, agricultural areas and Dammasch **Zoning:** PF
T3S R1W Quarter Section: 15 SW **Determination:** FES-1993 (93-288)

General Description: (The Living Enrichment Center is the old Callahan Property.) Caretaker reports seeing black bear in spring 1992, and people shooting deer. All forests on site provide wildlife habitat. (Note: this area checked for potential wetland; confirmed upland by Janet Burcham of FES in 1993.) Four upland forest areas are present on the property: north 6.03U, 9.45 acres (with large wetland 6.03 and URA#41W2 present, and a small wetland in northwest corner area. Well developed intact understory present), east two (6.02U, 2.98 acres west of road and 2.24 acres east of road), divided by paved street with small wetland area present, and south (6.011U, 5.83 acres), with small lagoon and wetland drainage present. Site has undergone master planning. All forests on site have been assessed together. All are similar in nature, although the northern forest is the least disturbed from trails and is the largest; and eastern forest is most disturbed with ivy.

Mapped Soils; On-site Soils: 91B Woodburn silt loam, 3-8% slopes; 10YR 4/1 silty clay loam with 7.5YR 4/6 mottles in small area.

Dominant Vegetation: (* = major dominant)

Trees
*Douglas fir
*Oregon white oak (in wetland too)
Oregon ash (wetland)
willow
red alder
bigleaf maple
black cottonwood (1 large)

Shrubs
*Saskatoon serviceberry
*salal
*thimbleberry
*poison oak
*beaked hazelnut
*snowberry
willow
Oregon ash
rose
western crabapple
oceanspray
currant or gooseberry
Douglas spirea
cascara

Herbs/Emergents
*Pacific blackberry
*sword fern
Watson's [hairy] willow-herb
slough sedge (wetland)
English ivy (in 6.02U)
fireweed
bedstraw
bracken fern
Leichtlin's camas
Dewey's sedge
soft rush

Upland Habitat Function	Rating	Comments
Wildlife Habitat	High	Diverse vegetation and structure, large size
Water Quality Protection	Med	Some protection provided to wetlands
Ecological Integrity	High	North and south; east more disturbed -->Medium
Connectivity	Medium	Escape areas from agricultural areas; Grahams Ferry Road may be considered barrier
Uniqueness	Medium	Representative of high quality habitat

Education Potential, Recreation, and Aesthetic Quality Comments: Forests provide excellent recreational and educational opportunities for the Living Enrichment Center. Aesthetic quality is high.
Recommendations: Maintain ongoing operations of the LEC (trail maintenance, invasive plant removal, etc.).

CITY OF WILSONVILLE NATURAL AREA INVENTORY
UPLAND SUMMARY SHEET

SITE: SAP South – Plan Area 2 **Site ID:** 6.02U-map refinement
Location: Grahams Ferry Road southwest of Villebois **Field Dates:** Feb., May & Oct. 2013
Size: 9,583 SF
Tax Lots / County: 2800 / Clackamas County
Adjacent Land Use: residential
T3S R1W Quarter Section: 15 SW

General Description: The map refinement area consists of the northern forest edge located immediately south of an existing paved road and previously developed paved area. Smaller diameter Douglas fir trees are planted closely in rows. The forest understory has an open understory with minimal native shrub cover and has been invaded by Himalayan blackberry. Due to the artificial plantation-like spacing of trees it is being removed from the SROZ map.

Mapped Soils; On-site Soils: 91B Woodburn silt loam, 3-8% slopes; on-site soils described in SWCA 2013 wetland delineation report.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
Douglas fir	Himalayan blackberry	Pacific blackberry
	beaked hazelnut	sword fern
	English holly	English ivy

Upland Habitat Function	Rating	Comments
Wildlife Habitat	Medium	Forest edge with low diversity and structure
Water Quality Protection	Low	No adjacent wetlands or waters
Ecological Integrity	Medium	Invasive species present
Connectivity	Medium	Bordered by residential development
Uniqueness	Low	Common native vegetation community with invasive species present

CITY OF WILSONVILLE NATURAL AREA INVENTORY
UPLAND SUMMARY SHEET

SAP South – Plan Area 2 **Site ID:** 6.03U-map refinement
Location: Grahams Ferry Road southwest of Villebois **Field Dates:** Feb., May & Oct. 2013
Size: 15,602 SF
Tax Lots / County: 2800 / Clackamas County
Adjacent Land Use: residential
T3S R1W Quarter Section: 15 SW

General Description: The map refinement area consists of the eastern forest edge located immediately east of a previously developed and paved area. The tree canopy consists of densely planted Douglas fir which appear to have been planted in rows to provide a visual barrier between the site and the adjacent residential development to the east. The forest understory is open with minimal native shrub cover and has been invaded by Himalayan blackberry, English holly, and English ivy. Due to the artificial plantation-like spacing of trees it is being removed from the SROZ map.

Mapped Soils; On-site Soils: 91B Woodburn silt loam, 3-8% slopes; on-site soils described in SWCA 2013 wetland delineation report.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
Douglas fir	beaked hazelnut	Pacific blackberry
	snowberry	sword fern
	Himalayan blackberry	English ivy
	English holly	

Upland Habitat Function	Rating	Comments
Wildlife Habitat	Medium	Forest edge with low diversity and structure
Water Quality Protection	Low	No adjacent wetlands or waters
Ecological Integrity	Medium	Invasive species present
Connectivity	Medium	Bordered by residential development
Uniqueness	Low	Common native vegetation community with invasive species present

APPENDIX E

OFWAM & Wetland Summary Sheets

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WETLAND SUMMARY SHEET

WETLAND: SAP South – Plan Area 2; Wetland B (southern continuation of LWI Unit 6.03)
Drainage Basin: Corral Creek
Acreage: 0.07
Location: Former Living Enrichment Center, north-central portion of site
Field Date(s): 5/20/2013
Tax Lots: 2900
T 1N, R 2W Section: 15

General Description: Narrow emergent wetland swale not previously mapped in the City's natural resource inventory. This feature is connected to the south end of Unit 6.03 via a culvert under a paved road. This section of the wetland is sparsely vegetated in the tree and shrub layers and does not provide the diverse wildlife habitat that is provided by the northern portion of the wetland which was determined to be locally significant in the City's inventory. This section of wetland is surrounded on all sides by existing paved roads and former Living Enrichment Center developed areas which isolate this feature from the larger contiguous complex of wetlands and uplands to the north.

NWI Classification, water regime modifier, and special modifier: PEMC

Mapped Soils; On-site Soils: 1B – Aloha silt loam, 3-6% slope; 10YR 3/2 silt loam with 7.5YR 4/4 mottles near the surface.

Hydrologic Source and Description: Precipitation, seasonally saturated.

Dominant Vegetation: (* = major dominant)

Trees	Shrubs	Herbs/Emergents
* Oregon ash	* Red osier	*Lamp rush
	Douglas spirea	*Siberian springbeauty
	Poison oak	*Pacific water dropwort
		*Rough-stalk bluegrass

Boundary Information: Upland dominated by big-leaf maple, Douglas fir, poison oak, snowberry, beaked hazelnut, sword fern, and California dewberry.

Wetland Functions:
Wildlife Habitat – Provides habitat for some species
Fish Habitat – n/a
Water Quality – Degraded
Hydrologic Control – Degraded

Significance: Non-locally Significant Wetland

Villebois SAP South - Plan Area 2
Wetland B - South portion
(South of LWI unit 6.03)

Answer sheets & summary sheets

Wetland assessment questions: answer sheet				
Wetland identifier				
Wildlife habitat				
Question 1	c	PEM		
Question 2	c	emergent		
Question 3	c	low interspersion		
Question 4	c	<0.5 Ac open water		
Question 5	b	culverted @ north + south		
Question 6	b	no surface connection to	lands in 3-mi	
Question 7	a	no adjacent WQ-limited	streams	
Question 8	c	adjacent developed	land use	
Question 9	a	>40% adjacent ↑ habitat		
Assessment descriptor	Provides habitat for some species			
Fish habitat	n/a			
Streams and rivers				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Lakes and ponds				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Water quality				
Question 1	b			
Question 2	b			
Question 3	a			
Question 4	b			
Question 5	a			
Question 6	c			
Assessment descriptor	Degraded			

Wetland B, cont.

Wetland assessment questions: answer sheet				
Wetland identifier				
Hydrologic control				
Question 1	b			
Question 2	b			
Question 3	c			
Question 4	c			
Question 5	c			
Question 6	a			
Question 7	a			
Assessment descriptor	Degraded			
Sensitivity to impact				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Assessment descriptor				
Enhancement potential				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Education				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				

OREGON FRESHWATER WETLAND METHOD

ASSESSMENT QUESTIONS AND CRITERIA

WILDLIFE HABITAT: Assessment Criteria	
The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

FISH HABITAT: Assessment Criteria	
The wetland's fish habitat function is intact if:	At least three questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is lost or not present if:	All questions are answered "c."

WATER QUALITY: Assessment Criteria	
A wetland's water-quality function is intact if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is lsot or not present if:	Five out of six questions are answered "c."

HYDROLOGIC CONTROL: Assessment Criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is impacted of degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

SENSITIVITY TO FUTURE IMPACTS: Assessment Criteria	
A wetland is sensitive to future impacts if:	Questions 1, 2, and 3 are answered "a," and one other question is answered "a."
A wetland is potentially sensitive to future impacts if:	Answers do not satisfy the above- or below-listed criteria.
A wetland is not sensitive to future impacts if:	Questions 1 and 2 are answered "b," and no other questions are answered "a."

ENHANCEMENT POTENTIAL: Assessment Criteria	
A wetland has high enhancement potential if:	Question 1 is answered "a," and not more than one other question is answered "c."
A wetland has moderate potential for enhancement if:	Answers do not satisfy the above- or below-listed criteria.
A wetland has little enhancement potential if:	Question 1 is answered "b," and two or more other questions are answered "c."

Wildlife habitat

Wetlands provide habitat for many wildlife species. A single wetland often cannot satisfy all require ments for wildlife use, so its proximity to other bodies of water or upland areas is important. Buffers and corridors are also essential for this reason, and they reduce human disturbance as well. Many species also have special habitat requirements: Good water quality is necessary for amphibians and mammals; structural diversity is important for birds; and a combination of open water and grazing areas is important for waterfowl.

For this assessment, **urban wetlands are those within urban growth boundaries or urban or rural service areas.** Because of the impacts of human activities, urban wetlands may not satisfy as many habitat requirements as wetlands in undeveloped areas. This should not be interpreted to mean that urban wetlands have limited value for all wildlife. The importance of an urban wetland may be increased because of its location and surroundings.

Notes

Assessment questions

Question 1

How many Cowardin wetland classes are present?

Directions

See question 21 in the Wetland Characterization.* Count only those Cowardin classes for which you answered "a," "b" or "c." For urban areas, also consider the mix of species (Question 22 in the Wetland Characterization.)

Rural areas:

a. Three or four.
b. Two.
c. One.

Urban areas:

a. Two or more.
b. One class with more than five plant species.
c. One class with five or fewer plant species.

Rationale

In Northwest wetlands, vegetation is the most important component of wildlife habitat. It is widely recognized that plant community diversity increases animal community diversity. The existence of two Cowardin classes adjacent to each other may also improve wildlife habitat value because some wetland wildlife species use the edge between plant communities. ("Edge" describes the border between vegetation types or between a vegetation type and open water.)

Structural diversity is also important. If several layers of vegetation are present, more diverse habitat types are provided. (Different birds nest in different layers.) In addition, the number of layers affects the amount of natural debris, which is necessary for amphibians and other wildlife.

Question 2

What is the dominant wetland vegetation cover type?

a. Woody vegetation.
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation or wet meadow.

Directions

See question 23 in the Wetland Characterization.

Rationale

Wooded and shrub wetlands provide habitat for the largest overall species assemblages. Emergent wetlands associated with open water are also an essential habitat for a large number of wetland species, particularly waterfowl, amphibians and wading birds. Emergent wetlands without open water provide habitat for wetland species to a lesser degree.

Question 3

What is the degree of Cowardin class interspersion for the wetland being observed?

a. High.
b. Moderate.
c. Low.

Directions

See question 24 in the Wetland Characterization.

Rationale

Interspersion occurs when two or more wetland types or upland inclusions create a mosaic or pattern. In a wetland composed of approximately concentric bands of vegetation, such as cattails ringed by shrubs, interspersion is low. At the opposite extreme, small patches of shrubs scattered throughout an emergent marsh represent a high degree of interspersion.

When two or more vegetation types are highly interspersed, a great deal of edge is created. Edge is important because many wildlife species are edge dwellers. Generally, the greater the edge, the greater the diversity of wildlife.

Notes

Question 4

If the wetland contains unvegetated open water, how many acres of unvegetated open water are present?

Directions

See question 28 in the Wetland Characterization.

Rural areas:

a. More than 3 acres .
b. Between 0.5 and 3 acres.
c. Less than 0.5 acres.

Urban areas:

a. More than 1 acre.
b. Between 0.5 and 1 acre.
c. Less than 0.5 acres.

Rationale

Open water is essential to a number of wetland wildlife species, including waterfowl, wading birds, amphibians and some reptiles.

Question 5

How is the wetland connected to another body of water, such as a stream, lake or pond?

Directions

See question 18 in the Wetland Characterization.

a. The wetland is connected by surface water to another body of water.
b. No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland.
c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.

Rationale

Wetland wildlife species will often use surface water to travel between a wetland and deep water. Also, water must be available during critical phases for the wildlife that use it. Water available during the nesting season is more valuable to wildlife than water available only during the winter.

Notes

Question 6 *(for Western OR only)*

How is the wetland connected to other wetlands?

Directions

See question 27 in the Wetland Characterization.

a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake.
b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius.
c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.

Rationale

Proximity to other wetlands increases a wetland's utility as habitat. Nearby wetlands sometimes contain features absent from the assessment wetland. For example, birds such as the great blue heron may roost near one wetland but travel to another to fish if the wetland where they roost doesn't have an ample supply of fish.

This criterion applies only in western Oregon. Because of the dry climate in eastern Oregon, isolated wetlands provide important habitat to both local and migratory species.

Question 7

What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?

Directions

See questions 7 and 8 in the Wetland Characterization. If both "a" and "b" apply, choose "a."

a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.
b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.
c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Rationale

Poor water quality can harm many terrestrial and aquatic species. The character of a wetland ecosystem can change when exposed to nutrients and other chemicals beyond tolerable limits. Excess nutrients, for example, can cause oxygen deficiencies, which in turn can cause a change in the species composition of both plant and animal communities. Studies in Washington and elsewhere have indicated that amphibians are especially sensitive to water quality.

Notes

Question 8

What is the dominant existing land use within 500 feet of the wetland's edge?

Directions

See question 15 in the Wetland Characterization. If the responses you gave to question 15 in the Characterization indicate that two or more land-use categories are equally dominant, pick the one that will yield the lowest letter response for this question. (Example: In question 15 of the Wetland Characterization, you responded "b. Between 20% and 50%" to both *Exclusive Forest Use lands* and *developed uses,* and the remainder of your responses to question 15 were "a. Less than 20%." For this Wildlife Habitat question, you would respond "a. Exclusive Forest Use or Open Space.")

a. Exclusive Forest Use or Open Space.
b. Agriculture.
c. Developed uses.

Rationale

Wildlife habitat generally deteriorates as land use changes from forested land to agricultural land to urban land. Certain game species, such as deer and some waterfowl, may benefit from land clearing. However, the majority of wildlife species are affected adversely when the land is developed because of fencing, lighting and loss of habitat.

Notes

Question 9a

For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide?

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

Question 9b

For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?

a. Greater than 40%.
b. Between 10 and 40%.
c. Less than 10%.

Directions

For rural areas, see question 25 in the Wetland Characterization. For urban areas, see question 26 in the Wetland Characterization.

Rationale

A buffer zone, an uncut or undisturbed area of vegetation providing wildlife cover, increases a wetland's wildlife habitat potential. It provides habitat for both upland animals and wetland dependent species that require upland habitat for parts of their life cycle. A buffer zone also decreases the impacts of disturbance on the wetland. This is particularly important for nesting birds, which may be disturbed by people and household pets.

Well-vegetated buffer areas and corridors are particularly significant in urban areas because of their beneficial effect on water quality as well as their value for wildlife.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Water quality (pollutant removal)

Notes

Sediment trapping

During periods of heavy rainfall, water runoff may cause erosion and increase solids suspended in receiving surface waters. The excess sediment entering water systems can damage aquatic ecosystems. For example, sediment accumulation in stream bottoms can smother spawning areas and kill aquatic insect larvae. It can also reduce the storage capacity of downstream water supply reservoirs.

Wetlands perform an important function by trapping sediment from waters that pass through them. As water flows through wetlands, it is slowed by vegetation, and sediment settles to the bottom before the water moves farther downstream. As much as 90% of the solids suspended in the water may be removed as the water moves through wetlands, resulting in cleaner water entering streams, rivers, lakes and estuaries.

Nutrient attenuation

Nitrogen and phosphorus are the two nutrients most often associated with water pollution. They are also main ingredients of fertilizers used on agricultural fields and lawns, and both are found in high concentrations in discharges from sewage treatment plants and livestock operations. Excessive amounts of nitrogen and phosphorus in lakes and slow-moving streams can cause algal blooms and subsequent oxygen deficiencies, which may kill fish and reduce water quality. The processes that occur as a result of excess nutrients are lumped together under the term "eutrophication." Within limits, wetlands can reduce nutrient levels so that the effects of eutrophication on downstream areas are prevented or reduced. This index considers only point and non-point pollutant sources that are due to land uses in the watershed.

Assessment questions

Question 1

What is the wetland's primary source of water?

Directions

See question 36 in the Wetland Characterization.

a. Surface flow, including streams and ditches.
b. Precipitation or sheet flow.
c. Groundwater, including seeps and springs.

Rationale

Wetlands bordering a perennial or intermittent stream or lake are areas into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants.

Question 2

Is there evidence of flooding or ponding during a portion of the growing season?

a. Yes.
b. Unable to determine or not applicable.
c. No.

Directions

See question 37 in the Wetland Characterization.

Rationale

Water level fluctuation in the wetland indicates the ability to retain water. Impounded or standing water acts as a sediment trap because it greatly slows the flow of the incoming water, allowing suspended solids to settle out. Additionally, the slower velocity increases the contact time of the water with vegetation, resulting in uptake of nutrients by the vegetation. These actions function to reduce pollutant loads.

Question 3

What is the degree of wetland vegetation cover?

a. High (greater than 60%).
b. Moderate (approximately 60%).
c. Low (less than 60%).

Directions

See question 21 in the Wetland Characterization. Add the lower end of the ranges for forest, scrub-shrub and emergent vegetation to get the result. If the result is 60% or more, answer "high." If the result is 60%, answer "moderate." Answer "low" for other results.

Rationale

The more dense the vegetation, the greater the wetland's ability to take up nutrients. A dense stand of persistent emergent plants (such as cattail and rush) along with floating and submerged aquatics would tend to provide maximum nutrient uptake during the growing season. Wooded and scrub-shrub wetlands remove nutrients mainly through settling of suspended solids in runoff and flood waters.

Notes

Question 4

What is the wetland's area in acres?

Directions

See questions 17 and 27 in the Wetland Characterization.

a. More than 5 acres.
b. Between 0.5 acres and 5 acres; or wetland area is less than 0.5 acres, and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.
c. Less than 0.5 acres, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.

Rationale

The larger the wetland, the greater its capacity and ability to filter pollutants. Small wetlands connected by surface water act as a series of filters and thus function similarly to a larger wetland.

Question 5

What is the dominant, existing land use within 500 feet of the wetland's edge?

Directions

Refer to the directions for question 8 of the wildlife habitat assessment questions.

a. Developed uses.
b. Agriculture.
c. Exclusive Forest Use or Open Space.

Rationale

Urbanized areas have more impervious surface areas and concentrate pollution sources. Wetlands in urban areas are important for filtering the runoff water before it enters a stream.

Notes

Question 6

What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?

Directions

See questions 7 and 8 in the Wetland Characterization. If both "a" and "b" apply, choose "a."

a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.

c. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

Rationale

A watershed with upstream pollutant loading sources needs wetlands to reduce pollutant levels in water before it is delivered downstream.

Water quality: assessment criteria

A wetland's water-quality function is intact if:	Question 1 is answered "a" or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's water-quality function is lost or not present if:	Four out of six questions are answered "c."

Notes

Hydrologic control
(flood control & water supply)

Wetlands function as natural water-storage areas during periods of high runoff and stream flooding. At times they act as flood regulators by holding floodwater then slowly releasing it downstream. This temporary storage reduces the amount of water downstream during floods, thereby reducing peak flows. Through this flood storage mechanism, wetlands associated with tributaries of streams or rivers can prevent water from all tributaries reaching the stream or river at the same time (this is called desynchronization). Wetlands can also act as floodwater "brakes." For example, water flowing through riverine wetlands during floods is slowed by trees, shrubs, reeds, rushes and other wetland vegetation. Wetlands acting as brakes can reduce flood peaks and thereby reduce flood damage, bank and bed erosion, and other adverse effects caused by fast moving water.

Wetlands also have long-term water holding abilities. Wetlands may store water for longer periods, sometimes for months. The slow draining of these wetlands to surface water or ground water as the water level in the wetland recedes may contribute to maintenance of baseflows in streams hydrologically connected to the wetland. The ability of this long-term water storage to maintain stream flows is called "flow conservation."

Notes

Assessment questions

Question 1

Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a. Yes.
b. No.

Directions

See question 19 in the Wetland Characterization.

Rationale

Wetlands located within a floodplain or enclosed basin have a greater opportunity to receive and store water from surface flows and to release it slowly downstream or into the groundwater.

Question 2

Is there evidence of flooding or ponding during a portion of the growing season?

a. Yes.
b. Unable to determine or not applicable.
c. No.

Directions

See question 37 in the Wetland Characterization.

Rationale

Water marks are valid indicators of seasonal and episodic stage fluctuations in wetlands and, as such, are strong indicators of storage function.

Question 3

What is the wetland's area in acres?

a. More than 5 acres.
b. Between .5 acres and 5 acres.
c. Less than .5 acres.

Directions

See question 17 in the Wetland Characterization.

Rationale

Generally, the larger the wetland, the greater its ability to store and attenuate flood flows.

Question 4

Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)?

a. Yes, the outlet is restricted or the wetland has no outlet.
b. Minor restrictions slow down the water (i.e., undersized culvert.)
c. No, the outlet has unrestricted flow.

Directions

See question 38 in the Wetland Characterization.

Rationale

Wetlands with no outlets or with restricted or controlled outlets generally will store greater amounts of water than wetlands with unrestricted flow outlets. Also, the wetland can store water for slower release into the water system.

Notes

Question 5

What is the dominant wetland vegetation cover type?

a. Woody vegetation.
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation or wet meadow.

Directions

See question 23 in the Wetland Characterization.

Rationale

Densely vegetated wetlands with vegetation greater than 6 feet tall are better able to control flood flows than wetlands dominated by open water or low growing vegetation, which generally offers little resistance.

Question 6

What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. Developed uses.
b. Agriculture.
c. Exclusive Forest Use and Open Space.

Directions

See question 16 in the Wetland Characterization.

Rationale

If the wetland is upstream from developed areas, its ability to control floods becomes more important.

Question 7

What is the dominant land use in the watershed upstream from the assessment area?

a. Urban or urbanizing.
b. Agriculture.
c. Forested or natural area.

Directions

See question 6 in the Wetland Characterization.

Rationale

Runoff volume is directly related to the level of development in the watershed. The more development, the more runoff. The opportunity for the wetland to provide flood control and flow conservation to a community is greater where runoff is greater.

Notes

Hydrologic control: assessment criteria

A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

APPENDIX F

SROZ Mitigation Planting Plan

WORK SCOPE FOR ALL ENHANCEMENT AREAS:

1. Remove invasive plant species.
2. Plant required trees & shrubs.
3. Tag plants for identification & provide wildlife protection.
4. Install grass seed as needed.

GENERAL NOTES:

1. Limit impacts to existing trees and their root systems by planting new trees and shrubs outside of the dripline areas to the greatest extent possible.
2. Any soil compacted within the dripline of the tree shall be aerated by acceptable arboricultural methods for tree care.
3. Do not alter the existing soil level under the dripline of existing trees.
4. See Significant Resource Impact Report for additional information.

EXISTING SROZ AREA MITIGATION CALCULATIONS

SROZ ENCROACHMENT AREA= 34,730 SF
ENCROACHMENT MITIGATION RATIO= 2.5:1
REQUIRED MITIGATION AREA= 86,825 SF
PROPOSED MITIGATION AREA= 195,195 SF

MITIGATION TREES REQUIRED (5/500 SF)= 347
MITIGATION SHRUBS REQUIRED (25/500 SF)= 1,737

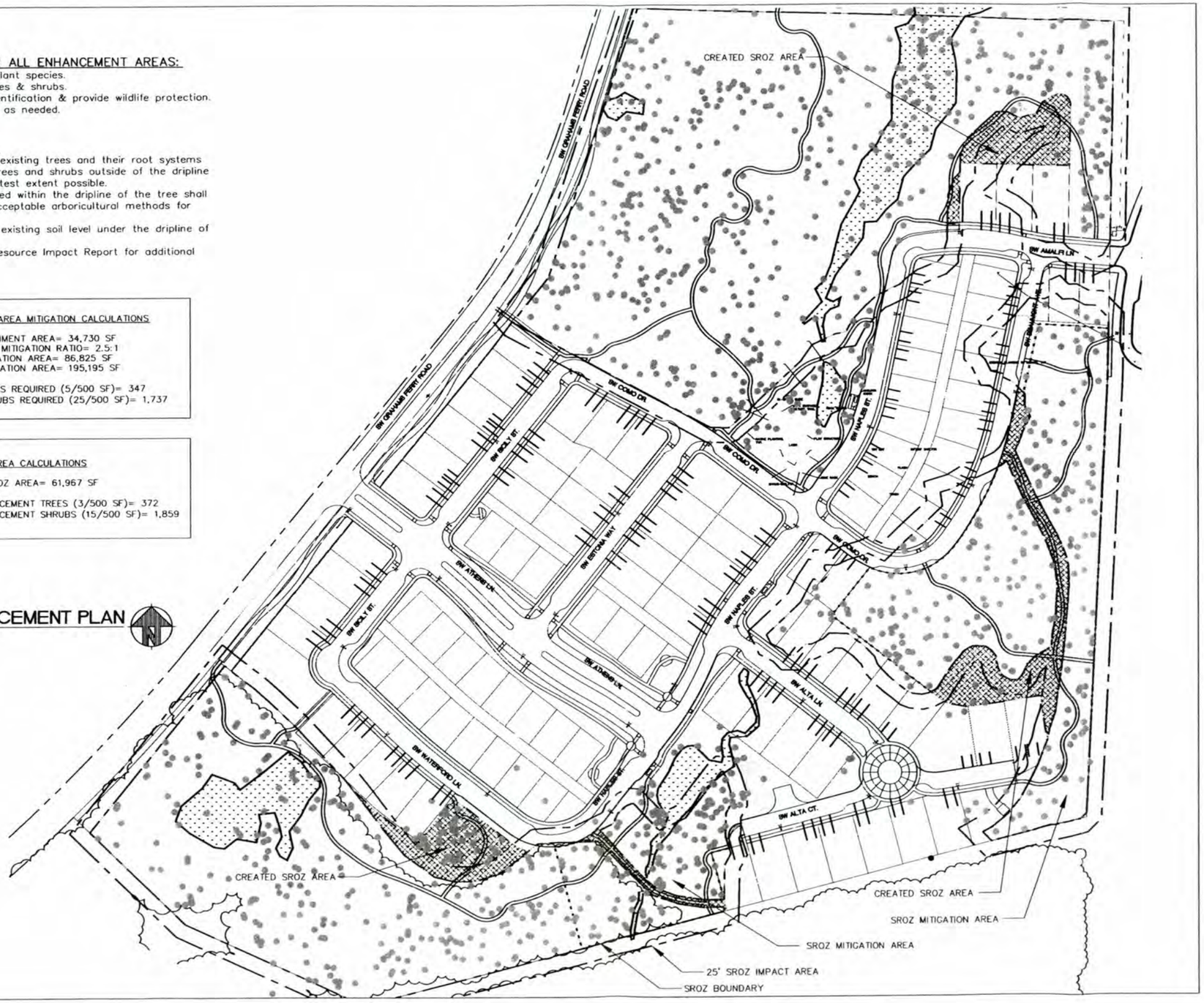
CREATED SROZ AREA CALCULATIONS

NEW CREATED SROZ AREA= 61,967 SF

PROPOSED ENHANCEMENT TREES (3/500 SF)= 372
PROPOSED ENHANCEMENT SHRUBS (15/500 SF)= 1,859

SROZ ENHANCEMENT PLAN

SCALE 1" = 80'-0"



Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

REGISTERED LANDSCAPE ARCHITECT
JANET L. OTTEN
OREGON

VILLEBOIS SAP
SOUTH PLAN
AREA 2

SROZ Mitigation Plan

DATE 1/23/2014

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1 OF 2

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OUTLINE SPECIFICATIONS PLANTING AND SEEDING:

GENERAL: All plants shall conform to all applicable standards of the latest edition of the "American Association of Nurserymen Standards", A.N.S.I. Z60.1 – 1973. Meet or exceed the regulations and laws of Federal, State, and County regulations, regarding the inspection of plant materials, certified as free from hazardous insects, disease, and noxious weeds, and certified fit for sale in Oregon.

The apparent silence of the Specifications and Plans as to any detail, or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of first quality are to be used. All interpretations of these Specifications shall be made upon the basis above stated.

Landscape contractor shall perform a site visit prior to bidding to view existing conditions.

PERFORMANCE QUALITY ASSURANCE: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary horticultural practices and who are completely familiar with the specified requirements and methods needed for the proper performance of the work of this section.

NOTIFICATION: Give Landscape Architect minimum of 2 days advance notice of times for inspections. Inspections at growing site does not preclude Landscape Architect's right of rejection of deficient materials at project site. Each plant failing to meet the above mentioned "Standards" or otherwise failing to meet the specified requirements as set forth shall be rejected and removed immediately from the premises by the Contractor and at his expense, and replaced with satisfactory plants or trees conforming to the specified requirements.

SUBSTITUTIONS: Only as approved by the Landscape Architect or the Owner's Representative.

GUARANTEE AND REPLACEMENT: All plant material shall be guaranteed from final acceptance for one full growing season or one year, whichever is longer. During this period the Contractor shall replace any plant material that is not in good condition and producing new growth (except that material damaged by severe weather conditions, due to Owner's negligence, normally unforeseen peculiarities of the planting site, or lost due to vandalism). Guarantee to replace, at no cost to Owner, unacceptable plant materials with plants of same variety, age, size and quality as plant originally specified. Conditions of guarantee on replacement plant shall be same as for original plant.

Landscape Contractor shall keep on site for Owner's Representative's inspection, all receipts for soil amendment and topsoil deliveries.

PROTECTION Protect existing roads, sidewalks, and curbs, landscaping, and other features remaining as final work. Verify location of underground utilities prior to doing work. Repair and make good any damage to service lines, existing features, etc. caused by landscaping installation.

PLANT QUALITY ASSURANCE: Deliver direct from nursery. Maintain and protect roots of plant material from drying or other possible injury. Store plants in shade and protect them from weather immediately upon delivery, if not to be planted within four hours.

Nursery stock shall be healthy, well branched and rooted, formed true to variety and species, full foliaged, free of disease, injury, defects, insects, weeds, and weed roots. Trees shall have straight trunks, symmetrical tips, and have an intact single leader. Any trees with double leaders will be rejected upon inspection. All Plants: True to name, with one of each bundle or lot tagged with the common and botanical name and size of the plants in accordance with standards of practice of the American Association of Nurserymen, and shall conform to the Standardized Plant Names, 1942 Edition.

Container grown stock: Small container-grown plants, furnished in removable containers, shall be well rooted to ensure healthy growth. **Grow container plants in containers a minimum of one year** prior to delivery, with roots filling container but not root bound. Bare root stock: Roots well-branched and fibrous. Balled and burlapped (B&B): Ball shall be of natural size to ensure healthy growth. Ball shall be firm and the burlap sound. No loose or made ball will be acceptable.

TOPSOIL AND FINAL GRADES: Landscaping shall include finished grades and even distribution of topsoil to meet planting requirements. Existing grades and slopes shall be maintained.

MITIGATION PLANTING SPECIFICATIONS:

SITE PREPARATIONS: Removal of invasive non-native species is required by mechanical methods for the entire SROZ area. If necessary, excessive weed growth may be treated with Rodeo or Garlon 3-A (or approved equals) in strict accordance with the manufacturer's instructions.

SOIL PREPARATION: Existing soils must be sampled and evaluated to determine the need for compost amendment. Do not apply commercial fertilizer to any of the new plantings. Limit soil disturbance to the greatest extent possible by localizing tilling to the specific planting areas only.

TIMING: Plantings should be installed between February 1 and May 1 or between October 1 and November 15. When plantings must be installed outside these times, additional measures may be needed to assure survival.

PLANTING TREES AND SHRUBS: Plant upright and face to give best appearance or relationship to adjacent plants and structures. Loosen and remove twine binding and burlap from top one-half of root balls. Cut off cleanly all broken or frayed roots, and spread roots out. Stagger Plants in rows. Backfill planting hole with native soil mix while working each layer to eliminate voids.

MULCHING: Trees, shrubs, and groundcovers planted in upland areas shall be mulched a minimum of 3" in depth and 18" in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.

TREE & SHRUB IDENTIFICATION: All trees and shrubs shall be marked with brightly colored flagging tape for easy identification during the maintenance period.

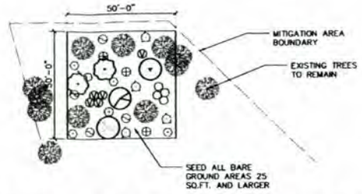
WILDLIFE PROTECTION: Biodegradable plastic mesh tubing, or other approved method, shall be placed around individual trees and shrubs to prevent browsing by wildlife.

SEED: Bluetag grass seed conforming to applicable State laws. No noxious weed seeds. Submit Guaranteed analysis. Sow seed with a mechanical spreader at the rates as noted below.
Understory Seed Mix: Heritage Seedlings, Inc. – Oak Woodland Understory Mix or approved equal. Sow at 8-13 lbs. per acre.
Native Seed Mix: Sunmark Seeds – Native Uplands Mix or approved equal. Sow at 1 lb. per 1,000 sq.ft.

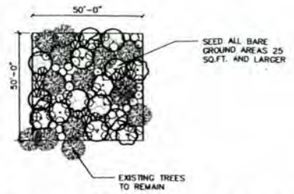
IRRIGATION: Irrigation is not required if plantings are installed in the appropriate time frames as listed above. If deemed necessary, supplemental irrigation shall be provided during the dry season using an automatic, temporary, above-ground system that is design/build by contractor.

MAINTENANCE: The permitee is responsible for the monitoring and maintenance of this facility for a minimum of five years following the acceptance of the facility the City of Wilsonville. Owners Representative shall inspect the facility annually and provide an annual report documenting the site conditions, wildlife observations, species survival and nuisance plant coverage. If at any time during the warranty period the landscaping falls below 80% survival of trees and shrubs, or if the amount of invasive non-native species exceeds 20%, the Owner shall remove the undesirable vegetation and reinstall all deficient planting at the next appropriate time.

CLEAN-UP: At completion of each division of work all extra material, supplies, equipment, etc., shall be removed from the site. All walks, paving, or other surfaces shall be swept clean, mulch areas shall have debris removed and any soil cleared from surface. All areas of the project shall be kept clean, orderly and complete.



TYPICAL PLANTING SCHEMATIC
MITIGATION AREA SCALE 1" = 30'-0"



TYPICAL PLANTING SCHEMATIC
CREATED SROZ AREA SCALE 1" = 30'-0"

PLANT LIST: MITIGATION PLANTINGS

SYM.	#	LATIN NAME/ Common Name	SIZE	SPACING
		TOTAL ENHANCEMENT AREA = 195,195 SF (**)		
TREES				
	62	ACER CIRCINATUM Vine Maple	18-24"	8-12' o.c.
	111	AMELANCHIER ALNIFOLIA Serviceberry	18-24"	8-12' o.c.
	87	CRATAEGUS DOUGLASII Black Hawthorn	24-36"	8-12' o.c.
	87	RHAMNUS PURSHIANA Cascara	24-36"	8-12' o.c.
SHRUBS				
	256	CORYLUS CORNUTA Beaked Hazelnut	18-24"	4-5' o.c.
	342	GAULTHERIA SHALLON Salal	12-18"	4-5' o.c. (*)
	256	HOLODISCUS DISCOLOR Creambush	18-24"	4-5' o.c.
	256	OEMLERIA CERASIFORMIS Indian Plum	18-24"	4-5' o.c.
	285	PHYSOCARPUS CAPITATUS Pacific Ninebark	18-24"	4-5' o.c.
	342	SYMPHORICARPOS ALBA Snowberry	12-18"	4-5' o.c. (*)
GROUNDCOVER				
		NATIVE GRASS SEED MIX To Contain:	Sow at 1 lb./1,000 SF	
		50% ELYMUS GLAUCUS Blue Wildrye		
		30% FESTUCA RUBRA RUBRA Native Red Fescue		
		10% AGROSTIS EXERATA Spike Bentgrass		
		10% BROMUS CARNATIUS California Brome		

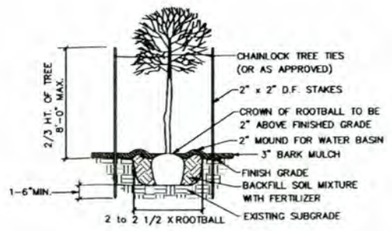
(*) SHRUB SPACING: 4-5' ON CENTER OR IN CLUSTERS OF 4 SPACED 8-10' APART

(**) PLANT QUANTITIES ARE BASED ON SROZ ENCROACHMENT AREA. TREES AND SHRUBS SHALL BE PLANTED IN THE ENHANCEMENT AREA AT A RATE OF 1 TREE AND 4-5 SHRUBS PER 500 SQ.FT.

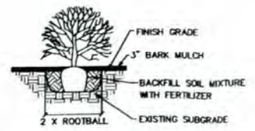
PLANT LIST: CREATED SROZ AREAS

SYM.	#	LATIN NAME/ Common Name	SIZE	SPACING
		TOTAL NEW SROZ AREA = 61,967 SF		
TREES				
	67	ACER CIRCINATUM Vine Maple	18-24"	8-12' o.c.
	119	AMELANCHIER ALNIFOLIA Serviceberry	18-24"	8-12' o.c.
	93	CRATAEGUS DOUGLASII Black Hawthorn	24-36"	8-12' o.c.
	93	RHAMNUS PURSHIANA Cascara	24-36"	8-12' o.c.
SHRUBS				
	274	CORYLUS CORNUTA Beaked Hazelnut	18-24"	4-5' o.c.
	366	GAULTHERIA SHALLON Salal	12-18"	4-5' o.c. (*)
	274	HOLODISCUS DISCOLOR Creambush	18-24"	4-5' o.c.
	274	OEMLERIA CERASIFORMIS Indian Plum	18-24"	4-5' o.c.
	305	PHYSOCARPUS CAPITATUS Pacific Ninebark	18-24"	4-5' o.c.
	366	SYMPHORICARPOS ALBA Snowberry	12-18"	4-5' o.c. (*)
GROUNDCOVER				
		NATIVE GRASS SEED MIX To Contain:	Sow at 1 lb./1,000 SF	
		50% ELYMUS GLAUCUS Blue Wildrye		
		30% FESTUCA RUBRA RUBRA Native Red Fescue		
		10% AGROSTIS EXERATA Spike Bentgrass		
		10% BROMUS CARNATIUS California Brome		

(*) SHRUB SPACING: 4-5' ON CENTER OR IN CLUSTERS OF 4 SPACED 8-10' APART



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

Villebois

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GEODESIGN, INC

REGISTERED LANDSCAPE ARCHITECT
JANET L. OTTEN
OREGON

VILLEBOIS SAP SOUTH PLAN AREA 2

SROZ Mitigation Plan

DATE: 1/23/2014

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2 OF 2

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APPENDIX G

Resumes

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SWCA
ENVIRONMENTAL CONSULTANTS

STACY BENJAMIN, M.S.
Senior Ecologist

Education / Training

- Oregon Rapid Wetland Assessment Protocol Training; 2010
- National Environmental Policy Act Training; 2009
- Project Management Training; 2008
- Western Mountains, Valleys & Coast Delineation Manual Regional Supplement Training; 2008
- Wetland Delineation Training, 1998
- M.S., Ecology and Evolution, University of Oregon, 1993
- B.S., Biology, University of Oregon, Robert D. Clark Honors College, 1991

Expertise

- Wetland & waters delineation
- Wetland functional assessment
- Wetland permitting & mitigation design
- Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and Endangered Species Act
- Oregon EFSC & Washington EFSEC documentation
- NEPA documentation
- Biological assessment
- Environmental assessment

Selected Projects

- Wetland Permitting for the Oregon Department of Corrections and Oregon State Hospital Replacement Project site; Junction City, Oregon
- Wetland and Waters Delineation, Habitat Mapping, and EIS Support for the Lower Snake River Wind Energy Project; Garfield and Columbia Counties, Washington
- Conditional Use Permitting for the Poplars Ranch Solar Project; Lake County, Oregon
- Raptor and Eagle Nest Surveys for the Beckwourth Pass Wind Farm; Lassen and Plumas Counties, California
- Environmental Assessment for Mormon Basin Placer Gold Mine; BLM Vale District; Malheur County, Oregon

Stacy Benjamin joined SWCA in 1996, and she is the Wetlands and Terrestrial Biology Team Lead for the Portland office. Her primary responsibilities include wetland determinations and delineations, habitat and impacts assessments, preparing permit applications and mitigation plans, and facilitation of agency review and receipt of regulatory approvals. Ms. Benjamin is also responsible for coordination of staff assignments, provides training to natural resource staff and provides QA/QC review of work products. Stacy has provided wetland and terrestrial biology services for a variety of private and public projects, ranging from residential and industrial development projects to energy projects and linear utility and infrastructure projects. Ms. Benjamin possesses 15 years of experience coordinating regulatory approvals for projects located in close proximity to wetlands and other natural resources. She works with the client and multi-disciplinary project teams during the project design and alternatives analysis phase of the project to avoid and minimize impacts to natural re-sources. She also advises clients regarding programmatic permitting requirements and mitigation measures to facilitate permitting with the state and federal regulatory agencies.

Ms. Benjamin's recent project experience includes conducting the wetland delineation of the 256 acre Oregon Department of Corrections and Oregon State Hospital Replacement Project site in Junction City as well as permitting 94 acres of wetland fill and designing 70 acres of onsite wetland mitigation for the project. She has also managed wetlands and waters delineations and habitat surveys for renewable energy projects in Oregon, Washington, and California. Stacy has prepared natural resource documentation to meet the permitting requirements of the Oregon Energy Facility Siting Council, Washington Energy Facility Site Evaluation Council, and the Washington State Environmental Policy Act. She also prepares National Environmental Policy Act (NEPA) documents including Biological Assessments and Environmental Assessments. Stacy has prepared NEPA documents to meet the requirements of many federal agencies including the U.S. Fish and Wildlife Service, U.S. Department of Agriculture Rural Development, the Bureau of Land Management, the Federal Highway Administration and Bureau of Indian Affairs.

SWCA
ENVIRONMENTAL CONSULTANTS

C. MIRTH WALKER, B.A., PWS, CWD
Senior Wetland Scientist

Education/Training

- B.A., Biology and Psychology, Reed College; Portland, Oregon, 1979
- ORWAP, Wetland Training Institute; Portland, Oregon, 2010
- Wetland Delineation Manual Regional Supplements Workshop, PNW Chapter, SWS; Portland, Oregon, 2008
- Classifying Wetlands and Assessing Wetland Functions and Values using Hydrogeomorphic Principles; Portland State University, 2002
- Wetland Soils and Hydrology, 1991, and Basic Wetland Delineation, 1990, Wetland Training Institute; Seattle

Registration/Certification

- Professional Wetland Scientist (PWS#415), SWS PCP, 1995
- Certified Wetland Delineator, USACE Seattle District Provisional Program, 1993

Expertise

- Project management
- Preliminary jurisdictional wetland and waters determination
- Wetland and stream delineation, assessment, mitigation design, permitting, and agency coordination
- Botany of the Pacific Northwest
- Hydric soils identification
- Aerial photograph interpretation
- Agricultural lands wetland delineation
- Quality assurance review

Relevant Projects

- Graham Oaks Nature Park and Arrowhead Creek Wetlands Delineation and Permitting; Wilsonville, Oregon
- Fernhill and Jackson Bottom Agricultural Wetlands Delineation; Forest Grove and Hillsboro, Oregon
- In-Lieu-Fee Wetland Mitigation Bank Site Hydric Soil Evaluation and Wetland Delineation; Gales Creek, Oregon
- Progress Quarry Wetland Delineation, Stream and Wetland Mitigation and Restoration Plan, Permitting, and Monitoring; Beaverton, Oregon

C. Mirth Walker joined SWCA in 1994 and has over 20 years' experience in the world of wetlands and waters. She is responsible for project management and staff mentoring; conducting wetland determinations and delineations; assessing vegetation communities, wetland functions, and wildlife habitat; preparing and coordinating wetland permits at the local, state, and federal level; designing wetland and stream mitigation plans including restoration, enhancement, and creation plans; evaluating potential wetland mitigation bank opportunities and credits; conducting local wetland and natural resource inventories; and providing quality control and quality assurance review. Ms. Walker has an extensive background in wetland ecology and is considered one of the premier wetland scientists in the Pacific Northwest consulting community.

Ms. Walker has an excellent reputation and a strong track record of working with clients and regulatory agency personnel to resolve wetland and natural resource identification issues, delineation disputes, and wetland permitting and mitigation issues. She provides scientifically accurate and efficient wetland and water determinations and delineations for a variety of clients. She brings excellent fatal-flaw analysis capabilities to the table to identify potential roadblocks to permits and project development early in the design process. She also provides aerial photograph interpretation, forensic wetland determination, and expert witness testimony for clients and local jurisdictions in Oregon and Washington. Ms. Walker has many years of experience assisting clients with problem solving and finding reasonable, productive, scientifically valid, and economical solutions to natural resource issues.

Ms. Walker managed and conducted local wetland inventories (LWIs) and natural resource assessments for the cities of Ashland, Lakeside, La Grande, and Wilsonville in Oregon, and she assisted with the LWIs for Hillsboro, Tualatin, Tigard, and Stayton, Oregon. She recently completed a five-city LWI project in the Willamette Valley, Oregon for the cities of Adair Village, Harrisburg, Scio, Monroe, and Mill City.

Ms. Walker is currently the secretary/newsletter editor for the Society of Wetland Scientists (SWS) Pacific Northwest Chapter, board member of the Northwest Ecological Research Institute, property committee member of The Wetlands Conservancy, and a member of the Association of State Wetland Managers and the Audubon Society of Portland.

APPENDIX H

Literature Cited

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1 Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Vancouver

40 ft Alley - D French Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 9

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Vancouver

40 ft Alley - C American Classic

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 10

Job No.: 1348

1 Front Elevation
1/4" = 1'-0"

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Villebois II Single Family

Willsonville, OR

Polygon Vancouver

40 ft Alley - B American Modern

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 8

Job No.: 1348

1 Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
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Villebois II Single Family

Willsonville, OR

Polygon Vancouver

40 ft Alley - A English Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 7

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
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Villebois II Single Family

Willsonville, OR

Polygon Northwest Company

4017-A English Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: BANK 1

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Northwest Company

4017-B American Modern

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	Author	11 FEB 2014	2/19/2014 11:15:46 AM

Sheet No.: BANK 2

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Northwest Company

4017-D French Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: BANK 3

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Vancouver

5017 - A English Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 4

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Vancouver

5017 - B American Modern

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 5

Job No.: 1348

① Front Elevation
1/4" = 1'-0"

Milbrandt Architects, Inc., P.S.
25 Central Way, Suite 210, Kirkland, Washington 98033 Phone: 425-454-7130 Fax: 425-658-1208 Website: http://www.milbrandtarch.com

Villebois II Single Family

Willsonville, OR

Polygon Vancouver

5017 - D French Revival

Front Elevation

Scale:	Drawn By:	Date:	Date Plotted:
1/4" = 1'-0"	RT, AH	11 FEB 2014	

Sheet No.: Bank 6

Job No.: 1348

SECTION III) TENTATIVE PLAT

IIIA) SUPPORTING
COMPLIANCE REPORT

SUPPORTING COMPLIANCE REPORT

TENTATIVE PLAT

PDP 7 SOUTH

SECTION IIIA

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II. CONCLUSION 21

I. WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE

SECTION 4.125. VILLAGE (V) ZONE

(.02) PERMITTED USES

Examples of principle uses that are typically permitted:

A. Single Family Detached Dwellings

H. Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association.

Response: The *Tentative Plat* (see Notebook Section IIIB) shows that the proposed Tentative Plat will create lots for development of single family dwellings and tracts for parks and open space. All proposed uses within the subject area are permitted pursuant to this section.

(.05) DEVELOPMENT STANDARDS APPLYING TO ALL DEVELOPMENTS IN THE VILLAGE ZONE

All development in this zone shall be subject to the V Zone and the applicable provisions of the Wilsonville Planning and Land Development Ordinance. If there is a conflict, then the standards of this section shall apply. The following standards shall apply to all development in the V zone:

A. Block, Alley, Pedestrian and Bicycle Standards:

1. Maximums Block Perimeter: 1,800 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent a block perimeter from meeting this standard.

Response: These standards are addressed within the PDP Compliance Report (see Notebook Section IIA).

2. Maximum spacing between streets for local access: 530 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent street extensions from meeting this standard.

Response: These standards are addressed within the PDP Compliance Report (see Notebook Section IIA).

3. If the maximum spacing for streets for local access exceeds 530 feet, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard.

Response: These standards are addressed within the PDP Compliance Report (see Notebook Section IIA).

B. Access: All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer.

Response: All of the lots within the proposed PDP that have frontage on a public street and an alley will take vehicular access from an alley to a garage or parking area.

Table V-1 Development Standards

Response: The attached *Tentative Plat* (see Notebook Section IIIB) depicts proposed lot sizes and dimensions. All of the lots will be developed with single family dwelling units. All of the lots meet applicable requirements, as addressed below. No buildings are proposed with this application. Final compliance with these standards will be reviewed at building permit submittal.

Single-Family Dwellings

Minimum lot size: 2,250 square feet

Minimum lot width: 35 feet

Minimum lot depth: 50 feet

Response: All of the lots within the proposed Tentative Plat meet the applicable minimum lot size, width, and depth requirements of this Section and of the SAP - South Architectural Pattern Book, with allowed variations for site features, e.g. site topography or road alignments.

Allowed variations are requested for Lots 90 and 97, where the presence of surrounding open space tracts including SROZ areas and the termination of SW Alta Court limit the available area for lot frontage. Lot 90 has 32.5 feet of frontage on the southwestern terminus of SW Alta Court. Lot 97 has 59 feet of frontage on the northeastern terminus of SW Alta Court. However, where the front wall of each residential building on both Lots 90 and 97 are anticipated to be located, the lot width is approximately 60 feet. Lots 90 and 97 have been designed to protect surrounding significant natural resources and it is not possible to increase the width of these lots or extend the street without encroaching into the adjacent SROZ areas.

Additionally, a variation is requested for medium lots to be 50 feet wide within the block bounded by SW Almafi Lane, SW Naples Street, SW Como Drive, and SW Beaumont Lane. These lots meet the minimum lot size and depth for Mediums, but exceed the lot width range shown in the SAP - South Pattern Book (+/- 41' to 49') by one (1) foot. Lots are not of a sufficient depth to be classified as Standards and lot depth cannot be increased due to street alignment, presence of the alley, and the intent to protect SROZ areas on the east and west sides of this block.

(.07) General Regulations - Off-Street Parking, Loading & Bicycle Parking

Table V-2: Off-Street Parking Requirements

Category	Min. Vehicle Spaces	Max. Vehicle Spaces	Bicycle Short Term	Bicycle Long Term
Single Family Detached Dwelling Units	1.0 / DU	NR	NR	NR

Response: Each of the homes will provide a minimum of a two-car garage in compliance with this standard.

(.08) Open Space

Open space shall be provided as follows:

A. In all residential developments and in mixed-use developments where the majority of the developed square footage is to be in residential use, at least twenty-five percent (25%) of the area shall be open space, excluding street pavement and surface parking. In multi-phased developments, individual phases are not required to meet the 25% standard as long as an approved Specific Area Plan demonstrates that the overall development shall provide a minimum of 25% open space. Required front yard areas shall not be counted towards the required open space area. Required rear yard areas and other landscaped areas that are not within required front or side yards may be counted as part of the required open space.

B. Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City of Wilsonville standards. The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage. See SROZ provisions, Section 4.139.10.

C. The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or maintenance are the responsibility of a private party or homeowners' association, the City Attorney shall review and approve any pertinent bylaws, covenants, or agreements prior to recordation.

Response: Specific Area Plan - South Plan Area 2 includes 24.06 acres of open space area, comprising 56% of the total area of Plan Area 2. SAP South Plan Area 2 has been submitted concurrently with PDP 7S. Therefore, PDP 7S is consistent with the open space area planned for in Specific Area Plan - South Plan Area 2. This compliance measure is described in more detail in the PDP compliance report (see Notebook Section IIA).

(.09) STREET & ACCESS IMPROVEMENT STANDARDS

A. Except as noted below, the provisions of Section 4.177 apply within the Village zone:

1. General Provisions:

a. All street alignment and access improvements shall conform to the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan and the following standards:

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently with PDP 7S. Therefore, the street alignments and access improvements within this PDP are consistent with the *Villebois Village Master Plan* and SAP South - Plan Area 2 (see the PDP Supporting Compliance Report - Notebook Section IIA).

i. All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan.

Response: All street improvements within this Preliminary Development Plan will comply with the applicable Public Works Standards. The street system within this Preliminary Development Plan is designed to provide for the continuation of streets within Villebois and to adjoining properties or subdivisions according to the *Master Plan*. The street system is illustrated on *Sheet 7 - Circulation Plan* in Notebook Section IIB.

ii. All streets shall be developed with curbs, landscape strips, bikeways or pedestrian pathways, according to the Master Plan.

Response: All streets within this Preliminary Development Plan will be developed with curbs, landscape strips, sidewalks, and bikeways or pedestrian pathways as depicted on *Sheet 7 - Circulation Plan* in Notebook Section IIB and in accordance with the *Master Plan*.

2. Intersections of streets

a. Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.

b. **Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District.**

Response: The *Tentative Plat* located in Section IIIB of this Notebook demonstrates that all proposed streets will intersect at angles consistent with the above standards. See also Notebook Section IIB - Reduced Drawings.

c. **Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:**

   i. **1000 ft. for major arterials**

   ii. **600 ft. for minor arterials**

   iii. **100 ft. for major collector**

   iv. **50 ft. for minor collector**

Response: The *Tentative Plat* located in Notebook Section IIIB demonstrates that opposing intersections on public streets are offset, as appropriate, so that no danger to the traveling public is created.

d. **Curb Extensions:**

   i. **Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F), below, and shall:**

   ii. **Not obstruct bicycle lanes on collector streets.**

   iii. **Provide a minimum 20 foot wide clear distance between curb extensions all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District.**

Response: Curb extensions are shown on *Sheet 7 - Circulation Plan* in Notebook Section IIB. PDP 7S does not include any collector streets or bike lanes. The attached drawings illustrate that all street intersections will have a minimum 20 foot wide clear distance between curb extensions on all local residential street intersections.

3. **Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%, may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards.**

Response: *Sheet 5 - Grading & Erosion Control Plan* in Notebook Section IIB demonstrates that proposed streets can comply with this standard.

4. **Centerline Radius Street Curves:**

   The minimum centerline radius street curves shall be as follows:

   a. **Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.**

   b. **Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.**

   c. **Local streets: 75 feet**

Response: The *Tentative Plat* (see Notebook Section IIIB) demonstrates that all streets will comply with the above standards.

5. **Rights-of-way:**

   a. **See (.09) (A), above.**

Response: Proposed rights-of-way are shown on the *Tentative Plat*, located in Section IIIB of this Notebook. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of a final plat in accordance with Section 4.177.

6. **Access drives.**

   a. **See (.09) (A), above.**

   b. **16 feet for two-way traffic.**

Response: Access drives (alleys) will be paved at least 16-feet within a 20-foot tract, as shown on *Sheet 7 - Circulation Plan* in Notebook Section IIB. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions.

7. **Clear Vision Areas**

   a. **See (.09) (A), above.**

Response: Clear vision areas will be provided and maintained in compliance with the Section 4.177.

8. **Vertical clearance:**

   a. **See (.09) (A), above.**

Response: Vertical clearance will be provided and maintained in compliance with the Section 4.177.

9. **Interim Improvement Standard:**

   a. **See (.09) (A), above.**

Response: An interim street section improvement will be provided on Grahams Ferry Road to create consistency with the street improvements previously completed

with phased development of SAP North and SAP South. No other interim street improvements are proposed.

(.18) VILLAGE ZONE DEVELOPMENT PERMIT PROCESS

G. Preliminary Development Plan Approval Process:

1. An application for approval of a Preliminary Development Plan for a development in an approved SAP shall:

f) Include a preliminary land division (concurrently) per Section 4.400, as applicable.

Response: This application includes a request for preliminary land division approval. This request for approval of a Tentative Plat is located in Notebook Section III. This section includes a Supporting Compliance Report, the proposed Tentative Plat, draft CC&R's, a copy of the certification of liens & assessments form, and the subdivision name approval from the County Surveyor's Office.

SECTION 4.177. STREET IMPROVEMENT STANDARDS

Response: Proposed rights-of-way are shown on the *Tentative Plat* in Notebook Section IIIB. Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with the final plat.

Reduced drawings located in Notebook Section IIB demonstrate that all proposed access drives (alleys) within the Preliminary Development Plan area will have a minimum improvement width of 16 feet and will provide two-way travel. All access drives (alleys) will be constructed with a hard surface capable of carrying a 23-ton load. Easements for fire access will be dedicated as required by the fire department. All access drives will be designed to provide a clear travel lane free from any obstructions.

Clear vision areas will be maintained in accordance with the standards of Subsection 4.177(.01)(I). Vertical clearance will be maintained over all streets and access drives in accordance with Subsection 4.177(.01)(J).

LAND DIVISIONS

SECTION 4.210. APPLICATION PROCEDURE

A. Preparation of Tentative Plat. The Planning Staff shall provide information regarding procedures and general information having a direct influence on the proposed development, such as elements of the Comprehensive Plan, existing and proposed streets, road and public utilities. The applicant shall cause to be prepared a tentative plat, together with improvement plans and other supplementary material as specified in this Section. The Tentative Plat shall be prepared by an Oregon licensed professional land surveyor or engineer. An affidavit of the services of each surveyor or engineer shall be furnished as part of the submittal.

Response: A *Tentative Plat* has been prepared by an Oregon licensed professional engineer as required. The *Tentative Plat* can be seen in Section IIIB of this

Notebook. Improvement plans can be seen in Notebook Section IIB. The Introductory Narrative located in Section IA includes a listing of the services provided by each design team member.

B. Tentative Plat Submission. The purpose of the Tentative Plat is to present a study of the proposed subdivision to the Planning Department and Development Review Board and to receive approval recommendations for revisions before preparation of a final Plat. The design and layout of this plan plat shall meet the guidelines and requirements set forth in this Code. The Tentative Plat shall be submitted to the Planning Department with the following information:

1. Site development application form completed and signed by the owner of the land or a letter of authorization signed by the owner. A preliminary title report or other proof of ownership is to be included with the application form.

2. Application fees as established by resolution of the City Council.

Response: Copies of the application form and the application fee are included in Notebook Sections IB and IC, respectively.

3. Ten (10) copies and one (1) sepia or suitable reproducible tracing of the Tentative Plat shall be submitted with the application. Paper size shall be eighteen inch (18") by twenty-four inch (24"), or such other size as may be specified by the City Engineer.

Response: The balance of the 10 copies of the *Tentative Plat* (see Notebook Section IIIB) will be provided when the application is determined complete; three (3) of which have been provided with initial submittal.

4. Name of the subdivision. No subdivision shall duplicate or resemble the name of any other subdivision in Clackamas or Washington County. Names may be checked through the county offices.

Response: The name of the proposed subdivision of PDP 7S is "Grande Pointe at Villebois" (see Notebook Section IIIE for documentation of subdivision name approval from the Clackamas County Surveyor's Office).

5. Names, address, and telephone numbers of the owners and applicants, and engineer or surveyor.

Response: The names, addresses and telephone numbers of the owner, applicant, engineer and surveyor are listed in the Introductory Narrative, which can be seen in Notebook Section IA, and are listed on the *Cover Sheet* in Notebook Section IIB.

6. Date, north point and scale drawing.

7. Location of the subject property by Section, Township, and Range.

8. **Legal road access to subject property shall be indicated as City, County, or other public roads.**

9. **Vicinity map showing the relationship to the nearest major highway or street.**

10. **Lots: Dimensions of all lots, minimum lot size, average lot size, and proposed lot and block numbers.**

11. **Gross acreage in proposed plat.**

Response: The above information is provided on the plan sheets located in Notebook Section IIB. The location of the subject property by Section, Township and Range and the gross acreage of the proposed plat are also listed in the Introductory Narrative, located in Notebook Section IA, and are listed on *Sheet 1 - Cover Sheet* in Notebook Section IIB.

12. **Proposed uses of the property, including sits, if any, for multi-family dwellings, shopping centers, churches, industries, parks, and playgrounds or other public or semi-public uses.**

Response: The proposed plat does not include any multi-family dwelling sites, shopping centers, churches, or industries. Park and open space areas are indicated on the plan sheets located in Notebook Section IIB. Proposed uses within the subject park and open space areas are detailed on the FDP Plans included in Notebook Section VIB.

13. **Improvements: Statement of the improvements to be made or installed including streets, sidewalks, lighting, tree planting, and times such improvements are to be made or completed.**

Response: Proposed improvements are shown on the plan sheets in Notebook Section IIB. *Sheet 7 - Circulation Plan* shows proposed streets and sidewalks. *Sheet 10 - Street Tree/Lighting Plan* shows proposed street trees and proposed street lights.

14. **Trees. Locations, types, sizes, and general conditions of all existing trees, as required in Section 4.600.**

Response: The requirements of Section 4.600 can be seen in Section V of this Notebook. *Sheet 9 - Tree Preservation Plan* in Notebook Section IIB shows existing tree locations, types, sizes and general conditions, pursuant to the requirements of Section 4.600.

15. **Utilities such as electrical, gas, telephone, on and abutting the tract.**

Response: *Sheet 6 - Composite Utility Plan* in Notebook Section IIB shows existing and proposed utilities.

16. **Easements: Approximate width, location, and purpose of all existing and proposed easements on, and known easements abutting the tract.**

17. **Deed Restrictions: Outline of proposed deed restrictions, if any.**

18. **Written Statement: Information which is not practical to be shown on the maps may be shown in separate statements accompanying the Tentative Plat.**

19. **If the subdivision is to be a "Planned Development," a copy of the proposed Home Owners Association By-Laws must be submitted at the time of submission of the application. The Tentative Plat shall be considered as the Stage I Preliminary Plan. The proposed By-Laws must address the maintenance of any parks, common areas, or facilities.**

Response: *Sheet 2 - Existing Conditions* in Notebook Section IIB) shows the approximate width, location, and purpose of all existing easements. The attached *Tentative Plat* (see Notebook Section IIIB) shows proposed easements. No deed restrictions are proposed at this time. A draft of the CC&R's is included in Section IIIC of this Notebook.

20. **Any plat bordering a stream or river shall indicate areas subject to flooding and shall comply with the provisions of Section 4.172.**

Response: The proposed plat areas do not border a stream or river.

21. **Proposed use or treatment of any property designated as open space by the City of Wilsonville.**

Response: The proposed plat includes Open Space 3. This area will be retained in tracts that will be owned and maintained by the homeowners association. Proposed use of the tracts for Open Space 3 is shown in the FDP plans included in Section VIB of this Notebook.

22. **A list of the names and addresses of the owners of all properties within 250 feet of the subject property, printed on self-adhesive mailing labels. The list shall be taken from the latest available property ownership records of the Assessor's Office of the affected county.**

Response: The required mailing list has been submitted with this application. A copy is provided in Notebook Section ID.

23. **A completed "liens and assessments" form, provided by the City Finance Department.**

Response: A copy of this form is provided in Notebook Section IIID.

24. **Locations of all areas designated as a Significant Resource Overlay Zone by the City, as well as any wetlands shall be shown on the tentative plat.**

Response: *Sheet 2 - Existing Conditions* in Notebook Section IIB shows the location of locally significant and non-significant wetland areas, as well as the SROZ

and Impact Area boundaries. An application for amendment to SAP South to add Plan Area 2 and proposed refinements to the SROZ boundaries have been submitted concurrently. The SROZ will be retained with Open Space 3 in tracts as shown on the attached *Tentative Plat* (see Notebook Section IIIB), which will be owned and maintained by the homeowners association.

25. Locations of all existing and proposed utilities, including but not limited to domestic water, sanitary sewer, storm drainage, streets, and any private utilities crossing or intended to serve the site. Any plans to phase the construction or use of utilities shall be indicated.

Response: *Sheet 2 - Existing Conditions* shows all existing utilities. *Sheet 6 - Composite Utility Plan* shows all proposed utilities. *Sheet 5 - Grading and Erosion Control Plan* shows proposed streets and storm drainage facilities. These plan sheets can be seen in Notebook Section IIB.

26. A traffic study, prepared under contract with the City, shall be submitted as part of the tentative plat application process, unless specifically waived by the Community Development Director.

Response: A copy of the Traffic Impact Analysis is attached in Notebook Section IID.

C. Action on proposed tentative plat:

1. Consideration of tentative subdivision plat. The Development Review Board shall consider the tentative plat and the reports of City staff and other agencies at a regular Board meeting no more than ninety (90) days after tentative plat application has been accepted as complete by the City. Final action on the proposed tentative plat shall occur within the time limits specified in Section 4.013. The tentative plat shall be approved if the Development Review Board determines that the tentative plat conforms in all respects to the requirements of this Code.

Response: The *Tentative Plat* (see Notebook Section IIIB) is included with this application for review by the Development Review Board.

2. Consideration of tentative partition plat. The Planning Director shall review and consider any proposed land partition plat through the procedures for Administrative Reviews specified in Section 4.030 and 4.035.

Response: This request is for a Tentative Subdivision Plat. This code section does not apply.

3. The Board shall, by resolution, adopt its decision, together with findings and a list of all Conditions of Approval or required changes to be reflected on the Final Plat

Response: Any Conditions of Approval adopted by the Board shall be reflected on the Final Plat.

4. **Board may limit content of deed restrictions. In order to promote local, regional and state interests in affordable housing, the Board may limit the content that will be accepted within proposed deed restrictions or covenants. In adopting conditions of approval for a residential subdivision or condominium development, the Board may prohibit such things as mandatory minimum construction costs, minimum unit sizes, prohibitions or manufactures housing, etc.**

Response: The applicant recognizes the authority of the Board to limit the content of the deed restrictions or covenants.

5. **Effect of Approval. After approval of a tentative plat, the applicant may proceed with final surveying, improvement construction and preparation of the final plat. Approval shall be effective for a period of two (2) years, and if the final plat is not submitted to the Planning Department within such time, the tentative plat shall be submitted again and the entire procedure shall be repeated for consideration of any changes conditions which may exist. Except, however, that the Development Review Board may grant a time extension as provided in Section 4.023.**

Response: After approval of the Tentative Plat, a final plat will be prepared and submitted to the Planning Department within two years if an extension is not provided.

D. **Land division phases to be shown. Where the applicant intends to develop the land in phases, the schedule for such phasing shall be presented for review at the time of the tentative plat. In acting on an application for tentative plat approval, the Planning Director or Development Review Board may set time limits for the completion of the phasing schedule which, if not met, shall result in an expiration of the tentative plat approval.**

Response: The PDP is proposed to be executed as shown on *Sheet 11 - PDP Phasing Plan* (see Notebook Section IIB).

E. **Remainder tracts to be shown as lots or parcels. Tentative plats shall clearly show all effected property as part of the application for land division. All remainder tracts, regardless of size, shall be shown and counted among the parcels or lots of the division.**

Response: The *Tentative Plat* (see Notebook Section IIIB) illustrates the entirety of effected property is included in lots and tracts.

SECTION 4.236. GENERAL REQUIREMENTS - STREETS.

(.01) Conformity to the Master Plan Map: Land divisions shall conform to and be in harmony with the Transportation Master Plan (Transportation Systems Plan), the bicycle and Pedestrian Master Plan, the Parks and Recreation Master Plan, the Official Plan or Map and especially to the Master Street Plan.

Response: The proposed land division complies with Specific Area Plan - South and the *Villebois Village Master Plan* as demonstrated in the PDP Compliance Report (see Notebook Section IIA), and thereby conforms to the applicable Master Plans.

(.02) Relation to Adjoining Street System.

A. A land division shall provide for the continuation of the principal streets existing in the adjoining area, or of their proper projection when adjoining property is not developed, and shall be of a width not less than the minimum requirements for streets set forth in these regulations. Where, in the opinion of the Planning Director or Development Review Board, topographic conditions make such continuation or conformity impractical, an exception may be made. In cases where the Board or Planning Commission has adopted a plan or plat of a neighborhood or area of which the proposed land division is a part, the subdivision shall conform to such adopted neighborhood or area plan.

B. Where the plat submitted covers only a part of the applicant's tract, a sketch of the prospective future street system of the unsubmitted part shall be furnished and the street system of the part submitted shall be considered in the light of adjustments and connections with the street system of the part not submitted.

C. At any time when an applicant proposes a land division and the Comprehensive Plan would allow for the proposed lots to be further divided, the city may require an arrangement of lots and streets such as to permit a later resubdivision in conformity to the street plans and other requirements specified in these regulations.

Response: Plan sheets in Notebook Section IIB illustrate street design will meet the minimum requirements set forth by this Section. The street system within PDP 7 South will provide connections to principle streets of adjoining areas. The Tentative Plat covers the entirety of PDP 7 South.

(.03) All streets shall conform to the standards set forth in Section 4.177 and the block size requirements of the zone.

Response: Previous sections of this report have demonstrated compliance with the standards of Section 4.177 and the applicable block size requirements.

(.04) Creation of Easements: The Planning Director or Development Review Board may approve an easement to be established without full compliance with these regulations, provided such an easement is the only reasonable method by which a portion of a lot large enough to allow partitioning into two (2) parcels may be provided with vehicular access and adequate

utilities. If the proposed lot is large enough to divide into more than two (2) parcels, a street dedication may be required. Also, within a Planned Development, cluster settlements may have easement driveways for any number of dwelling units when approved by the Planning Director or Development Review Board.

Response: Any necessary easements will be identified on the final plat.

(.05) Topography: The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of these regulations.

Response: *Sheet 5 - Grading and Erosion Control Plan* in Notebook Section IIB demonstrates that the layout of streets has given recognition to surrounding topographic conditions.

(.06) Reserve Strips: The Planning Director or Development Review Board may require the applicant to create a reserve strip controlling the access to a street. Said strip is to be placed under the jurisdiction of the City Council, when the Director or Board determine that a strip is necessary:

A. To prevent access to abutting land at the end of a street in order to assure the proper extension of the street pattern and the orderly development of land lying beyond the street; or

B. To prevent access to the side of a street on the side where additional width is required to meet the right-of-way standards established by the City; or

C. To prevent access to land abutting a street of the land division but not within the tract or parcel of land being divided; or

D. To prevent access to land unsuitable for building development.

Response: Reserve strips will be provided as appropriate.

(.07) Future Expansion of Street: When necessary to give access to, or permit a satisfactory future division of, adjoining land, streets shall be extended to the boundary of the land division and the resulting dead-end street may be approved without a turn-around. Reserve strips and street plugs shall be required to preserve the objective of street extension.

Response: Streets that will be expanded in the future will occur in compliance with this standard.

(.08) Existing Streets: Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall conform to the designated width in this Code or in the Transportation Systems Plan.

Response: Rights-of-way will be dedicated in accordance with the *Villebois Village Master Plan* and the Transportation System Plan.

(.09) Street Names: No street names will be used which will duplicate or be confused with the names of existing streets, except for extensions of existing streets. Street names and numbers shall conform to the

established name system in the City, and shall be subject to the approval of the City Engineer.

Response: No street names will be used that duplicate or could be confused with the names of existing streets. Street names and numbers will conform to the established name system in the City, as approved by the City Engineer.

SECTION 4.237. GENERAL REQUIREMENTS - OTHER.

(.01) Blocks:

A. The length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control, and safety of pedestrian, bicycle, and motor vehicle traffic, and recognition of limitations and opportunities of topography.

B. Sizes: Blocks shall not exceed the sizes and length specified for the zone in which they are located unless topographical conditions or other physical constraints necessitate larger blocks. Larger blocks shall only be approved where specific findings are made justifying the size, shape, and configuration.

Response: The concurrent SAP Amendment Compliance Report demonstrated compliance with the applicable block requirements. The street system proposed in this land division generally conforms to the street system in SAP South Plan Area 2 and the *Villebois Village Master Plan* as described in the PDP Supporting Compliance Report in Notebook Section IIA.

(.02) Easements:

A. Utility lines. Easements for sewers, drainage, water mains, electrical lines or other public utilities shall be dedicated wherever necessary. Easements shall be provided consistent with the City's Public Works Standards, as specified by the City Engineer or Planning Director. All the utility lines within and adjacent to the site shall be installed with underground services within the street and to any structures. All utilities shall have appropriate easements for construction and maintenance purposes.

B. Water Courses. Where a land division is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the water course, and such further width as will be adequate for the purposes of conveying storm water and allowing for maintenance of the facility or channel. Streets or parkways parallel to water courses may be required.

Response: The final plat will include the appropriate easements.

(.03) Pedestrian and bicycle pathways. An improved public pathway shall be required to transverse the block near its middle if that block exceeds the length standards of the zone in which it is located.

A. Pathways shall be required to connect to cul-de-sacs to pass through unusually shaped blocks.

B. Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.

Response: Any mid-block pathways required due to block size will be provided in conformance with this standard.

(.04) Tree planting. Tree planting plans for a land division must be submitted to the Planning Director and receive the approval of the Director or Development Review Board before the planning is begun. Easements or other documents shall be provided, guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees that are located on private property.

Response: *Sheet 10 - Street Tree/Lighting* in Notebook Section IIB shows proposed street tree planting.

(.05) Lot Size and shape. The lot size, width, shape and orientation shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots shall meet the requirements of the zone where they are located.

A. In areas that are not served by public sewer, an on-site sewage disposal permit is required from the City. If the soil structure is adverse to on-site sewage disposal, no development shall be permitted until sewer service can be provided.

B. Where property is zoned or deeded for business or industrial use, other lot widths and areas may be permitted at the discretion of the Development Review Board. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.

C. In approving an application for a Planned Development, the Development Review Board may waive the requirements of this section and lot size, shape, and density shall conform to the Planned Development conditions of approval.

Response: Proposed lot sizes, widths, shapes and orientations are appropriate for the proposed development and are in conformance with the Village Zone requirements as demonstrated by this report.

(.06) Access. The division of land shall be such that each lot shall have a minimum frontage on a public street, as specified in the standards of the

relative zoning districts. This minimum frontage requirement shall apply with the following exceptions:

A. A lot on the outer radius of a curved street or facing the circular end of a cul-de-sac shall have frontage of not less than twenty-five (25) feet upon a street, measured on the arc.

B. The Development Review Board may waive lot frontage requirements where in its judgment the waiver of frontage requirements will not have the effect of nullifying the intent and purpose of this regulation or if the Board determines that another standard is appropriate because of the characteristics of the overall development.

Response: The proposed lots comply with the applicable access requirements of the Village Zone as demonstrated in previous sections of this report.

(.07) Through lots. Through lots shall be avoided except where essential to provide separation of residential development from major traffic arteries or adjacent non-residential activity or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least ten (10) feet, across which there shall be no access, may be required along the line of lots abutting such a traffic artery or other disadvantageous use. Through lots with planting screens shall have a minimum average depth of one hundred (100) feet. The Development Review Board may require assurance that such screened areas be maintained as specified in Section 4.176.

Response: No through lots are proposed by this application.

(.08) Lot side lines. The side lines of lots, as far as practicable for the purpose of the proposed development, shall run at right angles to the street upon which the lots face.

Response: All side lines of lots will run at right angles to the street upon which the lots face.

(.09) Large lot land divisions. In dividing tracts which at some future time are likely to be re-divided, the location of lot lines and other details of the layout shall be such that re-division may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of buildings within future street locations shall be made a matter of record if the Development Review Board considers it necessary.

Response: This request does not include any tracts which may be divided at a future time.

(.10) Building line. The Planning Director or Development Review Board may establish special building setbacks to allow for the future redivision or other development of the property or for other reasons specified in the findings supporting the decision. If special building setbacks lines are established for the land division, they shall be shown on the final plat.

Response: No building lines are proposed by this application.

(.11) Build-to line. The Planning Director or Development Review Board may establish special build-to lines for the development, as specified in the findings and conditions of approval for the decision. If special build-to lines are established for the land division, they shall be shown on the final plat.

Response: No build-to lines are proposed by this application.

(.12) Land for public purposes. The Planning Director or Development Review Board may require property to be reserved for public acquisition, or irrevocably offered for dedication, for a specified period of time.

Response: This land division does not include land to be dedicated for public purposes except for the dedication of street right-of-way.

(.13) Corner lots. Lots on street intersections shall have a corner radius of not less than ten (10) feet.

Response: All lots on street intersections will have a corner radius of not less than ten (10) feet. This is demonstrated on the *Tentative Plat* in Notebook Section IIIB.

SECTION 4.262. IMPROVEMENTS - REQUIREMENTS.

(.01) Streets. Streets within or partially within the development shall be graded for the entire right-of-way width, constructed and surfaced in accordance with the Transportation Systems Plan and City Public Works Standards. Existing streets which abut the development shall be graded, constructed, reconstructed, surfaced or repaired as determined by the City Engineer.

Response: *Sheet 5 - Grading and Erosion Control Plan* in Notebook Section IIB of this Notebook, shows compliance with this standard.

(.02) Curbs. Curbs shall be constructed in accordance with standards adopted by the City.

Response: Curbs will be constructed in accordance with City standards.

(.03) Sidewalks. Sidewalks shall be constructed in accordance with standards adopted by the City.

Response: Sidewalks will be constructed in accordance with City standards.

(.04) Sanitary sewers. When the development is within two hundred (200) feet of an existing public sewer main, sanitary sewers shall be installed to serve each lot or parcel in accordance with standards adopted by the City. When the development is more than two hundred (200) feet from an existing public sewer main, the City Engineer may approve an alternate sewage disposal system.

Response: *Sheet 6 - Composite Utility Plan* in Notebook Section IIB illustrates proposed sanitary sewer lines.

(.05) Drainage. Storm drainage, including detention or retention systems, shall be provided as determined by the City Engineer.

Response: *Sheet 5 - Grading and Erosion Control Plan* (see Notebook Section IIB) illustrates the proposed storm drainage facilities. A supporting utility report is provided (see Notebook Section IIC) that demonstrates that the proposed storm drainage facilities will meet City standards.

(.06) Underground utility and service facilities. All new utilities shall be subject to the standards of Section 4.300 (Underground Utilities). The developer shall make all necessary arrangements with the serving utility to provide the underground services in conformance with the City's Public Works Standards.

Response: Proposed utilities will be placed underground pursuant to Section 4.300 and City Public Works Standards.

(.07) Streetlight standards. Streetlight standards shall be installed in accordance with regulations adopted by the City.

Response: Proposed streetlights are shown on *Sheet 10 - Street Tree/Lighting Plan* in Notebook Section IIB. Streetlights will be installed in accordance with City standards.

(.08) Street signs. Street name signs shall be installed at all street intersections and dead-end signs at the entrance to all dead-end streets and cul-de-sacs in accordance with standards adopted by the City. Other signs may be required by the City Engineer.

Response: Street name and dead-end signs will be installed in accordance with City standards.

(.09) Monuments. Monuments shall be placed at all lot and block corners, angle points, points of curves in streets, at intermediate points and shall be of such material, size, and length as required by State Law. Any monuments that are disturbed before all improvements are completed by the developer and accepted by the City shall be replaced to conform to the requirements of State Law.

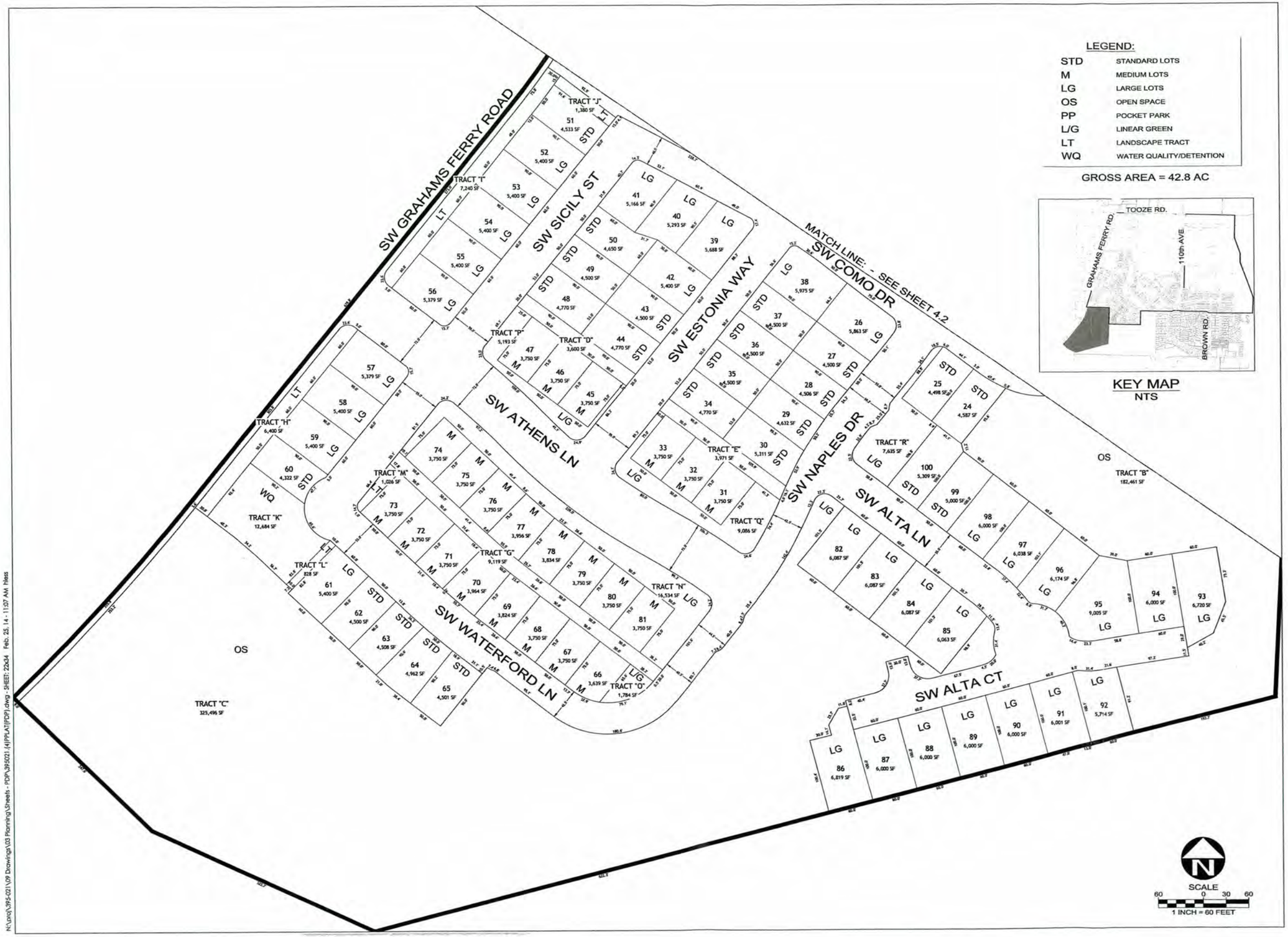
Response: Monuments will be placed at all lot and block corners, angle points, points of curves in streets, at intermediate points and will be of such material, size, and length as required by State Law.

(.10) Water. Water mains and fire hydrants shall be installed to serve each lot in accordance with City standards.

Response: *Sheet 6 - Composite Utility Plan* in Notebook Section IIB illustrates that water mains and fire hydrants will be installed to serve each lot in accordance with City standards.

II. CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable requirements of the City of Wilsonville Planning & Land Development Ordinance for the requested Tentative Subdivision Plat. Therefore, the applicant respectfully requests approval of this application.



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Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tentative Plat

DATE 01/17/2014

4.1

LEGEND:	
STD	STANDARD LOTS
M	MEDIUM LOTS
LG	LARGE LOTS
OS	OPEN SPACE
PP	POCKET PARK
L/G	LINEAR GREEN
LT	LANDSCAPE TRACT
WQ	WATER QUALITY/DETENTION

GROSS AREA = 42.8 AC

KEY MAP
NTS

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tentative Plat

DATE 01/17/2014

4.2

PRELIMINARY DRAFT
TO BE MODIFIED

After Recording Return To:
Ball Janik LLP
101 SW Main Street, Suite 1100
Portland, OR 97204-3219
Attn.: Barbara Radler

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR

_____

THIS DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR _____ is made and executed on this ___ day of _____ 20___ by _____, a _____.

Declarant is the owner of the real property located in the City of Wilsonville, Clackamas County, Oregon and legally described on the attached Exhibit A. Declarant desires to establish a planned community on the property known as "_____," which shall also be part of the master planned development known as "Villebois," which was established and is governed by the Master Plan approved by the City of Wilsonville.

NOW THEREFORE, Declarant hereby declares that the real property described on the attached Exhibit A shall be held, sold and conveyed subject to the covenants, conditions and restrictions declared below, which shall run with the real property and shall benefit and be binding upon all parties having or acquiring any right, title or interest in the real property or any part thereof.

1. DEFINITIONS

The terms specified below shall have the following meanings when used in this Declaration:

1.1 ACC. "ACC" shall mean the Architectural Control Committee of the Association formed pursuant to Section 12.

1.2 Articles. "Articles" shall mean the Articles of Incorporation of the Association filed with the Corporation Division of the Oregon Secretary of State, as amended from time to time.

1.3 Assessment. "Assessment" shall mean any assessment levied against one or more Owners by the Association for payment of expenses relating to the Property and shall include Regular Assessments, Special Assessments, Limited Assessments and Reserve Assessments as those terms are defined herein.

1.4 Association. "Association" shall mean _____ Homeowners Association, an Oregon nonprofit mutual benefit corporation, formed for the purposes set forth in this Declaration, the Bylaws and the Articles.

1.5 Association Landscaping. "Association Landscaping" shall mean all landscaping and all irrigation systems and utilities pertaining to landscaping located in the Common Areas and the front yard areas of the Lots, including all grass, sod, ground cover, flower and plant beds, planter strips, trees, shrubs, bushes and other plantings located in the front yard areas of the Lots, but excluding all sidewalks, driveways, fencing and other non-landscaping improvements located in the front yard areas of the Lots. The front yard areas of the Lots include those portions of the Lots located between the front of the Homes and any public or private street.

1.6 Board. "Board" shall mean the duly elected Board of Directors of the Association.

1.7 Bylaws. "Bylaws" shall mean the Bylaws of the Association, as amended from time to time. The Bylaws shall be adopted pursuant to ORS 94.625 and recorded in the official records of Clackamas County, Oregon.

1.8 City. "City" shall mean the City of Wilsonville, Oregon.

1.9 Common Areas. "Common Areas" shall mean those portions of the Property legally described on the attached Exhibit B which shall be owned by the Association for the common benefit of the Owners.

1.10 Common Maintenance Areas. "Common Maintenance Areas" shall mean the Common Areas and any other property that the Association is required to maintain pursuant to this Declaration or that the Board deems necessary or appropriate for the Association to maintain for the common benefit of the Owners, including without limitation, those areas described in Section 11.1.

1.11 Declarant. "Declarant" shall mean _____, a _____, and its successors and assigns who are designated as such in writing by Declarant and who consent in writing to the transfer or assumption of any rights or obligations of Declarant under this Declaration or the Bylaws. If less than all of Declarant's rights and obligations under this Declaration or the Bylaws are transferred to a successor or assign, then the successor or assign shall only be deemed a Declarant with respect to those rights or obligations that are specifically assigned or assumed by the successor or assign. One or more persons or entities may be a Declarant.

1.12 Declaration. "Declaration" shall mean this Declaration of Covenants, Conditions and Restrictions for _____, as amended from time to time in accordance with its terms.

1.13 Design Guidelines. "Design Guidelines" shall mean the design guidelines described in Section 13.

1.14 Home. "Home" shall mean a dwelling unit located on a Lot and any associated Improvements.

1.15 Improvement. "Improvement" shall mean every structure or improvement of any kind, including without limitation, buildings, sidewalks, driveways, fences, walls, works of art, trees, hedges, plantings and other landscaping, changes in exterior color or shape, site work (such as, without limitation, excavation, grading and utility improvements), and all other product of construction efforts (such as, without limitation, alterations, renovations and reconstruction) on or with respect to the Property or any portion thereof.

1.16 Limited Assessment. "Limited Assessment" shall mean an assessment levied against an Owner by the Association for costs and expenses incurred by the Association for corrective action performed pursuant to this Declaration that is required as a result of the willful or negligent actions or omissions of the Owner or the Owner's tenants, family members, guests, contractors, or invitees. "Limited Assessment" also includes assessments for a common expense or any part of a common expense that benefits fewer than all of the Lots, as determined in the sole discretion of the Board.

1.17 Lot. "Lot" shall mean each of Lots 1 through 81, inclusive, as depicted on the Plat.

1.18 Master Plan. "Master Plan" shall mean the Master Plan of Villebois approved by the City.

1.19 Member. "Member" shall mean each member of the Association and shall include every Owner of a Lot. There shall be two (2) classes of membership in the Association, Class A and Class B, as described in Section 3.3 below.

1.20 Nonprofit Corporation Act. "Nonprofit Corporation Act" shall mean the Oregon Nonprofit Corporation Act (ORS 65.001 to 65.990), as amended from time to time.

1.21 Operation and Maintenance Agreement. "Operation and Maintenance Agreement" shall mean the Villebois Operation and Maintenance Agreement between the City and Declarant executed in connection with the recordation of the Plat.

1.22 Owner. "Owner" shall mean any person or entity, including Declarant, at any time owning a Lot, including any vendee under a recorded land sale contract to whom possession has passed, but does not include a tenant or holder of a leasehold interest, a person holding only a security interest in a Lot or a vendor under a recorded land sale contract who has surrendered possession.

1.23 Pattern Book. "Pattern Book" shall mean the design requirements for each area within Villebois adopted and applied by the City and which will be a condition to the City's approving building permits.

1.24 Planned Community Act. "Planned Community Act" shall mean the Oregon Planned Community Act (ORS 94.550 to 94.783), as amended from time to time.

1.25 Plat. "Plat" shall mean the Plat of _____ recorded in the official records of Clackamas County, Oregon on _____, 20___ as Document No. _____ and any amendments thereto.

1.26 Property. "Property" shall mean the real property located in the City of Wilsonville, Clackamas County, Oregon and legally described on the attached Exhibit A.

1.27 Regular Assessment. "Regular Assessment" shall mean an assessment by the Association against all Owners to provide for the payment of all estimated normal expenses of the Association for the performance of the Association's duties as provided in this Declaration or the Bylaws.

1.28 Reserve Assessment. "Reserve Assessment" shall mean an assessment by the Association against all Owners to establish and maintain the reserve funds pursuant to Section 6.

1.29 Special Assessment. "Special Assessment" shall mean an assessment against all Owners in the event that the Regular Assessment for any particular year is or will become inadequate to meet the expenses of the Association.

1.30 Special Declarant Rights. "Special Declarant Rights" shall mean those rights reserved for Declarant in Section 15.

1.31 Turnover Meeting. "Turnover Meeting" shall mean the meeting of the Owners called pursuant to the Bylaws for the purpose of turning over control of the Association to the Class A Members.

1.32 Villebois. "Villebois" shall mean all of the property subject to the Master Plan.

2. DECLARATION

2.1 Property Covered. The property that is covered by and is hereby made subject to this Declaration is the Property.

2.2 Purpose. The purpose of this Declaration is to provide for the maintenance, restoration, repair, improvement and upkeep of the Common Maintenance Areas and to set forth other terms and conditions governing the use and enjoyment of the Property.

2.3 Declaration. The Property shall be subject to all of the conditions, covenants, restrictions, and provisions contained in this Declaration, which shall benefit and burden each Lot and all other portions of the Property. Such conditions, covenants, restrictions, and provisions shall be binding on all parties having any right, title or interest in or to the Property, or any part thereof, and each of their respective heirs, personal representatives, successors and assigns. The Property shall be a Class I planned community as defined in the Planned Community Act and shall be subject to all of the terms and provisions of the Planned Community Act. The Property shall be known as "_____."

2.4 Improvements. Declarant does not agree to build any particular Improvements on the Property, but may elect, at Declarant's option, to build any such Improvements. Declarant elects not to limit Declarant's rights to add Improvements not described in this Declaration.

3. THE ASSOCIATION

3.1 Organization. Declarant shall, concurrently with the execution and recording of this Declaration, organize the Association as a nonprofit mutual benefit corporation pursuant to the Nonprofit Corporation Act under the name "_____ Homeowners Association" The Articles shall provide for the Association's perpetual existence, but in the event the Association is at any time dissolved, whether inadvertently or deliberately, it shall automatically be succeeded by an unincorporated association of the same name. All of the property, powers and obligations of the Association existing immediately prior to its dissolution shall thereupon automatically vest in the successor unincorporated association. Such vesting shall thereafter be confirmed as evidenced by appropriate conveyances and assignments by the Association to the successor unincorporated association. To the greatest extent possible, any successor unincorporated association shall be governed by the Articles and Bylaws as if they had been drafted to constitute the governing documents of the unincorporated association.

3.2 Membership. Every Owner of a Lot shall, immediately upon creation of the Association and thereafter during the entire period of such Owner's ownership of a Lot, be a Member of the Association. Such membership shall commence, exist and continue simply by virtue of such ownership, shall expire automatically upon termination of such ownership, and need not be confirmed or evidenced by any certificate or acceptance of membership.

3.3 Voting Rights. The Association shall have the following two (2) classes of voting membership:

3.3.1 Class A Members. Class A Members shall be all Owners other than Declarant (except that beginning on the date on which the Class B membership is converted to Class A membership, and thereafter, Class A Members shall be all Owners, including Declarant). Class A Members shall be entitled to one (1) vote for each Lot owned. When more than one (1) person holds an interest in a Lot, all such persons shall be Members. However, only one (1) vote shall be exercised for the Lot. The vote for the Lot shall be exercised as the Owners of the Lot

determine among themselves. If the Owners of the Lot cannot agree upon how to exercise the vote, then the vote for that Lot shall be disregarded in determining the proportion of votes with respect to the particular matter at issue.

3.3.2 Class B Members. The Class B Member shall be Declarant. The Class B Member shall be entitled to three (3) votes for each Lot owned. The Class B membership shall cease and be converted to Class A membership on the election in writing by Declarant to terminate the Class B membership.

3.4 Powers and Obligations. The Association shall have, exercise and perform all of the following powers, duties and obligations:

3.4.1 Declaration. The powers, duties and obligations granted to the Association by this Declaration, including, without limitation, the authority to levy Assessments against the Owners for the costs of operating and managing the Association and performing the Association's responsibilities under this Declaration and the Bylaws, as well as the operating costs and expenses of the ACC.

3.4.2 Statutory Powers. The powers and obligations of a nonprofit corporation pursuant to the Nonprofit Corporation Act, and of a homeowners association pursuant to ORS 94.630, as either may be amended from time to time, except as provided otherwise by this Declaration or the Bylaws.

3.4.3 General. Any additional or different powers, duties and obligations necessary or desirable for the purpose of carrying out the functions of the Association pursuant to this Declaration and the Bylaws or otherwise promoting the general benefit of the Members. The powers and obligations of the Association may from time to time be amended, repealed, enlarged or restricted by changes to this Declaration made in accordance with the provisions herein, accompanied by changes to the Articles or Bylaws made in accordance with such instruments, as applicable, and with the Planned Community Act and Nonprofit Corporation Act.

3.5 Liability. Neither the Association, members of the Board, officers of the Association nor members of committees established under or pursuant to the Bylaws shall be liable to any Owner for any damage, loss, injury or prejudice suffered or claimed on account of any action or failure to act by the Association or any Board member, officer or committee member, provided that the Association, Board member, officer or committee member acted or failed to act, in good faith, within the scope of his or her authority, and in a manner reasonably believed to be in the best interest of the Association and its Members, with regard to the act or omission at issue.

3.6 Interim Board. Declarant shall have the right to appoint an interim Board consisting of one (1) to three (3) directors, who shall serve as the Board until replaced by Declarant or until their successors have been elected by the Owners at the Turnover Meeting.

3.7 Transitional Advisory Committee. Declarant shall form a transitional advisory committee as provided in the Bylaws to provide for the transition of administrative responsibility for the Association from Declarant to the Class A Members.

3.8 Association Rules and Regulations. The Board from time to time may adopt, modify, or revoke such rules and regulations governing the conduct of persons and the operation and use of the Lots and Common Areas as it may deem necessary or appropriate in order to assure the safe, peaceful and orderly use and enjoyment of the Property, without unduly infringing on the privacy or enjoyment of any Owner or occupant of any part of the Property. A copy of the rules and regulations, upon adoption, and a copy of each amendment, modification or revocation thereof, shall be delivered by the Board promptly to each Owner and shall be binding upon all Owners and occupants of all Lots upon the date of delivery. The method of adoption of such rules shall be as provided in the Bylaws.

4. ALLOCATION OF COMMON PROFITS AND EXPENSES

4.1 Method of Allocation. The common profits of the Association shall be distributed among, and the common expenses of the Association shall be charged to, the Lots on an equal basis, except as provided in Section 5.4 below. The common expenses of the Association may be assessed on a monthly, quarterly or annual basis as determined by the Board.

4.2 No Exception. No Owner may claim exemption from liability for contribution toward the common expenses of the Association by waiving his or her use or enjoyment of the Common Areas or by abandoning his or her Lot. No Owner may claim an offset against such liability for failure of the Association or the Board to perform its obligations.

5. ASSESSMENTS

5.1 Creation of Lien and Personal Obligation of Assessments. Declarant, for each Lot it owns, does hereby covenant, and each Owner of a Lot by acceptance of a conveyance thereof, whether or not so expressed in the conveyance, shall be deemed to covenant to pay to the Association all Assessments or other charges as may be fixed, established and collected from time to time in the manner provided in this Declaration or the Bylaws. Such Assessments and charges, together with any interest, expenses or attorneys' fees imposed pursuant to Section 7.4, shall be a charge on the land and shall be a continuing lien upon the Lot against which the Assessment or charge is made. Assessments, charges and other costs shall also be the personal obligation of the person who was the Owner of the Lot at the time when the Assessment or charge becomes due. Such liens and personal obligations shall be enforced in the manner set forth in Section 7 below.

5.2 Regular Assessments.

5.2.1 Commencement. Regular Assessments for each Lot shall commence upon the sale of the Lot to an Owner other than a Declarant. Regular Assessments shall not be levied against Declarant-owned Lots.

5.2.2 Amount of Regular Assessments. The Regular Assessments shall be based upon an annual budget prepared by the Board with respect to projected expenses of the Association, including, without limitation, the following:

(a) maintenance, repair, replacement, and upkeep of the Common Maintenance Areas;

(b) premiums for all insurance policies that the Association is required or permitted to maintain pursuant to the Bylaws;

(c) any deficits remaining from the previous fiscal year of the Association;

(d) reserves for the major maintenance, repair and replacement of the Common Maintenance Areas and the Improvements located thereon for which the Association has maintenance responsibility and such other reasonable contingency reserves as may be established from time to time at the discretion of the Board;

(e) costs related to the preparation, review and update of the reserve study and maintenance plan described in Section 6; and

(f) such other and further costs, expenses, obligations, and liabilities as the Board, in its discretion, may incur for the management, operation, and maintenance of the Property and the Association in accordance with this Declaration and the Bylaws.

5.2.3 Allocation of Regular Assessments. The Regular Assessments shall be allocated equally among all Lots subject to assessment pursuant to Section 5.2.1.

5.3 Special Assessments. In addition to the Regular Assessments, the Association shall have the authority to levy Special Assessments to satisfy any actual or projected deficiency between the expenses of the Association and the amounts realized through Regular Assessments; provided, however, that prior to the Turnover Meeting, any special assessment for capital improvements or additions shall be approved by not less than fifty percent (50%) of the total voting power of the Association, determined on the basis of one vote per Lot notwithstanding the special voting rights of Declarant under Section 3.3.2 hereof. Special Assessments shall be allocated equally among all Lots. Special Assessments are payable as the Board may from time to time determine, but no sooner than thirty (30) days after mailing notice thereof to the Owners.

5.4 Limited Assessments. The Association shall have the authority levy against any Owner a Limited Assessment equal to the costs and expenses incurred by the Association, including legal fees, for corrective action performed pursuant to this Declaration or the Bylaws that is required as a result of the willful or negligent actions or omissions of the Owner or the Owner's tenants, family members, guests, contractors, or invitees, or for a common expense or any part of a common expense that benefits a particular Lot or Lots rather than all the Lots, as determined in the sole discretion of the Board.

5.5 Reserve Assessments. The Association shall have the authority to levy Reserve Assessments necessary to fund the reserve account created under Section 6. The Reserve Assessments for each Lot shall commence upon the sale of the Lot to an Owner other than a Declarant. Reserve Assessments shall not be levied against Declarant-owned Lots. The Reserve Assessments shall be allocated equally among all Lots subject to assessment pursuant to this Section 5.5.

5.6 Statement of Account. Upon the request of an Owner or an Owner's agent, for the benefit of a prospective purchaser, the Board shall make and deliver a written statement of any unpaid Assessments against the Owner's Lot through the date specified in the statement and the purchaser in that case shall not be liable for any unpaid assessments against the Lot that are not included in the statement provided by the Board. The Association is not required to provide a statement of outstanding Assessments if the Association has commenced litigation by filing a complaint against the Owner and the litigation is pending when the statement would otherwise be due.

6. RESERVE ACCOUNT; RESERVE STUDY AND MAINTENANCE PLAN

6.1 Reserve Account. Declarant shall establish a reserve account in the name of the Association for the major maintenance, repair and replacement, in whole or in part, of the Common Maintenance Areas and any Improvements located in, on, or under the Common Maintenance Areas for which the Association has maintenance responsibility pursuant to this Declaration, including exterior painting, if the Common Maintenance Areas include any exterior painted surfaces, that will normally require major maintenance, repair or replacement in more than one (1) year and fewer than thirty (30) years. The reserve account need not include those items that could reasonably be funded from the maintenance fund or for which one or more Owners are responsible for maintenance or replacement under this Declaration or the Bylaws. The reserve account shall be funded by the Reserve Assessments. The reserve funds shall be kept separate from other funds of the Association and may be used only for maintenance, repair, and replacement of the Common Maintenance Areas for which reserves have been established as specified in this Section 6.1. However, after the Turnover Meeting, the Board may borrow funds from the reserve account to meet high seasonal demands on the regular operating funds or to meet other unexpected increases in expenses. Funds borrowed to meet unexpected increases in expenses under this Section shall be repaid from Regular or Special Assessments if the Board has adopted a resolution, which may be an annual continuing resolution, authorizing the

borrowing of funds. Not later than the adoption of the budget for the following year, the Board shall adopt by resolution a written payment plan providing for repayment of the borrowed funds within a reasonable period. The Board shall administer the reserve fund and may adjust the amount of the Reserve Assessments to reflect changes in current maintenance, repair or replacement costs over time as indicated by the reserve study or update (as discussed in Section 6.2 below), and may provide for other reserve items that the Board, in its discretion, deems appropriate. If, after reviewing the reserve study or reserve study update, the Board determines that the reserve account will be adequately funded for the following year, then the Board may vote to reduce or eliminate funding of the reserve account for that particular year. Additionally, following the Turnover Meeting, on an annual basis, the Board, with the approval of all Owners, may elect not to fund the reserve account for the following year regardless of whether or not the reserve account is fully funded. Any funds established for any of the purposes mentioned in this Section shall be deemed to be a reserve fund notwithstanding that it may not be so designated by the Board. The amount of the reserve fund shall constitute an asset of the Association and shall not be refunded or distributed to any Owner. An Owner may treat his or her outstanding share of the reserve fund as a separate item in a sales contract.

6.2 Reserve Study. The Board shall annually conduct a reserve study, or review and update an existing study, of the Common Maintenance Areas and other reserve items set forth in Section 6.1 to determine the requirements of the reserve fund described in Section 6.1. The reserve study shall: (a) identify all items for which reserves are or will be established; (b) include the estimated remaining useful life of each item as of the date of the reserve study; and (c) include for each item, as applicable, an estimated cost of maintenance, repair and replacement at the end of the item's useful life.

6.3 Maintenance Plan. The Board shall prepare a maintenance plan for the maintenance, repair and replacement of all property for which the Association has maintenance, repair or replacement responsibility under this Declaration, the Bylaws or the Planned Community Act. The maintenance plan shall: (a) describe the maintenance, repair and replacement to be conducted; (b) include a schedule for the maintenance, repair and replacement; (c) be appropriate for the size and complexity of the maintenance, repair and replacement responsibility of the Association; and (d) address issues that include, but are not limited to, warranties and the useful life of the items for which the Association has maintenance, repair and replacement responsibility. The Board shall review and update the maintenance plan as necessary.

7. ENFORCEMENT

7.1 Default in Payment of Assessments; Enforcement of Lien. If an Assessment or any other charge levied under this Declaration or the Bylaws is not paid within ten (10) days after its due date, such Assessment or charge shall become delinquent and shall bear interest from the due date until paid at the rate set forth in Section 7.4 below and, in addition, the

Association may exercise any or all of the following remedies as allowed under the Planned Community Act:

7.1.1 Lien. The Association shall have a lien against each Lot for any Assessment levied against the Lot and any fines or other charges imposed under this Declaration or the Bylaws against the Owner of the Lot from the date on which the Assessment, fine or charge is due. The provisions regarding the attachment, notice, recordation and duration of liens established on real property under ORS 94.709 shall apply to the Association's lien. The lien shall be foreclosed in accordance with the provisions regarding the foreclosure of liens under ORS 94.709 through 94.719. The Association, through its duly authorized agents, may bid on the Lot at a foreclosure sale, and may acquire and hold, lease, mortgage and convey the Lot.

7.1.2 Suit or Action. The Association may bring an action to recover a money judgment for unpaid Assessments, fines and charges under this Declaration without foreclosing or waiving the lien described in Section 7.1.1. Recovery on any such action, however, shall operate to satisfy the lien, or the portion thereof, for which recovery is made.

7.1.3 Fines. In addition to any other remedies available to the Association hereunder and subject to the requirements of ORS 94.630(1)(n), the Association shall have the right to impose reasonable fines upon an Owner who violates the Declaration, Bylaws or any rules and regulations of the Association, in the manner and amount the Board deems appropriate in relation to the violation.

7.1.4 Other Remedies. The Association shall have any other remedy available to it by law or in equity.

7.2 Notification of First Mortgagee. Upon the advance written request of the first mortgagee of any Lot, the Board shall notify the first mortgagee of any default in the performance of the terms of this Declaration by the Lot's Owner that is not cured within sixty (60) days.

7.3 Subordination of Lien to First Mortgages. The Association's lien for the Assessments and other charges provided for in this Declaration shall be subordinate to the lien of any first mortgage or deed of trust of record. The sale or transfer of any Lot shall not affect the Association's lien. However, the sale or transfer of a Lot pursuant to the foreclosure of a first mortgage lien or the execution of a deed in lieu of foreclosure of a first mortgage lien shall extinguish the Association's lien with respect to Assessments and other charges that became due prior to such sale or transfer. No sale, foreclosure or transfer of a Lot shall extinguish the personal obligation of the Owner who owned the Lot at the time the Assessment or other charge became due.

7.4 Interest, Expenses and Attorneys' Fees. Any amount not paid to the Association when due in accordance with this Declaration shall bear interest from the due date until paid at a

rate of twelve percent (12%) per annum, or at such other rate as may be established by the Board, but not to exceed the lawful rate of interest under the laws of the State of Oregon. A late charge may be charged for each delinquent Assessment in an amount established from time to time by resolution of the Board. If the Association files a notice of lien, the lien amount shall also include the recording fees associated with filing the notice, and a fee for preparing the notice of lien established from time to time by resolution of the Board. If the Association brings any suit or action to enforce this Declaration, or to collect any money due hereunder or to foreclose a lien, the defaulting Owner shall pay to the Association all costs and expenses incurred by the Association in connection with such suit or action, including a foreclosure title report, and the prevailing party in such suit or action shall recover such amount as the court may determine to be reasonable as attorneys' fees at trial and upon any appeal or petition for review thereof.

7.5 Nonexclusiveness and Accumulation of Remedies. An election by the Association to pursue any remedy provided in this Section 7 for a violation of this Declaration shall not prevent the concurrent or subsequent exercise of any other remedy permitted hereunder. The remedies provided in this Declaration are not exclusive, but shall be in addition to all other remedies, including actions for damages and suits for injunctions and specific performance, that are available under applicable law to the Association. In addition, any aggrieved Owner may bring an action against another Owner or the Association to recover damages or to enjoin, abate, or remedy any violation of this Declaration by appropriate legal proceedings.

8. PROPERTY RIGHTS AND EASEMENTS

8.1 Owners' Use and Occupancy. Except as otherwise expressly provided in this Declaration, the Bylaws, the Plat or any easement, covenant or any other instrument of record, the Owner of a Lot shall be entitled to the exclusive use and benefit of his or her Lot. Declarant and any representative of the Association authorized by the Association may at any reasonable time, upon reasonable notice to the Owner, enter upon any Lot for the purpose of determining whether or not the use of and/or the Improvements on the Lot are then in compliance with this Declaration, the Bylaws, the Design Guidelines or the rules and regulations of the Association. No such entry shall be deemed to constitute a trespass or otherwise create any right of action in the Owner of the Lot. Declarant or the Association may grant or assign easements over or with respect to any Lot to municipalities or other utilities performing utility services and to communications companies.

8.2 Owners' Easements of Enjoyment. Subject to any restrictions contained in this Declaration, the Bylaws, the Plat, the Operation and Maintenance Agreement or any easement, covenant or other instrument of record, every Owner and the Owner's family members, tenants, guests, and invitees shall have a right and easement of enjoyment in and to the Common Areas, which easement shall be appurtenant to and shall pass with the title to every Lot. Use of the Common Areas shall not result in unreasonable disturbance of the Owners and occupants of the

other Lots and shall be subject to the rules and regulations as may be adopted by the Board from time to time pursuant to Section 3.8.

8.3 Title to Common Areas. Declarant shall convey fee title to the Common Areas to the Association free and clear of liens and encumbrances no later than the Turnover Meeting.

8.4 Extent of Owners' Rights. The rights and use of enjoyment in the Property shall be subject to the following easements and all other provisions of this Declaration:

8.4.1 Association's and Owners' Easements. Declarant reserves for itself and grants to the Association and the Board and their duly authorized agents and representatives for the benefit of the Association and all Owners of Lots within the Property the following easements:

(a) An easement under and upon the Common Areas, for installation and maintenance of power, gas, electric, sewer, water and other utility and communication lines and other utility and communication lines and services installed by Declarant or with the approval of the Board;

(b) An easement under and upon the Common Areas, for construction, maintenance, repair, and use of the Common Areas and any Improvements thereon;

(c) The right to have access to the Common Areas and to all Lots as may be necessary for the installation, maintenance, repair, upkeep or replacement of the Common Maintenance Areas, for determining whether or not the use of and/or the Improvements on a Lot are then in compliance with this Declaration, the Bylaws, the Design Guidelines or the rules and regulations of the Association, or to make emergency repairs thereon necessary for the public safety or to prevent damage to the Common Maintenance Areas or to another Lot or Home. In case of an emergency originating in or threatening any Lot or Home or the Common Maintenance Areas, each Owner hereby grants the right of entry to any person authorized by the Board or the Association, whether or not the Owner is present at the time;

(d) Such easements as are necessary to perform the duties and obligations of the Association set forth in this Declaration, the Bylaws and Articles, as the same may be amended or supplemented;

(e) Each Lot shall have an easement over any adjoining Lot as may be required to perform maintenance, repair or reconstruction of the Home located on the benefited Lot. The Owner of the benefited Lot shall be responsible for restoring any damage to the burdened Lot resulting from such use and shall indemnify and hold harmless the owner of the burdened Lot for, from and against any damage, claim, loss or liability resulting from such use; and

(f) Pursuant to ORS 94.733(3), each Lot, Home and all Common Areas shall have an easement over all adjoining Lots, Homes and the Common Areas for the purpose of accommodating any present or future encroachment as a result of engineering errors, construction, reconstruction, repairs, settlement, shifting, or movement of any portion of the Property, or any other similar cause, and any encroachment due to building overhang or projection. There shall be valid easements for the maintenance of the encroaching Lots, Homes and the Common Areas so long as the encroachments shall exist, and except as otherwise provided, the rights and obligations of Owners shall not be altered in any way by the encroachment, nor shall the encroachment be construed to be encumbrances affecting the marketability of title to any Lot, Home or Common Areas.

8.4.2 Declarant's Easements. So long as Declarant owns any Lot, and in addition to any other easements to which Declarant may be entitled, Declarant reserves an easement over, under and across the Common Areas in order to carry out development, construction, sales and rental activities necessary or convenient for the development of the Property or the sale or rental of Lots and for such other purposes as may be necessary or convenient for discharging Declarant's obligations or for exercising any of Declarant's rights hereunder.

8.4.3 Utility and Other Municipal Easements. Declarant or the Association may (and, to the extent required by law, shall) grant or assign easements to municipalities or other utilities performing utility services and to communications companies, and the Association may grant free access thereon to police, fire, and other public officials and to employees of utility companies and communications companies serving the Property.

8.4.4 Villebois Easements. All Common Area parks and trail systems with the Property may be used and enjoyed by the owners and occupants of other portions of Villebois on the same basis as the Owners. Such use shall be subject to all conditions and restrictions set forth in this Declaration, which may be enforced as provided in this Declaration. Such owners and occupants shall pay, indemnify and hold harmless the Association and all Owners for, from and against any damage, loss, claim or liability arising out of such use.

8.4.5 Transfer of the Common Areas. The Association may not sell, transfer or grant a security interest in any portion of the Common Areas unless the Owners holding at least eighty percent (80%) of the total voting power of the Association, including eighty percent (80%) of the votes not held by Declarant, and the Class B Member, if any, approve the sale, transfer or grant of security interest. A sale, transfer or grant of security interest in any portion of the Common Areas in accordance with this Section 8.4.5 may provide that the Common Areas so conveyed shall be released from any restrictions imposed on such Common Areas by this Declaration or the Bylaws. No such sale, transfer, or grant of security interest may, however, deprive any Lot of such Lot's right of access or support without the written consent of the Owner of such Lot.

8.4.6 Authority to Grant Easements and Other Property Interests in Common Areas. The Association may execute, acknowledge and deliver leases, easements, rights of way, licenses, and other similar interests affecting the Common Areas and consent to vacation of roadways within and adjacent to the Common Areas. Except for those matters described in ORS 94.665(4)(b), which the Board may approve without Owner consent, the granting of any interest pursuant to this Section 8.4.6 must be approved by at least seventy-five percent (75%) of the Owners present at a meeting of the Association or with the consent of at least seventy-five percent (75%) of all Owners solicited by any means the Board determines is reasonable. If a meeting is held to conduct the vote, the meeting notice shall include a statement that the approval of the granting of an interest in the Common Areas will be an item of business on the agenda of the meeting.

8.5 Maintenance and Reconstruction Easements. An easement is hereby reserved in favor of the Association and its successors, assigns, contractors, agents, and employees over and across each Lot, for purposes of accomplishing the repair and restoration of the Common Maintenance Areas pursuant to Section 14.

9. GENERAL PROVISIONS FOR AND RESTRICTIONS ON USE OF LOTS

9.1 Each Lot, including the Home and all other Improvements located thereon, shall be maintained in a clean and attractive condition, in good repair, and in such a manner as not to create a fire hazard.

9.2 No Lot shall be used except for residential purposes. No building shall be erected, altered, placed, or permitted to remain on any Lot other than one detached single-family dwelling and a private garage or carport. The Home and any other Improvements on a Lot shall comply with all applicable City height restrictions.

9.3 A greenhouse of noncommercial type, or a garden tool shed or other residential accessory buildings or improvements, may be erected, provided that these types of Improvements are of an acceptable architectural design (as determined by the ACC in accordance with Section 12), shall have the exterior painted and, if such structure is separate from the Home, shall be located within the fenced-in patio or courtyard. Such accessory buildings or improvements shall comply with applicable requirements of the City. All Homes shall provide a garage or carport sufficient to accommodate a minimum of two (2) vehicles.

9.4 All garbage, trash, cuttings, refuse, garbage and refuse containers, oil tanks, clothes lines or other service facilities, stored trailers, and recreational vehicles ("RV's") shall be screened from the view of neighboring Homes and from the Common Areas in a manner approved by the ACC. No RV's shall be visibly parked on a Lot for more than five (5) continuous days in a calendar month. The intent of this provision is to minimize the negative visual impact caused by the visible parking or storage of RV's.

9.5 No noxious or offensive activity shall take place on any Lot, nor shall anything be done or placed on any Lot that interferes with or jeopardizes enjoyment of other Lots or within the Property.

9.6 If any tree, shrub, or other vegetation blocks or substantially obscures the view from any Home, the Owner of the Home may petition the ACC for the trimming, topping, or removal of such tree, shrub, or other vegetation. Upon receipt of such petition, the ACC shall investigate the matter and make a determination in writing whether such view is actually blocked or substantially obscured. If the ACC makes such a determination, the Owner of the offending tree, shrub, or other vegetation shall have ten (10) days from the date the ACC made such determination to elect whether the offending tree, shrub, or other vegetation should be trimmed, topped, or entirely removed. If the offending tree, shrub, or other vegetation is not part of the Association Landscaping, then the Owner of the Lot on which the offending tree, shrub, or other vegetation is located shall bear sole responsibility for the entire cost of such trimming, topping, or removal and shall be solely responsible for obtaining any approvals from the City prior to proceeding with topping or removal.

9.7 The maintenance and replacement (if removed) of trees planted in the rear and side yards of all Lots shall be the responsibility of each Owner; provided, that no tree may be removed without the prior approval of the ACC and any required governmental approvals. Customary trimming and pruning in accordance with professional arboriculture industry standards of trees shall be permitted in the rear and side yards of the Lots without prior approval.

9.8 All fences, walls, hedges, landscaping and other Improvements installed on any Lot shall comply with the City vision clearance requirements and height restrictions. Owners who desire a fence are encouraged to use the same or similar material in style as fencing in the areas near the Property. Prior to construction, design of all fences, hedges or walls must be approved in writing by the ACC.

10. GENERAL RESTRICTIONS ON USE OF PROPERTY

10.1 Common Areas. No person shall construct or reconstruct any Improvements, or alter or refinish any Improvements, make any excavation or fill, make any change in the natural or existing surface drainage, or install a utility line in the Common Areas without the prior written approval of the Board or a duly appointed committee to which the Board has delegated such responsibility and, if required, the City.

10.2 Association Landscaping. No person shall remove, alter, modify or replace any Association Landscaping without the prior written approval of the Board or a duly appointed committee to which the Board has delegated such responsibility and, if required, the City.

11. MAINTENANCE OBLIGATIONS

11.1 Association Maintenance Obligations. The Association shall be responsible for the maintenance, repair, upkeep and replacement of the following Common Maintenance Areas:

(a) Tracts A, C, D, E, G, J and L, as shown on the Plat, including all paved street surfaces, mountable curbs, street signs, lighting, landscaping, irrigation systems and other Improvements located thereon, to be maintained as private streets and/or alleys;

(b) Tracts B, F, H, I, K, M and N, as shown on the Plat, including all landscaping, irrigation systems, sidewalks, lighting and other Improvements located thereon, to be maintained as a recreational areas, parks, open space tracts and/or linear/buffer tracts;

(c) The Association Landscaping;

(d) [Include City-owned park tract to be maintained by Association??];

(e) All entry monument signage for the Property, including any landscaping, lighting and irrigation systems related thereto;

(f) All cluster mailboxes serving the Lots; and

(g) Any other area determined by the Board to be in the interest of the Association to maintain.

The Association shall regularly inspect, maintain, repair and keep the Common Maintenance Areas in good condition and provide for all necessary services and cause all acts to be done which may be necessary or proper to assure the maintenance of the Common Maintenance Areas. The Association shall perform all maintenance obligations set forth in this Declaration or the Bylaws, any maintenance manual provided by Declarant or the maintenance plan described Section 6 above and shall employ all other commonly accepted maintenance practices intended to prolong the life of the materials and construction of Improvements within the Common Maintenance Areas. Additionally, the Association shall be responsible for performing all maintenance required of the "Obligor" under the Operation and Maintenance Agreement.

11.2 Owner's Maintenance Obligations. Except to the extent Association Landscaping is maintained by the Association, each Owner shall maintain his or her Lot and the Improvements located thereon in a clean and attractive condition, in good repair and in such a fashion as not to create a hazard of any kind. Such maintenance shall include, without limitation, painting or staining, repair, replacement and care of roofs, gutters, downspouts, surface water drainage, walks, driveways, landscaping and other exterior Improvements. In addition, each Owner shall keep his or her Lot free of trash and other unsightly materials. The provisions of the preceding sentence include the areas between the property line of any Lot and

the nearest curb, including sidewalks and street trees unless otherwise included in the Association Landscaping.

11.3 Damage or Destruction By Owner. If damage to the Common Maintenance Areas, including any Improvements located thereon, beyond ordinary wear and tear is directly attributable to an Owner or the family members, invitees, licensee, or guest of an Owner, then that Owner shall be responsible for the cost of repairing the damage and the Association may levy a Limited Assessment against the Owner for the repair cost.

12. ARCHITECTURAL CONTROL COMMITTEE

12.1 Creation of Committee. The ACC with the powers and authority described in this Section 12 shall be created as a committee of the Association. The ACC shall have three (3) members, who shall be appointed by Declarant until the Turnover Meeting, after which the ACC members shall be appointed by the Board and shall serve at the pleasure of the Board. Members of the ACC must be Owners. Board members may also serve as ACC members. Appointed members of the ACC shall remain in office until new members are appointed by the Board unless they sooner resign or are disqualified.

12.2 Operations. The members of the ACC shall elect a chairperson, who shall conduct all meetings and shall provide for reasonable notice to each member of the ACC prior to any meeting. The notice shall set forth the time and place of the meeting. Notice may be waived by any member.

12.3 Majority Action. The affirmative vote of a majority of the members of the ACC shall govern its actions and constitute the act of the ACC. A quorum of the ACC shall consist of a majority of the ACC members. The ACC may render its decision only by written instrument setting forth the action taken by the members consenting thereto.

12.4 Review Procedures. If the ACC fails to provide written approval or disapproval of plans and specifications within thirty (30) days after such complete plans and specifications have been submitted, approval of the ACC shall not be required and the related covenants shall be deemed to have been satisfied, unless within twenty (20) days of receipt of the complete plans and specifications, the ACC notifies the Owner of the ACC's intention to extend the approval period by an additional fifteen (15) days to a total of forty-five (45) days after receipt of complete plans and specifications. The ACC shall, from time to time, adopt application forms and rules specifying those requirements necessary to constitute a complete application.

12.5 Approval of Plans by ACC. No Home, building, garage, structure, or other Improvement of any kind or nature, including, without limitation, landscaping, shall be commenced, erected, placed, or altered on any Lot until the construction plans and specifications, and a plan showing the nature, shape, height, materials, and colors, together with detailed plans showing the proposed location of the same on the particular building site and

proposed landscaping has been submitted to and approved in writing by the ACC. All such Improvements and alterations shall be in conformance with the Design Guidelines, the Pattern Book adopted by the City for each area within Villebois and all other applicable governmental laws, ordinances, conditions of approval, rules and regulations. To the extent that the requirements contained in the Pattern Book or in any applicable governmental laws, ordinances, rules and regulations may be in conflict with the Design Guidelines, the more restrictive standard shall apply. Complete plans and specifications for approval by the ACC must include all material required by the rules of the ACC as provided in Section 12.4 above. In no case shall any plans and specifications be accepted for approval that are inconsistent with the requirements of Section 9.2. The ACC may approve or disapprove plans and specifications as submitted or may approve such plans and specifications with specific conditions to such approval.

12.6 Damages Inadequate. Damages are hereby declared to be inadequate compensation for any breach of the covenants, conditions, and restrictions imposed by this Declaration. Declarant, the ACC, or any Owner may, by appropriate proceedings, enjoin, abate, and remedy any such breach and the continuance

12.7 Nuisance. The result of every act of omission or commission or the violation thereof, whether such covenants, conditions, and restrictions are violated in whole or in part, shall constitute a nuisance, and every remedy allowed by law or equity against such nuisance, either public or private, shall be applicable against every such result and may be exercised by Declarant, the ACC, or by any Owner, and may be prohibited or enjoined.

12.8 Non-Waiver. The provisions contained in this Declaration shall inure to the benefit of and be enforceable by Declarant, the ACC, or any Owner, and each of their legal representatives, heirs, successors, and assigns. Failure by Declarant, the ACC or any Owner or their legal representatives, heirs, successors, and assigns to enforce any of the provisions contained herein shall in no event be deemed a waiver of the right to do so thereafter.

12.9 Estoppel Certificate. Within fifteen (15) business days after an Owner delivers a written request to the ACC, the ACC shall provide the Owner with an estoppel certificate executed by a member of the ACC. The estoppel certificate shall state whether or not the Improvements located on the Lot owned by the requesting Owner comply with the provisions of this Declaration. If the estoppel certificate indicates that the Improvements are not in compliance, then it shall identify the specific non-conforming Improvements and set forth with particularity the nature of the noncompliance. Any purchaser in due course from the Owner, and any mortgagee, beneficiary, or secured party having any interest in the Lot and any associated Improvements, may rely on the estoppel certificate with respect to the matters set forth therein, and the estoppel certificate shall be conclusive as between the ACC, all Owners, and such purchaser, mortgagee, beneficiary, or secured party.

12.10 Defenses. The issuance of an estoppel certificate as described in Section 12.9 shall constitute an absolute defense to claims brought against an Owner pursuant to this Section

12 with respect to matters within the purview of the ACC, where the Improvement at issue was in existence at the time of the issuance of the estoppel certificate.

12.11 Liability. The ACC shall use reasonable judgment in accepting or disapproving all plans and specifications submitted to it. Neither the ACC nor any individual ACC member shall be liable to any person for any official act of the ACC in connection with submitted plans and specifications, except to the extent the ACC or any individual ACC member acted with malice or wrongful intent. Approval by the ACC does not necessarily assure approval by any governmental authority. Notwithstanding that the ACC has approved plans and specifications, neither the ACC nor any of its members shall be responsible or liable to any Owner, occupant, builder, developer, or contractor with respect to any loss, liability, claim, or expense which may arise by reason of such approval. Review or analysis of structural, geophysical, engineering, or other similar considerations shall be outside the scope of the ACC's review. Neither the Board, the ACC, or any agent thereof, nor Declarant or any of its members, managers, employees, agents, or consultants, shall be responsible in any way for any defects in any plans or specifications submitted, revised, or approved in accordance with the provisions of this Declaration, nor for any structural or other defects in any work done according to such plans and specifications. The Association shall indemnify, hold harmless, and defend the ACC and its members in any suit or proceeding which may arise by reason of any of the ACC's decisions, provided that the ACC members acted in good faith, within the scope of their authority, and in a manner reasonably believed to be in the best interest of the Association and its Members. The Association shall use reasonable efforts to procure errors and omissions insurance coverage with respect to the ACC members, in accordance with the provisions of the Bylaws.

12.12 Activities of Declarant. This Section 12 shall not apply to the activities of Declarant or its affiliates.

13. DESIGN GUIDELINES

13.1 Paint Requirement. The exterior of any Home erected on a Lot shall be fully completed and painted within one (1) year after construction of the Home has commenced.

13.2 Designs, Materials, and Construction Quality. The external designs and materials of all Homes shall harmonize with each other and shall be reasonably harmonious with those employed on the Homes on other Lots. All auxiliary buildings on a Lot shall be of the same general design and materials as the Home on the Lot. The primary exterior color tone of all buildings shall blend with the natural environment. Bright, unnatural exterior colors are prohibited, except for limited use as trim and accent panels. All Homes, auxiliary buildings, fences, retaining walls, and other Improvements shall comply with the requirements of the Pattern Book and shall be constructed in a good, quality manner in accordance with locally accepted professional building practices.

13.3 Home Size. The ground floor area of each Home, exclusive of one story open porches, garages, and carports, shall not be less than that required by the City Building Code.

13.4 Foundations. All structures erected shall have full, concrete masonry or concrete or wooden piers and piling foundations as approved by the City and designed to accommodate the surrounding terrain. Foundations and exterior walls of all buildings shall be finished in a suitable and customary manner for each such type of building.

13.5 Height Restrictions. All Homes and other Improvements constructed on the Lots shall comply with the applicable City height restrictions. Any height adjustment granted by the City shall be approved by the ACC, unless the ACC determines that the building will unreasonably restrict the view of neighboring Lots.

13.6 Environmental Conditions. Owners shall insure that design and construction of structures in the Property shall properly withstand environmental conditions, including the protection of the flora on the Property.

13.7 Factory Built Homes. All Homes shall be constructed on the Lots. Mobile homes, factory built homes, or manufactured homes shall not be permitted. Notwithstanding the foregoing, panels constructed off-site but assembled on the Lot shall be permitted.

13.8 Additional Design Guidelines. The ACC shall have the authority, but not the obligation, to promulgate and issue, and thereafter to amend from time to time, additional design guidelines supplementing and/or interpreting, but not contradicting, the design guidelines set forth in this Section 13 or elsewhere in this Declaration. Such guidelines shall be supplied in writing to all Owners and shall be fully binding upon all parties as if set forth in this Declaration and shall be applied by the ACC in reviewing and approving or denying proposed improvements or modifications. The ACC shall take into account any proposed building site envelope in order to minimize any impact on neighboring Lots and shall have authority to establish and modify guidelines as necessary or convenient to further this purpose.

13.9 Activities of Declarant. This Section 13 shall not apply to the activities of Declarant or its affiliates.

14. CASUALTY AND CONDEMNATION

14.1 Casualty. The Owner of each Home shall repair, reconstruct, and rebuild the damaged or destroyed portions of his or her Home to substantially the same condition that existed prior to the damage or destruction. In the event of damage to or destruction of the Common Areas or Association Landscaping, the Association shall repair and restore the damaged portion of the Common Areas, unless the holders of at least 75% of the Class A Member voting power of the Association and the Class B Member, if any, agree that the damaged or destroyed portions shall not be repaired or restored. All repair, reconstruction,

rebuilding, or restoration shall begin within six (6) months following the damage or destruction and shall be diligently pursued to completion within twelve (12) months following the damage or destruction, unless work is delayed by causes beyond the reasonable control of the Owner or the Association, as the case may be. If the proceeds of the insurance policies held by the Association are insufficient to fund the full cost of repair and/or restoration of the Common Areas or Association Landscaping, the difference between the amount of such proceeds and such cost shall be charged to all Owners by means of a Special Assessment.

14.2 Condemnation. If any part of the Common Areas are taken by any authority having the power of condemnation or eminent domain (or shall be sold under threat of condemnation), each Owner shall be entitled to notice of such event. The Association shall represent the Owners in negotiations with the condemning authority. The condemnation award shall be applied first to restoration of the Common Areas not taken (unless holders of at least 75% of the Class A Member voting power of the Association and the Class B Member, if any, agree that the remaining Common Areas shall not be restored) and then to such other purposes as the Board may determine in its discretion (including payment to the Owners).

15. SPECIAL DECLARANT RIGHTS

15.1 Declarant shall have the following Special Declarant Rights:

15.1.1 Responsibility and control of the ACC and the Association until the Turnover Meeting, including the right to appoint, remove and replace members of the Board and the ACC.

15.1.2 The right to maintain a sales and management office on the Property.

15.1.3 The right to reserve easement and access rights across the Common Areas for use of future development.

15.1.4 The right to construct Improvements in the Common Areas, whether or not such Improvements are described in this Declaration.

15.1.5 The right to approve amendments to this Declaration and the Bylaws prior to the Turnover Meeting and for a period of ten (10) years thereafter regardless of whether Declarant still owns a Lot.

15.1.6 The right to approve Special Assessments for capital improvements or additions for so long as Declarant owns a Lot.

15.1.7 The right to receive notice of and to attend all Owner meetings and Board meetings for a period of ten (10) years following the Turnover Meeting regardless of whether Declarant still owns a Lot. Meeting notices to Declarant shall be given in the same manner as notices to the Owners; provided, however, that any notice of a Board meeting that is posted at

the Property pursuant to the Bylaws must also be given to Declarant by mail or any other delivery method described in Section 17.4 within the time period prescribed in the Bylaws.

15.1.8 The right to review and make copies of all inspection, maintenance and other records of the Association regardless of whether the Turnover Meeting has occurred or Declarant still owns a Lot.

15.1.9 The rights of Declarant under the Planned Community Act, including but not limited to those under ORS 94.550(21), and all other rights reserved for Declarant elsewhere in this Declaration or in the Bylaws.

16. DISPUTE RESOLUTION.

16.1 Required Procedure. To the fullest extent allowed by law, all claims, controversies, or disputes, whether they are statutory, contractual, tort claims, and/or counterclaims between or among Declarant, Declarant's successors and assigns, the Association, and/or Owner(s) (collectively, the "Parties" and individually, a "Party") which arise out of or are related to the Property, the Lots, the Homes, the Planned Community Act, this Declaration, the Bylaws, the Articles, the Design Guidelines or the rules and regulations of the Association, or which relate to the interpretation or breach of the Planned Community Act, this Declaration or the Bylaws, the Articles, the Design Guidelines or the rules and regulations of the Association (collectively referred to as "Claims") shall be resolved in accordance with the procedures specified herein. Except as otherwise required by the Planned Community Act, the following matters are excluded from this dispute resolution clause and do not constitute Claims: (i) judicial or non-judicial foreclosure or any other action or proceeding to enforce assessments, fines, interest or a trust deed, mortgage, Association lien, or land sale contract; (ii) a forcible entry and detainer action; (iii) actions by the Association or any Owner related to removal of a structure or other condition that violates this Declaration, the Bylaws, the Design Guidelines or any rules and regulations of the Association; (iv) actions for the appointment of a receiver; (v) provisional remedies such as injunctions or the filing of a lis pendens; or (vi) the filing or enforcement of a mechanic's lien. The filing of a notice of pending action (lis pendens) or the application to any court having jurisdiction thereof for the issuance of any provisional process remedy described in Rules 79 through 85 of the Oregon Rules of Civil Procedure (or corresponding federal statutory remedies), including a restraining order, attachment, or appointment of receiver, shall not constitute a waiver of the right to mediate or arbitrate under this Section, nor shall it constitute a breach of the duty to mediate or arbitrate. The proceeds resulting from the exercise of any such remedy shall be held by the Party obtaining such proceeds for disposition as may be determined by an agreement of the Parties pursuant to a mediation or by the arbitration award.

16.2 Negotiated Resolution. The Parties will seek a fair and prompt negotiated resolution of Claims and shall meet at least once to discuss and seek to resolve such Claims, but if this is not successful, all Claims shall be resolved by mediation, in small claims court, or by binding arbitration as set forth in Sections 16.3, 16.4 or 16.5, as applicable.

16.3 Mediation. Prior to mediation of any Claim, the Parties shall endeavor to resolve disputes through the process set forth in Section 16.2 above. All Claims that are not resolved by such process shall be subject to mediation as a condition precedent to arbitration or the filing of a small claims complaint. The request for mediation may be made concurrently with the filing of a demand for arbitration as set forth in Section 16.5 below, but, in such event, mediation shall proceed in advance of arbitration, which shall be stayed pending mediation for a period of sixty (60) days from the date of filing, unless stayed for a longer period by agreement of the parties. All mediation shall be in Clackamas County, Oregon with any dispute resolution program available that is in substantial compliance with the standards and guidelines adopted under ORS 36.175, as it may be amended. The foregoing requirement does not apply to circumstances in which irreparable harm to a Party will occur due to delay or litigation or an administrative proceeding initiated to collect assessments, other than assessments attributable to fines.

16.4 Small Claims. All Claims that have not been resolved by mediation and which are within the jurisdiction of the Small Claims Department of the Circuit Court of the State of Oregon shall be brought and determined there, and all Parties shall be deemed to have waived their right to a jury trial with respect to such Claims.

16.5 Arbitration. Prior to arbitration of any Claim, the Parties shall endeavor to resolve disputes through the processes set forth in Section 16.2, 16.3 and 16.4 above, as applicable. All Claims that have not been resolved by such processes shall be resolved by binding arbitration. Such arbitration shall be conducted by and pursuant to the then effective arbitration rules of Construction Arbitration Services, Inc., or another reputable arbitration service selected by Declarant. If Declarant is not a Party to such dispute, the arbitration service shall be selected by the Board. Any judgment upon the award rendered pursuant to such arbitration may be entered in any court having jurisdiction thereof.

16.6 No Attorneys' Fees. Unless otherwise specifically provided for in this Declaration, the Bylaws or the Planned Community Act, no party in the arbitration, mediation or other proceeding shall be entitled to recover costs or attorneys' fees in connection therewith. To the fullest extent allowed by law and except for Claims in an amount less than or equal to $7,500, no Claim shall be initiated by the Association without approval from the Owners holding seventy-five percent (75%) of the total voting power of the Association. The foregoing vote requirement shall not be required to institute or respond to the following: (i) actions to collect delinquent Assessments, fines or other charges under the Declaration, these Bylaws or any rules and regulations adopted by the Association; (ii) actions initiated by the Association prior to the Turnover Meeting; (iii) actions challenging ad valorem taxation or condemnation proceedings; (iv) actions initiated against any contractor or vendor hired by the Association or supplier of goods and services to the Association; (v) the defense of claims filed against the Association or the assertion of counterclaims in proceedings instituted against it (except for non-mandatory counterclaims); (vi) actions by the Association to appoint a receiver; or (vi) actions to summarily abate, enjoin and remove a structure or condition that violates this Declaration, the Bylaws, the Design Guidelines or any rules and regulations of the Association.

16.7 Confidentiality. The Parties shall keep all discussions of disputes, all settlements and arbitration awards and decisions confidential and shall not disclose any such information, whether directly or indirectly, to any third parties unless compelled to do so by an order of a court of competent jurisdiction. The Parties agree that if a Party breaches its confidentiality obligation then the other Party or Parties to the dispute shall be entitled to seek and obtain any and all equitable remedies, including injunctive relief and specific performance and each Party hereby waives any claim or defense that the other Party has an adequate remedy at law for any such breach and the Parties agree that the aggrieved Party shall not be required to post any bond or other security in connection with any such equitable relief.

17. MISCELLANEOUS

17.1 Term. The covenants, conditions and restrictions of this Declaration shall run for a term of thirty (30) years from the date this Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years each, unless amended, modified or terminated by a vote of the Owners holding at least seventy-five percent (75%) of the total voting power of the Association.

17.2 Amendment and Repeal.

17.2.1 This Declaration, or any provision thereof, as from time to time in effect with respect to all or any part of the Property, may be amended or repealed by the vote or written consent of Owners holding at least seventy-five percent (75%) of the total voting power of the Association and the written consent of Declarant prior to the Turnover Meeting and for a period of ten (10) years thereafter. To the extent any amendment relates to the preservation or maintenance of the Common Areas, such amendment shall also be approved by the zoning administrator of the City.

17.2.2 Upon approval of an amendment as provided herein, the president and secretary of the Association shall execute an instrument amending this Declaration and certifying that the amendment was adopted in accordance with this Declaration and ORS 94.590, which certification shall be properly acknowledged in the manner of acknowledgment of deeds, and the Board, or other duly appointed and authorized persons, shall record the instrument amending this Declaration.

17.2.3 In no event shall an amendment to this Declaration create, limit or diminish any Special Declarant Rights without Declarant's written consent. Additionally, no amendment to this Declaration shall change the boundaries of a Lot, any uses to which a Lot is restricted, the method for determining liability for common expenses, the method for determining the right to common profits or the method of determining voting rights unless the Owners of the affected Lots unanimously consent to the amendment.

17.3 Regulatory Amendments. Notwithstanding the provisions of Section 17.2, until the Turnover Meeting, Declarant shall have the right to amend this Declaration or the Bylaws without any other Owner approval in order to comply with the requirements of any applicable statute, ordinance, regulation or guideline of the Federal Housing Administration, the Veterans Administration, the Farmers Home Administration of the United States, the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Home Loan Mortgage Corporation, any department, bureau, board, commission or agency of the United States or the State of Oregon, or any corporation wholly owned, directly or indirectly, by the United States or the State of Oregon that insures, guarantees or provides financing for a planned community or lots in a planned community.

17.4 Notices. Any notices permitted or required to be delivered as provided herein shall be in writing and may be delivered by: (i) messenger service (or hand delivery); (ii) overnight courier service; (iii) regular U.S. Mail; or (iv) electronic mail, facsimile transmission or any other form of electronic communication acceptable to the Board and permissible under the Planned Community Act. Notices delivered by messenger service (or hand delivery), overnight courier service or regular U.S. Mail shall be sent to each Member's mailing address last appearing on the books of the Association. Notices delivered by facsimile or email shall be sent to the Member's email address or facsimile number last appearing on the books of the Association. Notwithstanding the foregoing, electronic mail, facsimile or other form of electronic communication may not be used to give notice of: (i) failure to pay an assessment; (ii) foreclosure of an Association lien under ORS 94.709; or (iii) an action the Association may take against a Member. Additionally, a Member may decline to receive notice by electronic mail, facsimile or other form of electronic communication by giving written notice thereof to the Board. Notices shall be deemed given on the date the notices are sent in accordance with the procedures outlined herein.

17.5 Right of Enforcement. Except as otherwise provided herein, each Owner of a Lot shall have the right to enforce any or all of the provisions of this Declaration. Additionally, the provisions of this Declaration relating to the preservation and maintenance of the Common Areas shall be deemed to be for the benefit of the City as well as the Association and Owners and the City may enforce such provisions by appropriate proceedings at law or in equity, or may cause such maintenance to be performed, the costs of which shall be a lien upon the Property.

17.6 Remedies Cumulative. Each remedy provided herein is cumulative and not exclusive.

17.7 Joint Owners. If two or more persons share the ownership of any Lot, regardless of the form of ownership, the responsibility of such persons to comply with this Declaration shall be a joint and several responsibility and the act or consent of any one or more of the co-Owners shall constitute the act or consent of the entire ownership interest; provided, however, that if the co-Owners disagree among themselves as to the manner in which any vote or right of consent held by them shall be exercised with respect to a pending matter, any co-Owner may deliver

written notice of such disagreement to the Association, and the vote or right of consent involved shall then be disregarded completely in determining the proportion of votes or consents given with respect to such matter.

17.8 Lessees and Other Invitees. Lessees, invitees, contractors, family members and other persons entering the Property under rights derived from an Owner shall comply with all of the provisions of this Declaration restricting or regulating the Owner's use, improvement or enjoyment of such Owner's Lot and other areas within the Property. The Owner shall be responsible for ensuring such compliance and shall be liable for any failure of compliance by such persons in the same manner and to the same extent as if the failure had been committed by the Owner.

17.9 Non-Waiver. The failure to enforce any of the provisions of this Declaration at any time shall not constitute a waiver of the right to subsequently enforce such provision.

17.10 Restrictions Construed Together. All of the provisions of this Declaration shall be liberally construed together to promote and effectuate the general plan and scheme of the Property.

17.11 Restrictions Severable. Each of the provisions of this Declaration shall be deemed independent and severable, and the invalidity or partial invalidity of any provision or portion thereof shall not affect the validity or enforceability of any other provision.

17.12 Singular Includes Plural. Unless the context requires a contrary construction, the singular shall include the plural and the plural the singular; and the masculine, feminine or neuter shall each include the masculine, feminine and neuter.

17.13 Captions. All captions and titles used in this Declaration are intended solely for convenience of reference and shall not affect that which is set forth in any of the provisions hereof.

(Remainder of Page Intentionally Left Blank;
Signature Page Follows)

IN WITNESS WHEREOF, the undersigned has executed this Declaration as of the date first written above.

DECLARANT: _____, a
_____

By:_____
Name:_____
Title:_____

STATE OF _____)
) ss.
County of_____)

The foregoing instrument was acknowledged before me on this ____ day of _____ 20___, by _____, who is the _____ of _____, a _____, on behalf of said_____.

_____
Notary Public for_____
My Commission Expires:_____

PRELIMINARY DRAFT
TO BE MODIFIED

EXHIBIT A

Legal Description of Property

Lots 1 through 81, inclusive, and Tracts A through N, inclusive, of _____, Clackamas County, Oregon, the plat of which was recorded in the official records of Clackamas County, Oregon on _____, 20___ as Document No. _____.

PRELIMINARY DRAFT
TO BE MODIFIED

EXHIBIT B

Legal Description of Common Areas

Tracts A through N, inclusive, _____, Clackamas County, Oregon, the plat of which was recorded in the official records of Clackamas County, Oregon on _____, 20___ as Document No. _____.

City of WILSONVILLE In OREGON

29799 SW Town Center Loop E
Wilsonville, Oregon 97070
(503) 682-1011
(503) 682-1015 Fax

CERTIFICATION OF ASSESSMENTS AND LIENS

"It is the policy of the City of Wilsonville that no permits of any kind shall either be issued or application processed for any applicant who owes or for any property for which there is any payment which is past due owing to the City of Wilsonville until such time as said sums owed are paid." (Resolution #796)

Project/Property Address: 29500 SW Grahams Ferry Road

Aka Tax Lot(s) Portions of Tax Lots 2800 & 2890 on Map(s) Township 3 South, Range 1 West, Section 15

Applicant: Polygon Northwest Company (Fred Gast)

Address: 109 E. 13th Street, Vancouver, WA 98660

Property Owner: Northwest Wilsonville Properties, LLC

Address: PO Box 230819
Tigard, Oregon 97281-0819

In reference to the above, the City of Wilsonville records show that the following amount is due to the City:

Principal Amnt Due $ Ø ☐Current ☐Non-Current

Comments: No Liens at this time

Dated: 1/16/14

Finance Department: Vera M McCain

(This certification shall be null and void 120 days following the Finance Department date of signature)

Amber Shasky-Bell

From: Stacy Connery
Sent: Monday, June 24, 2013 11:40 AM
To: Amber Shasky; Jaki Hunt; Travis Jansen; Patrick Espinosa
Subject: Plat name approval for "Grande Pointe at Villebois"

FYI - for the former LEC property (395-021)

Stacy Connery, AICP
(503) 828-5052

Pacific Community Design

New Address Effective April 20, 2013
12564 SW Main Street
Tigard, OR 97223

Please consider the environment before printing this e-mail

From: Fuller, Debbie [mailto:DebbieFul@co.clackamas.or.us]
Sent: Monday, June 24, 2013 11:36 AM
To: Stacy Connery
Cc: Thatcher, Sue
Subject: RE: Request for Plat Name Reservation

Hi Stacy,

Your request to reserve the plat name of "Grande Pointe at Villebois" is approved.

Thank you.

Debbie

Debbie Fuller
Engineering/Surveyor
Development Services Bldg.
150 Beavercreek Rd.
Oregon City, OR 97045

ph: 503.742.4492 | fax: 503.742.4481

Our office hours are 7:00 a.m. to 6:00 p.m. ~ We are closed on Fridays

BEGINNING JULY 8, 2013, the Department of Transportation and Development's hours are:
Monday thru Friday, 7:30 AM to 4:30 PM - LOBBY HOURS are Monday through Friday 8:00 AM to 3:00 PM
Our staff hours for appointments are 7:30 AM to 4:00 PM

From: Stacy Connery [mailto:stacy@pacific-community.com]
Sent: Friday, June 21, 2013 3:22 PM
To: Fuller, Debbie
Subject: RE: Request for Plat Name Reservation

Hi Debbie,

Please see the attached request for plat name reservation - "Grande Pointe at Villebois." I hope this one works. Please note the 'e' at the end of the first two words is intended. (This project is required by the City to have a European theme in the project and street names).

Thank you,
Stacy Connery, AICP
(503) 828-5052

Pacific Community Design

New Address Effective April 20, 2013
12564 SW Main Street
Tigard, OR 97223

Please consider the environment before printing this e-mail

From: Fuller, Debbie [mailto:DebbieFul@co.clackamas.or.us]
Sent: Tuesday, June 18, 2013 3:05 PM
To: Stacy Connery
Subject: RE: Request for Plat Name Reservation

Hi Stacy,

It is not so much the name Villebois as it is the first word..i.e. Woods, Meadow, Oak Meadows, and Park are all used several times in the list. Therefore, they would be denied due to the amount of times they are already used. Does that help?

Debbie

Debbie Fuller
Engineering/Surveyor
Development Services Bldg.
150 Beavercreek Rd.
Oregon City, OR 97045

ph: 503.742.4492 | fax: 503.742.4481

Our office hours are 7:00 a.m. to 6:00 p.m. ~ We are closed on Fridays

REQUEST TO RESERVE SUBDIVISION / CONDOMINIUM NAME

Clackamas County Surveyor's Office
150 Beavercreek Rd.
Oregon City, OR 97045
(503) 742-4475 / FAX (503) 742-4481
E-mail address: www.surveyor@clackamas.us

PLAT NAME REQUESTED:
Grande Pointe at Villebois

	TWP/RANGE:	**SECTION#:**	**TAX LOT#(s):**
Location of Plat:	3S/1W	15	2800 & 2890

I understand that if the above name plat is not pending or recorded within two years, the name will be removed from the reserved list.

RESERVED BY: Stacy Connery, Pacific Community Design, Inc.		
DATE: 6/13/13	**TELEPHONE:** (503) 941-9484	**FAX:** (503) 941-9485
EMAIL ADDRESS: stacy@pacific-community.com		
PLAT SURVEYOR: # Travis Jansen, #57751		
NAME OF DEVELOPER: Polygon Northwest Company		
ADDRESS: 109 E. 13th Street		
DATE: 6/21/13	**TELEPHONE:** (360) 695-7700	**FAX:** (360) 693-4442
EMAIL ADDRESS: fred.gast@polygonhomes.com		

APPROVED BY:	**APPROVAL DATE:**

SECTION IV) ZONE CHANGE

SUPPORTING COMPLIANCE REPORT
ZONE CHANGE
PDP 7S

SECTION IVA

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I. CITY OF WILSONVILLE COMPREHENSIVE PLAN

RESIDENTIAL DEVELOPMENT - IMPLEMENTATION MEASURES

IMPLEMENTATION MEASURE 4.1.4

Response: The subject site is part of the *Villebois Village Master Plan*, which is comprised of a variety of housing opportunities of varying densities. There are 13 different housing types within Villebois Village, ranging from apartments to estate lots. Villebois Village includes opportunities for affordable, senior and community housing. Compliance with this Implementation Measures was addressed with the *Villebois Village Master Plan*. The land use plan for the subject area was determined to be consistent with the *Villebois Village Master Plan*.

COMPACT URBAN DEVELOPMENT - IMPLEMENTATION MEASURES

IMPLEMENTATION MEASURE 4.1.6.A

Development in the "Residential - Village" Map area shall be directed by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and subject to relevant Policies and Implementation Measures in the Comprehensive Plan; and implemented in accordance with the Villebois Village Master Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable.

Response: This application is submitted along with a Preliminary Development Plan for PDP 7 South. Specific Area Plan - South Plan Area 2 is compliant with the *Villebois Village Master Plan* when considering proposed Master Plan refinements. Given concurrent submittal, PDP 7 South is consistent with the *Villebois Village Master Plan*. Section I of this report demonstrates compliance with the City of Wilsonville's Comprehensive Plan and Section II demonstrates compliance with Wilsonville's Land Development Code.

IMPLEMENTATION MEASURE 4.1.6.C

The "Village" Zone District shall be applied in all areas that carry the Residential - Village Plan Map Designation.

Response: The application proposes a zone change to "Village" for the subject property area, which is included in the "Residential-Village" Comprehensive Plan Map Designation (Area B).

IMPLEMENTATION MEASURE 4.1.6.D

The "Village" Zone District shall allow a wide range of uses that benefit and support an "urban village", including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses.

Response: This application seeks zone change approval from PF - Public Facilities to V - Village Zone on the southwestern portion of Villebois identified as PDP 7 South. The subject property is approximately 42.76 acres. More than half of the subject site is located within the City's Significant Resource Overlay Zone. The plan for subject property includes single family residential lots and park and open space areas. The

'Introductory Narrative' (see Notebook Section IA) lists the proposed range of residential units which are interspersed to provide a mix of housing. The proposed residential land use and housing types in this area are consistent with those portrayed in the *Villebois Village Master Plan*, which this regulation is intended to implement.

II. CITY OF WILSONVILLE LAND DEVELOPMENT ORDINANCE

SECTION 4.029 ZONING CONSISTENT WITH THE COMPREHENSIVE PLAN

If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the comprehensive plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development.

Response: This application is being requested concurrent with a PDP application and Tentative Plat for the site in conformance with the code. The PDP application materials are provided in Section II of this Notebook and the Tentative Plat application materials are provided in Section III.

SECTION 4.110 ZONING - ZONES

(.01) The following Base Zones are established by this Code:

H. Village, which shall be designated "V" [per Section 4.125 enabling amendments (File No. 02PC08)]

Response: The subject property is within the city limits of Wilsonville. The area has a City of Wilsonville Comprehensive Plan designation of "Residential - Village." The site is currently zoned Public Facilities. This request is for a zone change to "Village," which is permitted within the area designated "Residential - Village" on the Comprehensive Plan Map.

SECTION 4.125 VILLAGE (V) ZONE

(.01) The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan designation as described in the Comprehensive Plan.

Response: The subject property lies within the area designated "Residential - Village" on the Comprehensive Plan Map. This request is for a zone change to "V - Village."

(.02) Permitted Uses

Response: The Preliminary Development Plan (see Notebook Section II) proposes uses that are consistent with the permitted land uses within the Village zone. The PDP (see Notebook Section II) states that the proposed development will create lots for single family residential homes as well as parks and open spaces. These uses are permitted under the Village zone.

(.18) Village Zone Development Permit Process

B. Unique Features and Processes of the Village (V) Zone

2. ...Application for a zone change shall be made concurrently with an application for PDP approval...

Response: The application for a zone change is being made concurrent with an application for PDP approval (see Notebook Section II).

SECTION 4.197 ZONE CHANGES AND AMENDMENTS TO THIS CODE - PROCEDURES.

(.02) In recommending approval or denial of a proposed zone map amendment, the Planning Commission or Development Review Board shall at a minimum, adopt findings addressing the following criteria:

A. That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008 or, in the case of a Planned Development, Section 4.140; and

Response: This application has been submitted in accordance with the procedures set forth in Section 4.140, which requires that:

- *All parcels of land exceeding two (2) acres in size that are to be used for residential, commercial or industrial development, shall, prior to the issuance of building permit: 1. Be zoned for planned development; and*
- *Zone change and amendment to the zoning map are governed by the applicable provisions of the Zoning Sections, inclusive of Section 4.197.*

This zone change application will establish the appropriate zone for this development and will be governed by the appropriate Zoning Sections.

B. That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan Text; and

Response: The subject area is designated Residential Village on the Comprehensive Plan Map. Therefore, application of the Village Zone is consistent with the Comprehensive Plan. Compliance with the Comprehensive Plan is addressed in Section I of this Report.

C. In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text; and

Response: Compliance with Implementation Measure 4.1.4 is addressed in Section I of this Report.

D. That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized; and

Response: The Preliminary Development Plan compliance report and the plan sheets (see Notebook Section II) demonstrate that the existing primary public facilities are available and can be provided in conjunction with the project. Section IIC of this Notebook includes supporting utility and drainage reports. A Traffic Impact Analysis is attached in Notebook Section IID.

E. That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone; and

Response: An amendment to SAP - South Plan Area 2 has been submitted concurrently. SAP - South Plan Area 2 included an SRIR report and Supporting Compliance Report that addressed Section 4.139, indicating the proposed development does not have a significant adverse effect on the SROZ area.

F. That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change; and

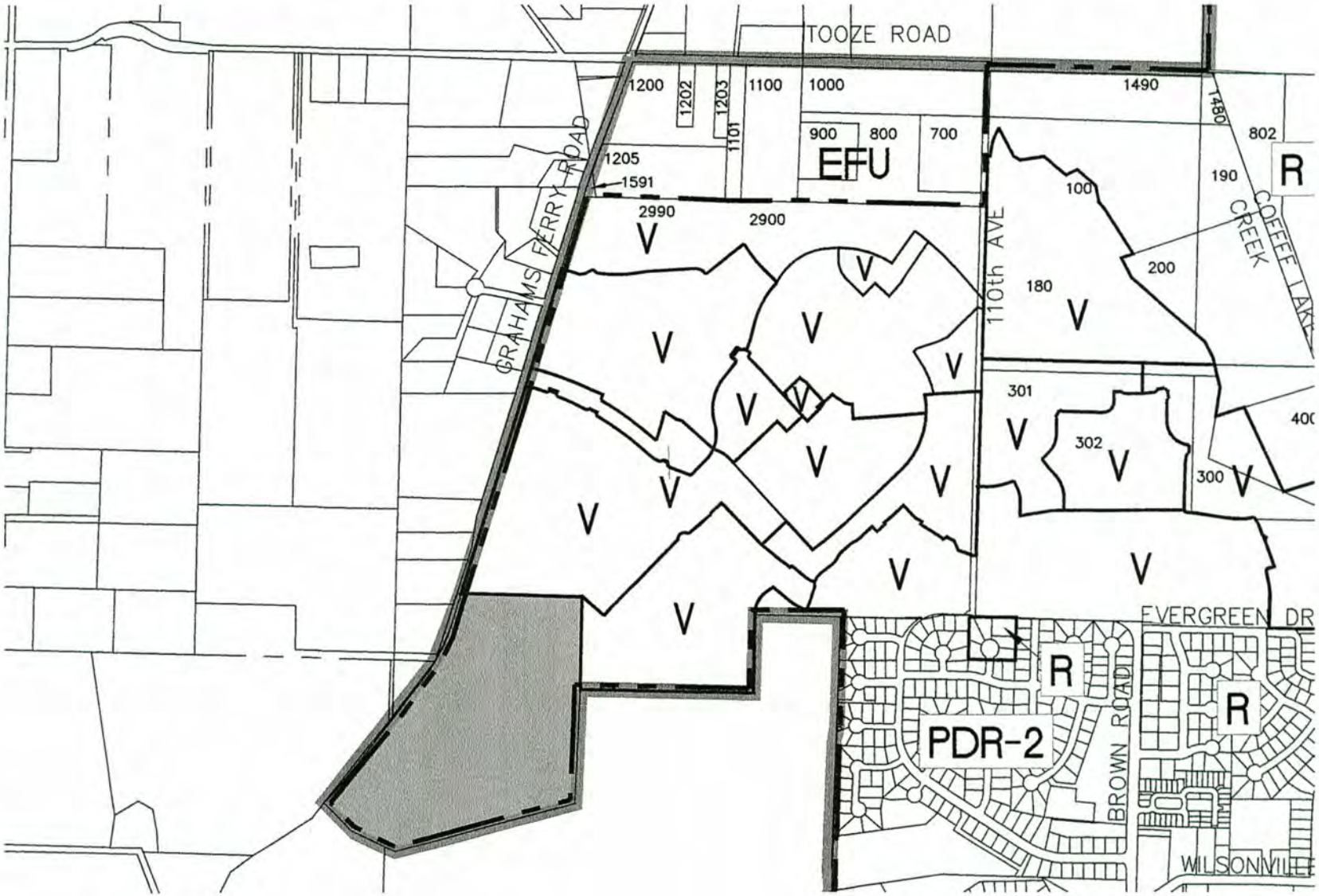
Response: The applicant is committed to a schedule demonstrating that the development of the subject property is reasonably expected to commence within two (2) years of the initial approval of the zone change.

G. That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards.

Response: The proposed development can be developed in compliance with the applicable development standards, as demonstrated by this report and the Preliminary Development Plan (Notebook Section II) and Tentative Plat (Notebook Section III) applications.

III. PROPOSAL SUMMARY & CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable requirements of the City of Wilsonville Planning & Land Development Ordinance for the requested Zone Change. Therefore, the applicant requests approval of this application.



LEGEND

- SUBJECT AREA – PROPOSED VILLAGE (V) ZONE (42.76 AC)
- ZONE LINE
- EXISTING UGB
- EXISTING CITY BOUNDARY
- PF — EXISTING ZONING DESIGNATION

1" = 1000'

PROPOSED ZONE MAP AMENDMENT

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Pacific Community Design

EXHIBIT "A"

July 9, 2013

LEGAL DESCRIPTION Job No. 395-021
Zone Change

A tract of land in the Southwest quarter of Section 15 and the Southeast quarter of Section 16, Township 3 South, Range 1 West of the Willamette Meridian, in the City of Wilsonville, County of Clackamas and the State of Oregon, described as follows:

BEGINNING at the southwest corner of the plat of "Arbor Villebois No. 4";

thence along the southerly plat boundary line of "Arbor Villebois No. 4", South 88°18'41" East, a distance of 804.79 feet to the northwest corner of Lot 181 of "Arbor Villebois No. 3";

thence along the westerly plat boundary line of "Arbor Villebois No. 3", South 01°13'44" West, a distance of 603.57 feet to the southwest corner of the plat of "Arbor Villebois No. 3";

thence leaving said plat boundary line, South 02°51'59" West, a distance of 744.00 feet;

thence South 75°44'45" West, a distance of 266.08 feet;

thence South 75°20'01" West, a distance of 969.44 feet;

thence North 64°57'40" West, a distance of 323.02 feet;

thence North 45°06'47" West, a distance of 256.11 feet to a point on the easterly right-of-way line of SW Grahams Ferry Road;

thence along said easterly right-of-way line, on a 2894.79 foot radius non-tangential curve, concave northwesterly, with a radius point bearing North 44°41'37" West, arc length of 355.76 feet, central angle of 07°02'29", chord bearing of North 41°47'08" East, and chord distance of 355.53 feet to a point of tangency;

thence continuing along said easterly right-of-way line, North 38°15'53" East, a distance of 678.81 feet to a point of tangential curvature;

thence continuing along said easterly right-of-way line, on a 1175.92 foot radius tangential curve to the left, arc length of 426.78 feet, central angle of 20°47'40", chord bearing of North 27°52'03" East, and chord distance of 424.44 feet to a point of tangency;

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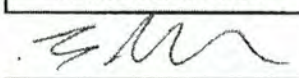
thence continuing along said easterly right-of-way line, North 17°27'18" East, a distance of 199.63 feet to the POINT OF BEGINNING.

Containing 42.75 acres, more or less.

Basis of bearings per plat of "Arbor Villebois No. 4", Clackamas County Survey Records.

REGISTERED
PROFESSIONAL
LAND SURVEYOR



OREGON
JULY 9, 2002
TRAVIS C. JANSEN
57751

RENEWS: 6/30/2015

Pacific Community Design, Inc.
12564 SW Main Street, Tigard, OR 97223 • (T) 503-941-9484 (F) 503-941-9485

EXHIBIT "A"

DRAWN BY: CLL DATE: 7/9/13
REVIEWED BY: TCJ DATE: 7/9/13
PROJECT NO.: 395-021
SCALE: 1"=250'
PAGE 3 OF 3

Pacific Community Design

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SECTION V) TREE REMOVAL PLAN

SUPPORTING COMPLIANCE REPORT
TYPE "C" TREE REMOVAL PLAN/PERMIT
PDP 7S

SECTION VA

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I. WILSONVILLE PLANNING AND LAND DEVELOPMENT ORDINANCE

SECTION 4.610.10. STANDARDS FOR TREE REMOVAL, RELOCATION OR REPLACEMENT

(.01) Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:

A. Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this chapter.

Response: Trees have been inventoried only within the proposed development footprint. Outside of the development footprint, existing trees have not been inventoried and will be retained within proposed parks and open space areas. Proposed tree removal is shown on the *Tree Preservation Plan* (see Notebook Section VC) and described in the Tree Report (see Notebook Section VB). The proposed project includes Significant Resource Overlay Zone (SROZ) areas around the northern, southern, and eastern edges of the site. This report addresses compliance with the standards of WC 4.610 for trees inventoried within and outside of the SROZ areas within the subject site.

B. Preservation and Conservation. No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a principle shall be equal in concern and importance as other design principles.

Response: The preservation of on-site trees was an important factor in the design of PDP 7 South. The site is the location of the former Living Enrichment Center (LEC). To minimize the impacts to existing on-site trees, the proposed development footprint is predominantly located within existing development areas previously impacted by the LEC. As described above, trees have been inventoried within the proposed development footprint. Outside of the development footprint, existing trees not inventoried will be retained within proposed parks and open space areas.

The attached Tree Report (see Notebook Section VB), prepared by Morgan Holen of Morgan Holen & Associates LLC, includes a tree inventory indicating the common and species names, DBH, condition, and recommended treatment of on-site trees. As described above, trees have only been inventoried within the proposed development footprint. Proposed tree removal is shown on the *Tree Preservation Plan* (see Notebook Section VC). The *Tree Preservation Plan* depicts the ranking of existing trees and whether they will be retained, removed, or likely removed.

The intent of the plan is to retain and incorporate the maximum quantity of trees rated "Important" and "Good," per *Villebois Village Master Plan* Chapter 3, Implementation Measure 9. The attached Tree Report (see Section VB) demonstrates that most of the inventoried trees are in "Poor" condition (50%) or "Moderate" condition (28%). Of trees inventoried, 19% are rated in "Good" condition and 3% are rated in "Important" condition. Relative to the total number of trees, a small percentage of "Important" or "Good" trees are proposed for removal. Four (4)

"Important" trees are proposed for removal, which is only 1% of the total number of trees inventoried. There are 101 "Good" trees proposed for removal, which is approximately 12% of the total number of trees inventoried. The determination to remove trees was based upon an assessment of which trees were necessary to remove due to the poor or hazardous health of the tree, whether or not they interfered with the health of other trees, and whether removal is necessary for utility work or the construction of residential dwellings.

C. Development Alternatives. Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements.

Response: As described above, the preservation and conservation of trees was carefully considered during the planning for on-site improvements. The *Tree Preservation Plan* (see Section VC) depicts the trees that are to be retained, to be removed, and likely to be removed during construction. The proposed development is proposed in areas that have been previously disturbed or graded by the Living Enrichment Center where feasible to limit encroachment into the SROZ. Alternative locations for buildings, structures, and site improvements is limited to the proposed area due to the presence of SROZ areas in the north, east, and south portions of the site, which comprises almost half of the gross site area. Tree removal is proposed in areas where it is necessary for site grading for the construction of public utilities, street and sidewalk improvements, and residential lots. *Sheet 5 - Grading and Erosion Control Plan* in Notebook Section IIB depicts the extent of grading activities proposed on the site.

D. Land Clearing. Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements.

Response: The clearing of land will be limited to areas designated as dedicated right-of-way and areas necessary for the construction of streets, utilities, and residential buildings. *Sheet 5 - Grading and Erosion Control Plan* in Notebook Section IIB depicts the extent of grading activities proposed on the site.

E. Residential Development. Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape.

Response: A Pattern Book was developed for the general design of residential structures within SAP - South. An application to amend SAP - South and include Plan Area 2 in the SAP - South Pattern Book has been submitted concurrently. As guided by the Pattern Book, homes are designed to blend into the landscape as much as feasible. The design of homes within this phase will be developed in accordance with the Pattern Book for SAP - South as amended for Plan Area 2. This is assured through review of compliance with the Pattern Book at the time of Building Permit application.

F. Compliance with Statutes and Ordinances. The proposed activity shall comply with all applicable statutes and ordinances.

Response: The development in PDP 7 South will comply with all applicable statutes and ordinances.

G. Relocation or Replacement. The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not removed, in accordance with WC 4.620.10.

Response: No relocation of trees is proposed. Tree replacement will occur in accordance with the necessary provisions from WC 4.620.00 and WC 4.620.10, as addressed below. As shown in the Tree Report prepared by Morgan Holen of Morgan Holen & Associates LLC (see Section VB), the tree mitigation proposed with the planting of street trees and trees within park and open space areas exceeds the required amount of mitigation of one (1) tree replanted per each tree removed.

H. Limitation. Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection.

1. **Necessary for Construction. Where the applicant has shown to the satisfaction of the reviewing authority that removal or transplanting is necessary for the construction of a building, structure or other site improvement and that there is no feasible and reasonable location alternative or design option on-site for a proposed building, structure or other site improvement; or a tree is located too close to an existing or proposed building or structures, or creates unsafe vision clearance.**
2. **Disease, Damage, or Nuisance, or Hazard. Where the tree is diseased, damaged, or in danger of falling, or presents a hazard as defined in WC 6.208, or is a nuisance as defined in WC 6.200 it seq., or creates unsafe vision clearance as defined in this code.**
3. **Interference. Where the tree interferes with the healthy growth of other trees, existing utility service or drainage, or utility work in a previously dedicated right-of-way, and it is not feasible to preserve the tree on site.**
4. **Other. Where the applicant shows that tree removal or transplanting is reasonable under the circumstances.**

Response: Morgan Holen of Morgan Holen & Associates LLC has prepared a Tree Report (see Notebook Section IIG) for Specific Area Plan - South Plan Area 2. The attached Tree Report includes a tree inventory, which indicates the tree common name and species name, DBH, condition, and recommended treatment (i.e. retain or remove). The determination to remove trees was based upon an assessment of what trees were necessary to remove due to the poor or hazardous health of the tree, whether or not they interfered with the health of other tree, and whether removal is necessary for utility work or the construction of residential dwellings.

Sheet 11 - Tree Preservation Plan (see Notebook Section IIB) illustrates trees proposed to be removed, likely to be removed, and to be retained, and their respective rating of important, good, moderate, or poor condition. Where tree removal is "necessary for construction," tree removal is needed for site grading in areas where public utilities, street and sidewalk improvements, linear greens or residential lots are planned (see *Sheet 5 - Grading and Erosion Plan* in Notebook Section IIB). "Important" trees planned for removal are located in areas where tree removal is necessary for the construction of residential lots. The majority of trees with a condition rating of "Good" proposed for removal are located in areas where residential lots or ROW improvements are proposed. In addition, removal of a few trees with a condition rating of "Good" in the southeast corner of the site is necessary for grading for ROW improvements.

I. Additional Standards for Type C Permits.

1. Tree Survey. For all site development applications reviewed under the provisions of Chapter 4 Planning and Zoning, the developer shall provide a Tree Survey before site development as required by WC 4.610.40 , and provide a Tree Maintenance and Protection Plan, unless specifically exempted by the Planning Director or DRB, prior to initiating site development.

Response: The *Tree Preservation Plan* (see Notebook Section VC) and the Tree Report (see Notebook Section VB) provide a tree survey with the location, species and health of each tree in the PDP area.

2. Platted Subdivisions. The recording of a final subdivision plat whose preliminary plat has been reviewed and approved after the effective date of Ordinance 464 by the City and that conforms with this subchapter shall include a Tree Survey and Maintenance and Protection Plan, as required by this subchapter, along with all other conditions of approval.

Response: The final subdivision plat will include this information, as necessary.

3. Utilities. The City Engineer shall cause utilities to be located and placed wherever reasonably possible to avoid adverse environmental consequences given the circumstances of existing locations, costs of placement and extensions, the public welfare, terrain, and preservation of natural resources. Mitigation and/or replacement of any removed trees shall be in accordance with the standards of this subchapter.

Response: *Sheet 6 - Composite Utility Plan* (see Notebook Section IIB) for the site has been designed to minimize the impact upon the environment to the extent feasible given existing conditions. Any trees to be removed due to the placement of utilities will be replaced and/or mitigated in accordance with the provisions in this subchapter.

J. Exemption. Type D permit applications shall be exempt from review under standards D, E, H and I of this subsection.

Response: This application requests a Type C Tree Removal Permit; therefore this standard is not applicable.

SECTION 4.610.40. TYPE C PERMIT

(.01) Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of the subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled.

Response: This application includes a request for approval of a Type "C" Tree Removal Plan for approval by the Development Review Board so that a Tree Removal Permit may be issued. Proposed tree removal is identified on the *Tree Preservation Plan* (see Notebook Section VC).

(.02) The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:

A. A plan, including a topographical survey bearing the stamp and signature of a qualified, registered professional containing all the following information:

1. Property Dimensions. The shape and dimensions of the property, and the location of any existing and proposed structure or improvement.

2. Tree Survey. The survey must include:

a) An accurate drawing of the site based on accurate survey techniques at a minimum scale of one inch (1") equals one hundred feet (100') and which provides a) the location of all trees having six inches (6") or greater d.b.h. likely to be impacted, b) the spread of canopy of those trees, c) the common and botanical name of those trees, and d) the approximate location and name of any other trees on the property.

b) A description of the health and condition of all trees likely to be impacted on the site property. In addition, for trees in a present or proposed public street or road right-of-way that are described as unhealthy, the description shall

include recommended actions to restore such trees to full health. Trees proposed to remain, to be transplanted or to be removed shall be so designated. All trees to remain on the site are to be designated with metal tags that are to remain in place throughout the development. Those tags shall be numbered, with the numbers keyed to the tree survey map that is provided with the application.

c) Where a stand of twenty (20) or more contiguous trees exist on a site and the applicant does not propose to remove any of those trees, the required tree survey may be simplified to accurately show only the perimeter area of that stand of trees, including its drip line. Only those trees on the perimeter of the stand shall be tagged, as provided in "b", above.

d) All Oregon white oaks, native yews, and any species listed by either the state or federal government as rare or endangered shall be shown in the tree survey.

3. Tree Protection. A statement describing how trees intended to remain will be protected during development, and where protective barriers are necessary, that they will be erected before work starts. Barriers shall be sufficiently substantial to withstand nearby construction activities. Plastic tape or similar forms of markers do not constitute "barriers".

4. Easements and Setbacks. Location and dimension of existing and proposed easements, as well as all setback required by existing zoning requirements.

5. Grade Changes. Designation of grade proposed for the property that may impact trees.

6. Cost of Replacement. A cost estimate for the proposed tree replacement program with a detailed explanation including the number, size, and species.

7. Tree Identification. A statement that all trees being retained will be identified by numbered metal tags, as specified in subsection "A," above in addition to clear identification on construction documents.

Response: The *Tree Preservation Plan* (see Notebook Section VC) identifies trees proposed for removal. The *Tree Preservation Plan* provides information required by WC 4.610.40(.02). In addition, Morgan Holen of Morgan Holen & Associates LLC has prepared a Tree Report (see Notebook Section VB) that provides information required by WC 4.610.40(.02).

SECTION 4.620.00. TREE RELOCATION, MITIGATION, OR REPLACEMENT

(.01) Requirement Established. A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal.

Response: No relocation of trees is proposed. Tree replacement will occur in accordance with the necessary provisions from WC 4.620.00 and WC 4.620.10. The tree mitigation proposed with the planting of street trees and trees within park and open space areas exceeds the required amount of mitigation.

(.02) Basis For Determining Replacement. The permit grantee shall replace removed trees on a basis of one (1) tree replaced for each tree removed. All replacement trees must measure two inches (2") or more in diameter. Alternatively, the Planning Director or Development Review board may require the permit grantee to replace removed trees on a per caliper inch basis, based on a finding that the large size of the trees being removed justifies an increase in the replacement trees required. Except, however, that the Planning Director or Development Review Board may allow the use of replacement Oregon white oaks and other uniquely valuable trees with a smaller diameter.

Response: Trees to be removed will be replaced in accordance with this criterion. The attached Tree Report (see Notebook Section VB) indicates that approximately 512 trees are proposed "to be removed" and 20 trees are "likely to be removed," for a total of 532 trees. The *Street Tree / Lighting Plan* (see Notebook Section IIB) shows 251 street trees to be planted, in addition to trees to be planted within parks, all of which are 2" in diameter or greater. The *Mitigation Planting Plan* in the attached SRIR (see Notebook Exhibit IIF) shows 360 trees to be planted within created SROZ areas, plus 387 trees to be planted for SROZ Mitigation, all of which are greater than 2" in diameter. The total number of trees to be planted is at least 611, which exceeds the required amounts of tree mitigation.

(.03) Replacement Tree Requirements. A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.

A. Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture nursery Grade No. 1 or better.

B. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date.

C. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced.

D. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat.

Response: The attached Tree Report (see Notebook Section VB), prepared by Morgan Holen of Morgan Holen & Associates LLC, includes mitigation analysis for planting replacement trees. All trees to be planted will meet the requirements of this standard.

(.04) All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade.

Response: All trees to be planted will meet the requirements of this standard.

(.05) Replacement Tree Location.

A. City Review Required. The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation, and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed

B. Relocation or Replacement Off-Site. When it is not feasible or desirable to relocate or replace trees on-site, relocation or replacement may be made at another location - approved by the city.

Response: Trees will be replaced on-site within the same general area as the trees removed. Tree replacement areas are shown on the *Street Tree / Lighting Plan* (see Notebook Section IIB) and *Mitigation Planting Plan* (see Notebook Section IIF). The *Street Tree / Lighting Plan* (see Notebook Section IIB) shows 251 street trees to be planted, in addition to trees to be planted within parks. The *Mitigation Planting Plan* in the attached SRIR (see Notebook Exhibit IIF) shows 360 trees to be planted within created SROZ areas, plus 387 trees to be planted for SROZ Mitigation.

(.06) City Tree Fund. Where it is not feasible to relocate or replace trees on site or at another approved location in the City, the Tree Removal Permit grantee shall pay into the City Tree Fund, which fund is hereby created, an amount of money approximately the value as defined by this subchapter, of the replacement trees that would otherwise be required by this subchapter. The City shall use the City Tree Fund for the purpose of producing, maintaining and preserving wooded areas and heritage trees, and for planting trees within the City.

Response: All trees removed will be replaced within PDP 7 South on a one-for-one basis. Therefore, payment to the City Tree Fund is not necessary.

(.07) Exception. Tree replacement may not be required for applicants in circumstances where the Director determines that there is good cause to not so require. Good cause shall be based on a consideration of preservation of natural resources, including preservation of mature trees and diversity of ages of trees. Other criteria shall include consideration of terrain, difficulty of replacement and impact on adjacent property.

Response: No exception to the tree replacement requirements is requested with this application.

SECTION 4.620.10. TREE PROTECTION DURING CONSTRUCTION

(.01) Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:

A. All trees required to be protected must be clearly labeled as such.

B. **Placing Construction Materials Near Tree. No person may conduct any construction activity likely to be injurious to a tree designated to remain, including, but not limited to, placing solvents, building material, construction equipment, or depositing soil, or placing irrigated landscaping, within the drip line, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist.**

C. **Attachments to Trees During Construction. Notwithstanding the requirement of WC 4.620.10(1)(A), no person shall attach any device or wire to any protected tree unless needed for tree protection.**

D. **Protective Barrier. Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the developer shall erect and maintain suitable barriers as identified by an arborist to protect remaining trees. Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. Barriers shall be sufficiently substantial to withstand nearby construction activities. Plastic Tape or similar forms of markers do not constitute "barriers". The most appropriate and protective barrier shall be utilized. Barriers are required for all trees designated to remain, except in the following cases.**

1. **Rights-of-ways and Easements.**
2. **Any property area separate from the construction or land clearing area onto which no equipment may venture.**

Response: Trees to be retained will be protected to the greatest extent possible during construction as described in the attached Tree Report (see Notebook Section VB). Additional details about tree protection during construction will be provided with the construction drawings.

SECTION 4.620.20. MAINTENANCE AND PROTECTION STANDARDS

(.01) **The following standards apply to all activities affecting trees, including, but not limited to, tree protection as required by a condition of approval on a site development application brought under this chapter or as required by an approved Tree Maintenance and Protection Plan.**

A. **Pruning activities shall be guided by the most recent version of the ANSI 300 Standards for Tree, Shrub and Other Woody Plant Maintenance.**

B. **Topping is prohibited**

1. **Exception from this section may be granted under a Tree Removal Permit if necessary for utility work or public safety.**

Response: The attached Tree Report (see Notebook Section VB) addresses tree protection standards. If pruning or topping is determined to be necessary in the future, it will occur in accordance with WC 4.620.20.

SECTION 4.640.00. APPLICATION REVIEW PROCEDURES

(.03) Reviewing Authority

B. Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council.

Response: This application includes *Tree Preservation Plans*, located in Notebook Section VC for review by the Development Review Board. The Applicant is requesting that the Development Review Board approve this plan so that a Tree Removal Permit may be issued.

II. CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable criteria of the City of Wilsonville Land Development Ordinance for the requested review of the Type "C" Tree Removal Plan and Permit. Therefore, the applicant respectfully requests approval of this application.

Morgan Holen & Associates, LLC
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Villebois SAP South Plan Area 2 – Wilsonville, Oregon
Tree Maintenance and Protection Plan
September 10, 2013
Revised: January 17, 2014

MHA1314

Purpose

This Tree Maintenance and Protection Plan for the Villebois Specific Area Plan (SAP) South, Plan Area 2 project located in Wilsonville, Oregon, is provided pursuant to City of Wilsonville Development Code, Section 4.610.40. This arborist report describes the existing trees located on the project site, as well as recommendations for tree removal, retention, mitigation, and protection. This report is based on observations made by International Society of Arboriculture (ISA) Certified Arborists Morgan Holen (PN-6145A) and Walter Knapp (PN-0497A) during a site visit conducted on June 4, 2013 and additional site visits by Morgan during July and August 2013. A complete description of individual trees is provided in the enclosed tree inventory data.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by Polygon Northwest Company to verify existing inventory data (from 2007) for individual trees measuring six inches and larger in diameter and to develop a tree maintenance and protection plan for the project. The site is planned for residential development. A site plan was provided by Pacific Community Design illustrating the location of trees and tree survey point numbers, and potential construction impacts.

Visual Tree Assessment (VTA) was performed on individual trees located within and adjacent to the proposed construction area and not across the entire site. VTA is the standard process developed by the ISA whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of potential construction impacts and treatment recommendations include retain, remove, and likely to be removed. Following the inventory fieldwork, we coordinated with Pacific Community Design to discuss and finalize treatment recommendations. Treatment recommendations were modified as needed on December 18, 2013 and January 10 and 17, 2014, based on revised site plans provided by Pacific Community Design.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to this site.

General Description

The Villebois SAP South, Plan Area 2 project site is the former Living Enrichment Center site, a retreat center that closed in 2004. The site is heavily treed, but included a large building in the center of the site with other structures scattered across the site; demolition work is in progress. Much of the forest is relatively natural and will be protected during site development. The individual tree inventory was limited to trees potentially impacted by construction based on the proposed site plan and numerous other trees will be preserved during site development.

The groves are dominated by Douglas-firs (*Pseudotsuga menziesii*) with scattered Oregon white oaks (*Quercus garryana*) which are naturally being outcompeted by the faster growing Douglas-firs. In wetter

portions of the site, red alder (*Alnus rubra*), Scouler's willow (*Salix scouleriana*), and Oregon ash (*Fraxinus latifolia*) are more common. Just thirty non-native and invasive trees were inventoried, including sweet cherry (*Prunus avium*), Siberian elm (*Ulmus pumila*), European white birch (*Betula pendula*), English hawthorn (*Crataegus monogyna*), and Norway maple (*Acer pseudoplatanus*).

The trees are undergoing natural forest stand succession, whereby trees compete with one another and some grow to dominate and suppress others. Trees are most sustainable if retained intact within groups or larger groves, with selective removal of trees for the purposes of construction and because of poor or hazardous condition. In addition, selective removal of Douglas-firs growing directly adjacent to Oregon white oaks could help to enhance the health and viability of oaks in areas where trees will be preserved in their relatively natural condition.

In all, 811 trees measuring 6-inches and larger in diameter were inventoried including 30 tree species. Table 1 provides a summary of the count of trees by species. A complete description of individual trees is provided in the enclosed tree inventory data.

Table 1. Count of Trees by Species – Villebois SAP S Plan Area 2, Wilsonville, OR.

Common Name	Species Name	Total	%
Austrian pine	*Pinus nigra*	1	0.12%
bigleaf maple	*Acer macrophyllum*	20	2.47%
black cottonwood	*Populus trichocarpa*	5	0.62%
cedar	unknown	2	0.25%
copper beech	*Fagus sylvatica*	1	0.12%
dawn redwood	*Metasequoia glyptostroboides*	2	0.25%
Deciduous	unknown	22	2.71%
Douglas-fir	*Pseudotsuga menziesii*	330	40.69%
English hawthorn	*Crataegus monogyna*	1	0.12%
European white birch	*Betula pendula*	4	0.49%
grand fir	*Abies grandis*	3	0.37%
incense-cedar	*Calocedrus decurrens*	4	0.49%
Leyland cypress	*Cupressocyparis leylandii*	1	0.12%
lodgepole pine	*Pinus contorta*	19	2.34%
madrone	*Arbutus menziesii*	2	0.25%
magnolia	*Magnolia* spp.	2	0.25%
Maple	*Acer* spp.	3	0.37%
Norway maple	*Acer platanoides*	1	0.12%
Oregon ash	*Fraxinus latifolia*	19	2.34%
Oregon white oak	*Quercus garryana*	94	11.59%
Pine	*Pinus* spp.	62	7.64%
ponderosa pine	*Pinus ponderosa*	1	0.12%
red alder	*Alnus rubra*	91	11.22%
Scotch pine	*Pinus sylvestris*	2	0.25%
Scouler's willow	*Salix scouleriana*	73	9.00%
Siberian elm	*Ulmus pumila*	6	0.74%
spruce	*Picea* spp.	3	0.37%
sweet cherry	*Prunus avium*	18	2.22%
sweetgum	*Liquidambar styraciflua*	2	0.25%
western redcedar	*Thuja plicata*	17	2.10%
Total		**811**	**100%**

The tree inventory includes 94 (11.6%) Oregon white oaks, but no native yews (*Taxus* spp.) or any species listed by either the state or federal government as rare or endangered were found on the site.

Tree Plan Recommendations

As described in the enclosed tree inventory data, individual trees were assigned a general condition rating as defined by the Villebois Specific Area Plan South Community Elements Book:

P: Poor Condition
M: Moderate Condition
G: Good Condition
I: Important Condition

Of the 811 inventoried trees, 279 (34.4%) trees are recommended for retention and may require special protection during construction, 512 (63.1%) trees are recommended for removal because of poor and hazardous condition or for the purposes of construction, and the remaining 20 (2.5%) trees are recommended for protection but are likely to be removed for the purposes of construction. Table 2 provides a summary of the count of trees by general condition rating and treatment recommendation.

Table 2. Count of Trees by Treatment Recommendation and General Condition Rating.

	General Condition Rating				Total
Treatment Recommendation	**P**	**M**	**G**	**I**	
Retain	109	101	49	20	**279** (34.4%)
Remove	286	121	101	4	**512** (63.1%)
Likely to be Removed	7	9	4	0	**20** (2.50%)
Total	**402** (50%)	**231** (28%)	**154** (19%)	**24** (3%)	**811** (100%)

The 20 trees classified as "likely to be removed", shall be accounted for as removed for the purposes of mitigation, but re-evaluated during construction in terms of long-term sustainability, and retained or removed at that time. These trees will be protected during construction, but if the arborist determines that a tree is not sustainable with construction impacts, the arborist shall submit a brief memorandum to the City documenting the change in condition to seek written authorization to proceed with removal and mitigation. If a tree is protected throughout construction, no mitigation will be required for the tree.

In addition, the enclosed tree data identifies 60 (7.4%) trees recommended for re-evaluation at the time of construction in terms of general condition, hazard potential, and safety. These trees will also be protected during construction, but if the arborist determines that a tree is not sustainable or presents a foreseeable threat of danger, the arborist shall submit a brief memorandum to the City documenting the change in condition to seek written authorization to proceed with removal and provide additional mitigation as necessary.

Where groves of trees will be preserved beyond the limits of the tree inventory, the natural area could be enhanced by removing invasive trees and plants, including English ivy (*Hedera helix*) growing up tree trunks. Relatively speaking however, invasive species are not a widespread problem across the site. Additionally, select trees could be removed to improve growing space for adjacent trees and to provide planting space for native trees, shrubs, and ground covers. Following clearing and once the site has been prepared for construction, the arborist could walk the groves of preserved trees and identify trees in poor or hazardous condition, or those competing with Oregon white oaks, and mark them for removal. A mix of native species could be replanted to increase species, age class, and structural diversity within

the groves. Standing dead trees should remain standing for wildlife habitat where safe to do so. Large woody debris may be left on site following tree removal activities to provide wildlife habitat and soil nutrients; place large wood in direct contact with the ground surface and remove small woody debris from the site to avoid fire hazard.

Mitigation Requirements
All 811 inventoried trees are greater than 6-inches in diameter, including 279 trees recommended for retention with protection throughout construction and 532 trees recommended for removal because of condition and/or construction or are likely to be removed because of construction. Removal of these 532 trees requires mitigation per Section 4.620.00; removed trees shall be replaced on a basis of one tree planted for each tree removed. Therefore, 532 trees measuring at least 2-inch in diameter shall be planted as mitigation for tree removal.

Tree Protection Standards
Trees designated for retention will need special consideration to assure their protection during construction. We highly recommend a preconstruction meeting with the owner, contractors, and project arborist to review tree protection measures and address questions or concerns on site. Tree protection measures include:

- **Fencing.** Trees to remain on site shall be protected by installation of tree protection fencing to prevent injury to tree trunks or roots, or soil compaction within the root protection area, which generally coincides with tree driplines. Fences shall be 6-foot high steel on concrete blocks or orange plastic construction fencing on metal stakes. The project arborist shall determine the exact location and type of tree protection fencing. Trees located more than 30-feet from construction activity shall not require fencing.
- **Tree Protection Zone.** Without authorization from the Project Arborist, none of the following shall occur beneath the dripline of any protected tree:
    1. Grade change or cut and fill;
    2. New impervious surfaces;
    3. Utility or drainage field placement;
    4. Staging or storage of materials and equipment; or
    5. Vehicle maneuvering.

  Root protection zones may be entered for tasks like surveying, measuring, and, sampling. Fences must be closed upon completion of these tasks.
- **Pruning.** Pruning may be needed to provide for overhead clearance and to remove dead and defective branches for safety. The project arborist can help identify where pruning is necessary once trees recommended for removal have been removed and the site is staked and prepared for construction. Tree removal and pruning shall be performed by a Qualified Tree Service.
- **Excavation.** The project arborist shall provide on-site consultation during all excavation activities beneath the dripline of protected trees. Excavation immediately adjacent to roots larger than 2-inches in diameter within the root protection zone of retained trees shall be by hand or other non-invasive techniques to ensure that roots are not damaged. Where feasible, major roots shall be protected by tunneling or other means to avoid destruction or damage. Exceptions can be made if, in the opinion of the project arborist, unacceptable damage will not occur to the tree. Where soil grade changes affect the root protection area, the grade line should be meandered wherever practicable. This will require on-site coordination to ensure a reasonable balance between engineering, construction, and the need for tree protection.

- **Surfacing.** Where surfacing is proposed beneath the dripline of protected trees, coordinate with the project arborist to provide recommendations for adjustments to protection fencing and to monitor construction in the tree protection zone. Avoid excavation and use a modified profile to build up from existing grade (Figure 1). The profile includes a layer of permeable geotextile fabric on the ground surface and crushed rock to raise the grade as needed. Surfacing may include asphalt, concrete, or other materials. If excavation is necessary, work shall be performed under arborist supervision.

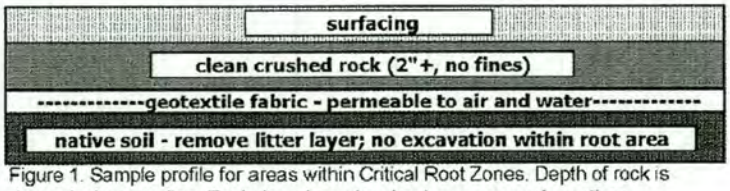

Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

- **Landscaping.** Following construction and where landscaping is desired, apply approximately 3-inches of mulch beneath the dripline of protected trees, but not directly against tree trunks. Shrubs and ground covers may be planted within tree protection areas. If irrigation is used, use drip irrigation only beneath the driplines of protected trees.
- **Quality Assurance.** The project arborist should supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports should be provided to the Client and City on a regular basis throughout construction.

Summary

In summary, 279 trees are recommended for retention with construction, an additional 20 trees will be protected but are likely to be removed during construction, and 512 trees are recommended for removal either because of poor condition or for the purposes of construction. The 512 trees planned for removal will require mitigation on a one-for-one basis and the 20 trees likely to be removed will require mitigation if removed.

Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Villebois SAP South, Plan Area 2 project. Please contact us if you have questions or need any additional information.

Thank you,
Morgan Holen & Associates, LLC

Morgan E. Holen

Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: Tree Inventory Data 1-17-14

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2852	1	Oregon white oak	*Quercus garryana*	20		G	one-sided crown	remove	
2853	2	Oregon white oak	*Quercus garryana*	18		M	one-sided crown	remove	
2854	3	Oregon white oak	*Quercus garryana*	2*14		P		remove	
2855	4	Douglas-fir	*Pseudotsuga menziesii*	15	10	P	thin crown or low live crown ratio	remove	
2856	5	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2857	6	Douglas-fir	*Pseudotsuga menziesii*	15	10	M		remove	
2858	7	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	intermediate crown class	remove	
2859	8	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		retain	
2860	9	Oregon white oak	*Quercus garryana*	20		G		remove	
2861	10	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2862	11	Douglas-fir	*Pseudotsuga menziesii*	18	20	G		remove	
2863	12	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
2865	14	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2866	15	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2867	16	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group	retain	
2868	17	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2869	18	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2870	19	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		remove	
2871	20	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		remove	
2877	21	Douglas-fir	*Pseudotsuga menziesii*	26	16	G	old broken top	retain	
2904	22	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2905	23	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2906	24	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	retain in group	retain	
2907	25	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2908	26	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2911	27	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2913	28	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2912	29	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2914	30	Oregon white oak	*Quercus garryana*	2*18,30	30	P	ivy infestation, not sustainable, hazard to adjacent property	remove	
2915	31	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2909	32	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	extensive ivy, high live crown, re-eval during clearing	retain	yes
2910	33	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	extensive ivy, high live crown, re-eval during clearing	retain	yes
2902	34	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2903	35	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2901	36	Douglas-fir	*Pseudotsuga menziesii*	38	15	G	retain in group	retain	
2892	37	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2891	38	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2890	39	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	retain in group	retain	
2889	40	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2878	41	Douglas-fir	*Pseudotsuga menziesii*	26	16	G	retain in group	retain	
2885	42	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2884	43	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2883	44	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2879	45	Douglas-fir	*Pseudotsuga menziesii*	38	15	G	remove ivy, safety prune	retain	
2880	46	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	retain	
2881	47	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2882	48	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group, remove ivy	retain	
2887	50	Douglas-fir	*Pseudotsuga menziesii*	34	15	G	retain in group	retain	
	50A	Douglas-fir	*Pseudotsuga menziesii*	14	10	M	retain in group	retain	
	50B	Douglas-fir	*Pseudotsuga menziesii*	14	10	M	retain in group	retain	
2886	51	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group	retain	
2888	52	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2916	53	Douglas-fir	*Pseudotsuga menziesii*	15	10	M	retain in group, re-evaluate during clearing	retain	yes
2917	54	Douglas-fir	*Pseudotsuga menziesii*	30	14	M	retain in group, re-evaluate during clearing	retain	yes
2918	55	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	stem decay	retain	yes
2919	56	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	stem decay	retain	yes
2920	57	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	sweep in main stem	retain	yes
2925	58	Oregon white oak	*Quercus garryana*	24		P	excessive lean, re-evaluate during clearing	retain	yes
2924	59	Oregon white oak	*Quercus garryana*	17		P	excessive lean, re-evaluate during clearing	retain	yes
2922	60	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2923	61	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	retain in group	retain	
2921	62	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	retain in group	retain	
2943	78	Douglas-fir	*Pseudotsuga menziesii*	9	7	P	remove suppressed tree for adjacent oak	retain	yes
2942	79	Oregon white oak	*Quercus garryana*	12		M		retain	
2944	81	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	high live crown, retain in group	retain	yes
2947	90	Douglas-fir	*Pseudotsuga menziesii*	11	8	M	thin crown or low live crown ratio	retain	yes
2950	93	Oregon white oak	*Quercus garryana*	12		P	ivy growing into crown, not sustainable	retain	yes
2951	94	Oregon white oak	*Quercus garryana*	30		M	ivy growing into crown, remove ivy and re-evaluate	retain	yes
2952	95	Oregon white oak	*Quercus garryana*	46		M	ivy growing into crown, remove ivy and re-evaluate	retain	yes
2953	96	Oregon white oak	*Quercus garryana*	11		M	ivy growing into crown, remove ivy	retain	
2954	97	Douglas-fir	*Pseudotsuga menziesii*	22	12	G	ivy growing into crown, remove ivy	retain	
2956	99	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	thin crown or low live crown ratio	remove	
3001	100	Douglas-fir	*Pseudotsuga menziesii*	20	11	P	decay, broken top	remove	
2959	101	Douglas-fir	*Pseudotsuga menziesii*	13	9	M		remove	
2970	102	Douglas-fir	*Pseudotsuga menziesii*	31	14	G		retain	yes
2971	103	Douglas-fir	*Pseudotsuga menziesii*	22	14	M		retain	
2969	110	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2968	111	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
2967	112	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2966	113	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	thin crown or low live crown ratio	remove	
2965	114	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2964	115	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2963	116	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2962	117	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2961	118	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	thin crown or low live crown ratio	remove	
2960	119	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
2978	121	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	thin crown or low live crown ratio	remove	
	121B	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		remove	
2974	122	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
2976	124	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2984	125	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		remove	
2985	126	Douglas-fir	*Pseudotsuga menziesii*	20	11	M		remove	
2983	127	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2979	128	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3009	133	Douglas-fir	*Pseudotsuga menziesii*	20	18	G		remove	
3008	134	Douglas-fir	*Pseudotsuga menziesii*	14	18	G		remove	
3007	135	Douglas-fir	*Pseudotsuga menziesii*	18	18	G		remove	
3000	136	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3002	137	bigleaf maple	*Acer macrophyllum*	18	20	M		remove	
2989	139	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
2987	141	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	broken top	remove	
2986	142	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	dead	remove	
3004	143	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3006	144	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3005	145	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
2993	147	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
2991	148	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
2996	149	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2999	151	sweet cherry	*Prunus avium*	12		P	invasive species	remove	
2995	152	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
2998	153	bigleaf maple	*Acer macrophyllum*	3*11		P		remove	
2955	156	Oregon white oak	*Quercus garryana*	12		M		remove	
3019	157	Douglas-fir	*Pseudotsuga menziesii*	17	20	M	thin crown or low live crown ratio	remove	
3022	158	Douglas-fir	*Pseudotsuga menziesii*	16	20	M	thin crown or low live crown ratio	likely to be removed	yes
3023	159	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	likely to be removed	yes
3024	160	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	dead	likely to be removed	yes
3020	161	Oregon white oak	*Quercus garryana*	14	8	P	structural defects; small, asymmetrical live crown	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3021	162	Douglas-fir	*Pseudotsuga menziesii*	12	20	P	suppressed	remove	
3025	163	Douglas-fir	*Pseudotsuga menziesii*	24	20	G	remove ivy; safety prune	remove	
3026	164	Douglas-fir	*Pseudotsuga menziesii*	19	20	G		retain	
3027	165	Douglas-fir	*Pseudotsuga menziesii*	30	20	G		retain	
3028	166	Oregon white oak	*Quercus garryana*	14	20	M	structural defects	likely to be removed	
3029	167	black cottonwood	*Populus trichocarpa*	26		M	inherent species limitations	likely to be removed	yes
3018	168	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	sweep in main stem	remove	
3017	169	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		remove	
3016	170	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		remove	
3031	172	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3044	174	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
3043	175	Douglas-fir	*Pseudotsuga menziesii*	12	8	G		remove	
3040	179	Scouler's willow	*Salix scouleriana*	18		P		remove	
3039	180	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	pitch seam	remove	
3042	181	bigleaf maple	*Acer macrophyllum*	24		P		remove	
3041	182	bigleaf maple	*Acer macrophyllum*	60		P		remove	
3036	183	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
2792	197	Oregon white oak	*Quercus garryana*	41	30	I	codominant stems	retain	
2793	198	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2794	199	Douglas-fir	*Pseudotsuga menziesii*	14	9	M	high live crown; retain in group	retain	
2795	200	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
2796	201	Douglas-fir	*Pseudotsuga menziesii*	13	9	M	retain in group	retain	
2798	203	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group; remove ivy	retain	
2799	204	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	retain in group	retain	
3109	298	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	remove for street construction	remove	
3110	299	Scouler's willow	*Salix scouleriana*	12		P		remove	
3111	300	Douglas-fir	*Pseudotsuga menziesii*	13	9	G		remove	
3112	301	black cottonwood	*Populus trichocarpa*	20		M	inherent species limitations; hazard potential	retain	yes
3113	302	Scouler's willow	*Salix scouleriana*	14		P		remove	
3114	303	red alder	*Alnus rubra*	12		M	species limitations	remove	
3118	307	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
3119	308	Douglas-fir	*Pseudotsuga menziesii*	17	10	G		retain	
3324	325	Siberian elm	*Ulmus pumila*	12		P		remove	
3325	326	Siberian elm	*Ulmus pumila*	16		P		remove	
3327	327	Siberian elm	*Ulmus pumila*	16		P		remove	
3133	328	Douglas-fir	*Pseudotsuga menziesii*	32		P	stressed, declining	retain	yes
3344	332	black cottonwood	*Populus trichocarpa*	20		P		remove	
3345	333	red alder	*Alnus rubra*	8		P		remove	
3332	334	Douglas-fir	*Pseudotsuga menziesii*	16	18	P	chlorotic	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3329	335	pine	*Pinus spp.*	30		P	multi-stem	remove	
3320	336	Siberian elm	*Ulmus pumila*	14		P		remove	
3328	338	western redcedar	*Thuja plicata*	18		G		remove	
3323	341	Siberian elm	*Ulmus pumila*	12		P		remove	
3322	342	Siberian elm	*Ulmus pumila*	12		P	invasive species	remove	
	353	Douglas-fir	*Pseudotsuga menziesii*	8		M		remove	
3184	354	Oregon white oak	*Quercus garryana*	28	25	I		retain	
	361	Scouler's willow	*Salix scouleriana*	12		P	decay	retain	yes
3181	376	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	377	Oregon white oak	*Quercus garryana*	16		M	one-sided crown; retain in group	retain	
	382	Douglas-fir	*Pseudotsuga menziesii*	26	14	M	basal swelling; retain in group	retain	
	383	Douglas-fir	*Pseudotsuga menziesii*	22	14	M	retain in group	retain	
3180	384	lodgepole pine	*Pinus contorta*	12		P		likely to be removed	yes
3179	385	lodgepole pine	*Pinus contorta*	8		P		retain	yes
3178	386	lodgepole pine	*Pinus contorta*	14		P		retain	yes
	387	Oregon white oak	*Quercus garryana*	28		I	safety prune	retain	
	394	Oregon white oak	*Quercus garryana*	28		I	safety prune	retain	
	400	Douglas-fir	*Pseudotsuga menziesii*	22		M		remove	
3340	401	red alder	*Alnus rubra*	12		P		remove	
3337	402	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		remove	
3338	403	Douglas-fir	*Pseudotsuga menziesii*	16	12	G		remove	
3341	404	red alder	*Alnus rubra*	12		P		remove	
3342	405	red alder	*Alnus rubra*	8		P		remove	
3343	406	red alder	*Alnus rubra*	10		P		remove	
3352	408	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3353	409	Oregon white oak	*Quercus garryana*	14	20	G		remove	
	410	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3331	411	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3326	412	cedar	*unknown*	8		P	poor condition	remove	
3336	414	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	416	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3347	417	red alder	*Alnus rubra*	8		P		remove	
3363	418	Douglas-fir	*Pseudotsuga menziesii*	24		P	pitch seam; one-sided	likely to be removed	
3364	420	Oregon white oak	*Quercus garryana*	18		G		retain	
3367	421	Oregon white oak	*Quercus garryana*	16		M	narrow crown angle, limited response potential	retain	
3365	422	Douglas-fir	*Pseudotsuga menziesii*	24		G		likely to be removed	
3362	423	Oregon white oak	*Quercus garryana*	2*20		M		likely to be removed	
3366	426	Douglas-fir	*Pseudotsuga menziesii*	22		M	one-sided	likely to be removed	
3334	427	Douglas-fir	*Pseudotsuga menziesii*	22	12	P	old broken top	remove	

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3333	428	red alder	*Alnus rubra*	14		P		remove	
3348	430	red alder	*Alnus rubra*	10		P		remove	
3349	431	red alder	*Alnus rubra*	8		P		remove	
3351	433	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3357	434	Douglas-fir	*Pseudotsuga menziesii*	18		G		remove	
3346	435	Scouler's willow	*Salix scouleriana*	12		P		remove	
3399	437	Douglas-fir	*Pseudotsuga menziesii*	34	15	G	open grown tree	remove	
3390	440	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3404	448	Douglas-fir	*Pseudotsuga menziesii*	16	10	G	edge grown	retain	yes
3393	450	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3398	453	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3397	454	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3409	456	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	one-sided crown; re-evaluate during clearing	retain	yes
3408	457	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	basal decay	retain	yes
3412	458	Douglas-fir	*Pseudotsuga menziesii*	14	8	M		remove	
3406	459	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
3402	460	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		retain	
3384	461	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3405	462	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	overtopped	retain	yes
3407	463	Oregon white oak	*Quercus garryana*	14		P	not suitable for retention with adjacent removal	retain	yes
3403	464	bigleaf maple	*Acer macrophyllum*	8		P		retain	yes
3401	466	Douglas-fir	*Pseudotsuga menziesii*	26	13	G	old broken top	retain	yes
3413	467	Douglas-fir	*Pseudotsuga menziesii*	24	13	M	stand grown	remove	
3392	468	Oregon white oak	*Quercus garryana*	20	25	P	overtopped	remove	
3400	469	Oregon white oak	*Quercus garryana*	16	20	M	one-sided crown	remove	
3413	472	Douglas-fir	*Pseudotsuga menziesii*	24	13	M	high live crown	remove	
3391	473	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3387	474	Douglas-fir	*Pseudotsuga menziesii*	12	8	G		remove	
3411	475	Oregon ash	*Fraxinus latifolia*	8		P		remove	
3389	476	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3388	477	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3385	478	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3386	479	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3417	480	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3419	481	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3421	482	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
3422	483	Douglas-fir	*Pseudotsuga menziesii*	48	16	G		remove	
3420	484	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3448	485	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3450	486	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		retain	
3446	487	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3447	488	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		retain	yes
3455	489	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		retain	yes
3451	490	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3452	491	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		remove	
3453	492	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	remove	
3454	493	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
3439	494	Douglas-fir	*Pseudotsuga menziesii*	12	8	M	very high live crown	retain	yes
3462	495	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3471	497	Douglas-fir	*Pseudotsuga menziesii*	10		P	overtopped	retain	
3463	498	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3460	499	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3455	500	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		remove	
3456	501	Oregon white oak	*Quercus garryana*	24	25	P	small asymmetrical live crown	remove	
3457	502	Oregon white oak	*Quercus garryana*	36	35	M	poor structure; re-evaluate during clearing	retain	yes
3458	503	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	suppressed	remove	
3459	504	Oregon white oak	*Quercus garryana*	6		P		remove	
3484	505	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	remove for construction	remove	
3483	506	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
3461	507	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	retain in group	remove	
3465	508	Oregon white oak	*Quercus garryana*	24	30	P	narrow crown angle, limited response potential	remove	
3468	509	Oregon white oak	*Quercus garryana*	36	35	I		retain	
3467	510	Oregon white oak	*Quercus garryana*	12		G		retain	
3470	511	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3464	512	Douglas-fir	*Pseudotsuga menziesii*	12		M		remove	
3466	513	Douglas-fir	*Pseudotsuga menziesii*	12		M		remove	
	514	Oregon white oak	*Quercus garryana*	12		M		retain	
3485	515	sweet cherry	*Prunus avium*	6		P		remove	
3481	516	Douglas-fir	*Pseudotsuga menziesii*	36	15	G	open grown	remove	
3486	518	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	suppressed	remove	
3478	519	Douglas-fir	*Pseudotsuga menziesii*	27	13	G		remove	
3479	520	madrone	*Arbutus menziesii*	14		M		remove	
3477	521	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
3487	522	sweet cherry	*Prunus avium*	6		P		remove	
3416	523	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
3418	524	red alder	*Alnus rubra*	10		P		remove	
3415	525	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	poor height to diameter ratio	remove	
3472	526	Oregon white oak	*Quercus garryana*	2*16	35	P	overtopped	retain	

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3480	529	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3424	530	Douglas-fir	*Pseudotsuga menziesii*	14	9	G	leans to development	retain	yes
3482	532	black cottonwood	*Populus trichocarpa*	24		P		remove	
3185	535	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		remove	
3424	536	Oregon white oak	*Quercus garryana*	8		P	dead	retain	yes
3444	539	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		retain	
3443	542	Douglas-fir	*Pseudotsuga menziesii*	18	11	M		retain	
3441	546	Douglas-fir	*Pseudotsuga menziesii*	20	11	P		retain	
3440	547	Douglas-fir	*Pseudotsuga menziesii*	16	6	G	not suitable for retention with adjacent removal	retain	
	548	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		retain	
3436	549	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		retain	
3437	550	Douglas-fir	*Pseudotsuga menziesii*	26	13	M	re-evaluate during clearing	retain	
3442	551	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	not suitable for retention with adjacent removal	retain	
3438	552	Douglas-fir	*Pseudotsuga menziesii*	12	10	M	re-evaluate during clearing	retain	
3512	553	Oregon white oak	*Quercus garryana*	2*24		I		remove	
3506	554	Scouler's willow	*Salix scouleriana*	6		P		remove	
3505	555	Scouler's willow	*Salix scouleriana*	10		P		remove	
3517	556	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
	557	maple	*Acer spp.*	8		P		remove	
	558	red alder	*Alnus rubra*	6		P		remove	
3521	559	Douglas-fir	*Pseudotsuga menziesii*	10	8	M	one-sided crown	remove	
3514	560	Scouler's willow	*Salix scouleriana*	16		P		remove	
3527	561	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	562	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	overtopped	remove	
3529	563	red alder	*Alnus rubra*	12		P		remove	
3535	564	red alder	*Alnus rubra*	12		P		remove	
3536	565	red alder	*Alnus rubra*	10		P		remove	
3537	566	red alder	*Alnus rubra*	12		P	lean	remove	
3530	567	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3515	568	red alder	*Alnus rubra*	10		P		remove	
3534	569	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
3533	570	red alder	*Alnus rubra*	8		P		remove	
3533	570	red alder	*Alnus rubra*	8		M	lean	remove	
3526	571	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3522	572	Scouler's willow	*Salix scouleriana*	10		P		remove	
3516	573	Oregon white oak	*Quercus garryana*	24		M	narrow crown angle, limited response potential, dead branches	remove	
3531	574	Scouler's willow	*Salix scouleriana*	6*10		P	decay	remove	
3525	575	red alder	*Alnus rubra*	6		P		remove	
3524	576	red alder	*Alnus rubra*	6		P		remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3523	577	Scouler's willow	*Salix scouleriana*	8		P		remove	
3532	578	Oregon white oak	*Quercus garryana*	2*8		P		remove	
3528	579	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	580	red alder	*Alnus rubra*	6		P		remove	
3510	581	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3509	582	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
3508	583	Oregon white oak	*Quercus garryana*	42		P	very poor structure	remove	
3507	584	Scouler's willow	*Salix scouleriana*	14		P		remove	
3503	585	Oregon white oak	*Quercus garryana*	2*22		I		remove	
3502	586	Oregon white oak	*Quercus garryana*	18		G	one-sided crown	remove	
3499	587	red alder	*Alnus rubra*	16		M	species limitations	remove	
3500	588	Scouler's willow	*Salix scouleriana*	20		P	decay, species limitations	remove	
	589	red alder	*Alnus rubra*	10		P		remove	
3492	590	Oregon ash	*Fraxinus latifolia*	10		P		remove	
3491	591	Scouler's willow	*Salix scouleriana*	10		P		remove	
	592	red alder	*Alnus rubra*	6		P		remove	
	593	red alder	*Alnus rubra*	10		P		remove	
	594	red alder	*Alnus rubra*	6		P		remove	
	595	red alder	*Alnus rubra*	8		P		remove	
3494	596	Scouler's willow	*Salix scouleriana*	16		P		remove	
3493	597	red alder	*Alnus rubra*	10		P		remove	
3511	598	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped	remove	
	599	Douglas-fir	*Pseudotsuga menziesii*	16		M		remove	
3489	600	sweet cherry	*Prunus avium*	10		P	invasive species	remove	
3488	601	bigleaf maple	*Acer macrophyllum*	16		M		remove	
	602	Douglas-fir	*Pseudotsuga menziesii*	8	7	G		remove	
	603	red alder	*Alnus rubra*	8		P		retain	
	604	Oregon white oak	*Quercus garryana*	14		M	one-sided crown	retain	
	609	Scouler's willow	*Salix scouleriana*	10		P	decrepit	remove	
3555	610	incense-cedar	*Calocedrus decurrens*	8		M		remove	
3556	611	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
3566	612	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3565	613	red alder	*Alnus rubra*	6		P		remove	
3564	614	Douglas-fir	*Pseudotsuga menziesii*	14	9	P		remove	
3554	615	Douglas-fir	*Pseudotsuga menziesii*	8	7	M		remove	
3563	616	lodgepole pine	*Pinus contorta*	12		P		remove	
	617	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped, low vigor	remove	
	618	Oregon white oak	*Quercus garryana*	24	25	I	no major defects; coordinate with arborist prior to working beneath dripline	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	619	Scouler's willow	*Salix scouleriana*	16		P	decrepit	remove	
	620	incense-cedar	*Calocedrus decurrens*	14		P	canker	remove	
	621	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	mechanical damage	remove	
	622	Douglas-fir	*Pseudotsuga menziesii*	18	11	P	mechanical damage	remove	
	623	Oregon ash	*Fraxinus latifolia*	16		M	broken top, decay; 623 & 624 are one tree	remove	
	625	Oregon white oak	*Quercus garryana*	24	25	I	no major defects; coordinate with arborist prior to working beneath dripline	retain	
	626	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
	627	bigleaf maple	*Acer macrophyllum*	10		P	lean, overtopped	remove	
	628	Douglas-fir	*Pseudotsuga menziesii*	16	10	G		remove	
	629	Douglas-fir	*Pseudotsuga menziesii*	9	7	P		remove	
	630	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
	631	Douglas-fir	*Pseudotsuga menziesii*	25	13	G		remove	
	632	madrone	*Arbutus menziesii*	6		P		remove	
3571	633	red alder	*Alnus rubra*	8		P		remove	
3561	635	European white birch	*Betula pendula*	6		P	invasive species	remove	
3560	636	bigleaf maple	*Acer macrophyllum*	12		P		remove	
3553	637	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3552	638	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
3551	639	dawn redwood	*Metasequoia glyptostroboides*	6		M		remove	
3559	640	incense-cedar	*Calocedrus decurrens*	8		M		remove	
3558	641	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3557	642	spruce	*Picea spp.*	10		P		remove	
3549	643	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		remove	
3550	644	red alder	*Alnus rubra*	10		P	decay	remove	
3548	645	incense-cedar	*Calocedrus decurrens*	12		P	multi-stem	remove	
3547	646	grand fir	*Abies grandis*	8		P		remove	
	647	Douglas-fir	*Pseudotsuga menziesii*	6	6	P	overtopped	remove	
3573	648	Oregon white oak	*Quercus garryana*	8		G		remove	
3572	649	red alder	*Alnus rubra*	6		P		remove	
3570	650	red alder	*Alnus rubra*	8		P		remove	
3569	651	bigleaf maple	*Acer macrophyllum*	6		P		remove	
3567	652	lodgepole pine	*Pinus contorta*	6	6	P		remove	
3568	653	red alder	*Alnus rubra*	6		M		remove	
	654	lodgepole pine	*Pinus contorta*	14		P		remove	
	655	Douglas-fir	*Pseudotsuga menziesii*	24	18	G	no major defects; coordinate with arborist prior to working beneath dripline	retain	
3545	656	western redcedar	*Thuja plicata*	6		P		remove	
3543	657	Scouler's willow	*Salix scouleriana*	6		P		remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
3542	658	Douglas-fir	*Pseudotsuga menziesii*	12	8	P		remove	
3541	659	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
3538	660	Douglas-fir	*Pseudotsuga menziesii*	26	13	G	open grown	remove	
3539	661	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
	662	Leyland cypress	*Cupressocyparis leylandii*	18		P	multi-stem, poor structure	likely to be removed	
	663	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	664	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
	665	Douglas-fir	*Pseudotsuga menziesii*	14	9	G		remove	
	666	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		remove	
	667	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
3546	668	pine	*Pinus spp.*	12		P		remove	
3540	669	Douglas-fir	*Pseudotsuga menziesii*	2*24	15	P	codominant	remove	
3544	670	Scouler's willow	*Salix scouleriana*	8		P		remove	
	671	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	672	Scouler's willow	*Salix scouleriana*	48		P	decrepit	retain	
	673	Douglas-fir	*Pseudotsuga menziesii*	10		M		retain	
	674	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	675	bigleaf maple	*Acer macrophyllum*	6		P		retain	
	676	deciduous	*unknown*	8		P		likely to be removed	
	678	pine	*Pinus spp.*	12		M		remove	
	679	red alder	*Alnus rubra*	6		P		retain	
	680	pine	*Pinus spp.*	14		M		remove	
	681	red alder	*Alnus rubra*	12		P		retain	
	682	pine	*Pinus spp.*	10		M		remove	
	683	pine	*Pinus spp.*	18		M		remove	
	684	pine	*Pinus spp.*	8		M		remove	
	685	pine	*Pinus spp.*	10		M		remove	
	686	pine	*Pinus spp.*	14		M		remove	
	687	western redcedar	*Thuja plicata*	12		M		likely to be removed	
	689	pine	*Pinus spp.*	8		M		remove	
	690	pine	*Pinus spp.*	10		M		remove	
	691	pine	*Pinus spp.*	8		M		remove	
	692	pine	*Pinus spp.*	10		M		remove	
	693	pine	*Pinus spp.*	12		M		remove	
	694	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	695	sweet cherry	*Prunus avium*	6		P	invasive species	retain	
	696	sweet cherry	*Prunus avium*	8		P	invasive species; severe ivy	retain	
	697	sweet cherry	*Prunus avium*	8		P	invasive species	retain	
	698	red alder	*Alnus rubra*	6		P		retain	

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	699	cedar	*unknown*	10		G		retain	
	700	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	701	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	702	red alder	*Alnus rubra*	14		P	decay, mostly dead	retain	
	702A	Oregon ash	*Fraxinus latifolia*	6		P	extensive ivy	remove	
	703	red alder	*Alnus rubra*	6		P	mostly dead	retain	
	704	English hawthorn	*Crataegus monogyna*	8		P	invasive species; mostly dead, ivy infestation	retain	
	705	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	706	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	707	red alder	*Alnus rubra*	8		P	severe ivy	retain	
	708	red alder	*Alnus rubra*	10		P	severe ivy	retain	
	709	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	710	sweet cherry	*Prunus avium*	22		P	invasive species	retain	
	712	Oregon ash	*Fraxinus latifolia*	12		P	codom stem failure; severe ivy	retain	
	713	Oregon ash	*Fraxinus latifolia*	24		P	decay; severe ivy	retain	
	715	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	716	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	717	red alder	*Alnus rubra*	10		P	severe ivy	retain	
	718	red alder	*Alnus rubra*	12		P	severe ivy	retain	
	719	red alder	*Alnus rubra*	6		P	severe ivy	retain	
	720	red alder	*Alnus rubra*	8		P	severe ivy	retain	
	721	Oregon ash	*Fraxinus latifolia*	8		M		retain	
	722	Oregon ash	*Fraxinus latifolia*	8		M		retain	
	737	Scouler's willow	*Salix scouleriana*	24		P	decrepit; severe ivy	retain	
	744	Scouler's willow	*Salix scouleriana*	10		P	decrepit; severe ivy	retain	
	745	Oregon ash	*Fraxinus latifolia*	12		M		retain	
	746	Oregon ash	*Fraxinus latifolia*	6		P	severe ivy	retain	
	747	western redcedar	*Thuja plicata*	27		G		remove	
	749	spruce	*Picea spp.*	10		P		remove	
	750	spruce	*Picea spp.*	16		P		retain	yes
	751	red alder	*Alnus rubra*	13		M		retain	
	752	Oregon white oak	*Quercus garryana*	24		I		retain	
	753	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	snag - excellent wildlife habitat, potentially hazardous	retain	yes
	754	red alder	*Alnus rubra*	10		P	species limitations	retain	
	755	red alder	*Alnus rubra*	12		P	species limitations	retain	
	756	Oregon white oak	*Quercus garryana*	12		M	extensive ivy, small one-sided crown	retain	yes
	757	Scouler's willow	*Salix scouleriana*	24		P	decrepit	retain	
	758	red alder	*Alnus rubra*	8		P		retain	
	759	deciduous	*unknown*	6		P		retain	

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	760	red alder	*Alnus rubra*	14		M		likely to be removed	
	761	pine	*unknown*	12		M		remove	
	762	western redcedar	*Thuja plicata*	12		M		remove	
	763	pine	*Pinus spp.*	14		M		remove	
	764	western redcedar	*Thuja plicata*	8		M		remove	
	765	pine	*Pinus spp.*	10		M		remove	
	766	pine	*Pinus spp.*	14		M		remove	
	767	western redcedar	*Thuja plicata*	14		M		remove	
	768	pine	*Pinus spp.*	10		M		remove	
	769	pine	*Pinus spp.*	10		M		remove	
	770	pine	*Pinus spp.*	10		M		remove	
	771	dawn redwood	*Metasequoia glyptostroboides*	18		M		remove	
	772	pine	*Pinus spp.*	8		M		remove	
	773	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	overtopped	remove	
	774	red alder	*Alnus rubra*	10		P		remove	
	775	Oregon white oak	*Quercus garryana*	30	35	G		retain	
	777	Douglas-fir	*Pseudotsuga menziesii*	13	9	P	overtopped	remove	
	778	Douglas-fir	*Pseudotsuga menziesii*	28	25	G		remove	
	779	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	dead branches	remove	
	780	Douglas-fir	*Pseudotsuga menziesii*	28	20	G		remove	
	781	Oregon ash	*Fraxinus latifolia*	24		M	remove for construction	remove	
	782	sweetgum	*Liquidambar styraciflua*	16		P		likely to be removed	
	783	Oregon ash	*Fraxinus latifolia*	18		M		remove	
	784	Scouler's willow	*Salix scouleriana*	32		P	decay	remove	
	785	Oregon white oak	*Quercus garryana*	28	35	I	no defects observed; remove for construction	remove	
	786	lodgepole pine	*Pinus contorta*	14		P		remove	
	787	Oregon white oak	*Quercus garryana*	18	20	G		retain	
	788	Oregon white oak	*Quercus garryana*	26	35	G	dead wood in crown, but generally sound	retain	
	789	Douglas-fir	*Pseudotsuga menziesii*	28	14	P	root rot, broken top	remove	
	790	pine	*Pinus spp.*	10		P		remove	
	791	pine	*Pinus spp.*	12		M		remove	
	792	pine	*Pinus spp.*	18		P		remove	
	793	lodgepole pine	*Pinus contorta*	8		P		remove	
	794	pine	*Pinus spp.*	12		M		remove	
	795	pine	*Pinus spp.*	16		M		remove	
	796	pine	*Pinus spp.*	18		M		remove	
	797	lodgepole pine	*Pinus contorta*	12		P		remove	
	798	lodgepole pine	*Pinus contorta*	10		P		remove	
	799	Oregon white oak	*Quercus garryana*	2*14	30	G		likely to be removed	

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	800	deciduous	*unknown*	10		P		remove	
	801	Douglas-fir	*Pseudotsuga menziesii*	22	20	P	root damage	remove	
	802	lodgepole pine	*Pinus contorta*	12		P	very poor condition	remove	
	803	European white birch	*Betula pendula*	12		P	invasive species	remove	
	804	Douglas-fir	*Pseudotsuga menziesii*	24	18	G		remove	
	805	Douglas-fir	*Pseudotsuga menziesii*	20	18	P	root damage	remove	
	806	Douglas-fir	*Pseudotsuga menziesii*	25	18	P	root damage	remove	
	807	lodgepole pine	*Pinus contorta*	6		P	very poor condition	remove	
	808	deciduous	*unknown*	6		P		remove	
	809	deciduous	*unknown*	6		P		remove	
	810	deciduous	*unknown*	10		P		remove	
	811	Austrian pine	*Pinus nigra*	14		M		remove	
	812	lodgepole pine	*Pinus contorta*	10		P		remove	
	813	Scotch pine	*Pinus sylvestris*	10		P		remove	
	814	sweetgum	*Liquidambar styraciflua*	14		M		remove	
	815	lodgepole pine	*Pinus contorta*	14		P		remove	
	816	Scotch pine	*Pinus sylvestris*	12		P		remove	
	817	pine	*Pinus spp.*	8		P		remove	
	818	red alder	*Alnus rubra*	8		P		remove	
	819	pine	*Pinus spp.*	10		P		remove	
	820	red alder	*Alnus rubra*	8		P		remove	
	821	red alder	*Alnus rubra*	10		P		remove	
	822	red alder	*Alnus rubra*	10		P		remove	
	823	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	824	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	825	red alder	*Alnus rubra*	10		P		remove	
	826	Oregon white oak	*Quercus garryana*	30		P	codominant stems, decay	remove	
	827	deciduous	*unknown*	6		P		remove	
	828	pine	*Pinus spp.*	8		P		remove	
	829	red alder	*Alnus rubra*	10		P		remove	
	830	Douglas-fir	*Pseudotsuga menziesii*	6	6	P		remove	
	831	Oregon ash	*Fraxinus latifolia*	12		P	dead branches	retain	yes
	832	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	833	red alder	*Alnus rubra*	30		P	clump	remove	
	834	Oregon ash	*Fraxinus latifolia*	36		M	remove for construction	remove	
	835	Oregon ash	*Fraxinus latifolia*	12		P		remove	
	836	Oregon ash	*Fraxinus latifolia*	32	14	P	thin crown or low live crown ratio	remove	
	837	Oregon ash	*Fraxinus latifolia*	24		M	ivy growing into crown; remove for construction	remove	
	838	Oregon ash	*Fraxinus latifolia*	10		M	ivy growing into crown; remove for construction	remove	

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	839	Oregon ash	*Fraxinus latifolia*	40		P	clump	remove	
	840	pine	*Pinus spp.*	6		P		remove	
	841	Oregon white oak	*Quercus garryana*	6		P		remove	
	842	pine	*Pinus spp.*	8		M		remove	
	843	deciduous	*unknown*	12		P		remove	
	844	pine	*Pinus spp.*	10		P		remove	
	845	deciduous	*unknown*	6		P		remove	
	846	red alder	*Alnus rubra*	8		P		remove	
	847	western redcedar	*Thuja plicata*	12		P		remove	
	848	western redcedar	*Thuja plicata*	20		P		remove	
	849	western redcedar	*Thuja plicata*	18		G		remove	
	850	Oregon white oak	*Quercus garryana*	18,24	35	M	codominant; history of branch failure; hazardous	remove	
	851	copper beech	*Fagus sylvatica*	8		G	forked top	remove	
	852	pine	*Pinus spp.*	6		P		remove	
	853	Norway maple	*Acer platanoides*	10		M		remove	
	854	European white birch	*Betula pendula*	12		P	invasive species	remove	
	855	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
	856	Oregon white oak	*Quercus garryana*	26	30	I	pair driveways for tree protection	retain	
	858	maple	*Acer spp.*	6		M		remove	
	859	pine	*Pinus spp.*	10		M		remove	
	860	Oregon white oak	*Quercus garryana*	20	25	I		retain	
	861	Douglas-fir	*Pseudotsuga menziesii*	30	14	G		retain	
	862	red alder	*Alnus rubra*	12		P	species limitations	remove	
	863	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
	864	maple	*Acer spp.*	6		M		remove	
	865	Oregon white oak	*Quercus garryana*	22	25	G	one-sided crown	retain	
	866	deciduous	*unknown*	6		P		remove	
	867	pine	*Pinus spp.*	8		P		remove	
	868	deciduous	*unknown*	6		P		remove	
	869	pine	*Pinus spp.*	6		P		remove	
	870	deciduous	*unknown*	10		P		remove	
	871	red alder	*Alnus rubra*	20		P		remove	
	872	pine	*Pinus spp.*	6		P		remove	
	873	Oregon white oak	*Quercus garryana*	36	30	G		retain	
	874	pine	*Pinus spp.*	8		P		remove	
	875	Douglas-fir	*Pseudotsuga menziesii*	32	14	M		retain	
	876	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped	retain	yes
	878	Douglas-fir	*Pseudotsuga menziesii*	36	25	P	pitch seam	retain	yes
	879	Douglas-fir	*Pseudotsuga menziesii*	22	20	G		remove	

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	880	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	overtopped	remove	
	881	Douglas-fir	*Pseudotsuga menziesii*	20	20	G		remove	
	882	Scouler's willow	*Salix scouleriana*	14		P		remove	
	883	Scouler's willow	*Salix scouleriana*	12		P		remove	
	884	Scouler's willow	*Salix scouleriana*	6		P		remove	
	885	Scouler's willow	*Salix scouleriana*	16		P		remove	
	886	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		remove	
	887	grand fir	*Abies grandis*	6		P		remove	
	888	grand fir	*Abies grandis*	8		P		remove	
	889	red alder	*Alnus rubra*	10		P		remove	
	890	pine	*Pinus spp.*	6		P		remove	
	891	deciduous	*unknown*	8		M		remove	
	892	European white birch	*Betula pendula*	10		P	invasive species	remove	
	893	western redcedar	*Thuja plicata*	12		G		remove	
	894	pine	*Pinus spp.*	10		P		remove	
	895	red alder	*Alnus rubra*	12		P		remove	
	896	red alder	*Alnus rubra*	8		P		remove	
	897	Douglas-fir	*Pseudotsuga menziesii*	24	13	P	decay	remove	
	898	pine	*Pinus spp.*	6		P		remove	
	899	pine	*Pinus spp.*	6		P		remove	
	900	red alder	*Alnus rubra*	12		M		remove	
	904	Douglas-fir	*Pseudotsuga menziesii*	22	12	G		remove	
	907	Oregon white oak	*Quercus garryana*	18		I	good crown density	retain	
	908	Oregon white oak	*Quercus garryana*	22		I	good crown density	retain	
	909	Scouler's willow	*Salix scouleriana*	10		M		remove	
	910	Scouler's willow	*Salix scouleriana*	12		P		remove	
	911	Scouler's willow	*Salix scouleriana*	12		P		remove	
	912	Scouler's willow	*Salix scouleriana*	20		P		remove	
	913	Scouler's willow	*Salix scouleriana*	18		P		remove	
	914	Scouler's willow	*Salix scouleriana*	12		P		remove	
	915	Douglas-fir	*Pseudotsuga menziesii*	8	7	P		remove	
	916	Douglas-fir	*Pseudotsuga menziesii*	10	8	P		remove	
	917	Scouler's willow	*Salix scouleriana*	14		P		remove	
	918	Douglas-fir	*Pseudotsuga menziesii*	12	8	M		remove	
	919	Scouler's willow	*Salix scouleriana*	42		P		remove	
	920	Douglas-fir	*Pseudotsuga menziesii*	28	25	M	pitch seam	remove	
	921	Oregon white oak	*Quercus garryana*	24	25	I	excellent crown density	remove	
	922	Scouler's willow	*Salix scouleriana*	6		P		remove	
	923	Oregon white oak	*Quercus garryana*	14		M		remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	924	pine	*Pinus spp.*	12		G		remove	
	925	western redcedar	*Thuja plicata*	18		P		remove	
	926	Douglas-fir	*Pseudotsuga menziesii*	28	20	M	pitch seam, pistol butt	remove	
	927	western redcedar	*Thuja plicata*	20		M		remove	
	928	western redcedar	*Thuja plicata*	18		M		remove	
	929	western redcedar	*Thuja plicata*	18		G		remove	
	930	pine	*Pinus spp.*	12		M		remove	
	931	pine	*Pinus spp.*	8		G		remove	
	932	pine	*Pinus spp.*	8		G		remove	
	934	pine	*Pinus spp.*	8		G		remove	
	935	pine	*Pinus spp.*	12		M		remove	
	936	pine	*Pinus spp.*	8		M		remove	
	937	Scouler's willow	*Salix scouleriana*	6		P		remove	
	938	pine	*Pinus spp.*	10		M	multiple attachments	remove	
	939	pine	*Pinus spp.*	8		G		remove	
	940	pine	*Pinus spp.*	8		G		remove	
	941	pine	*Pinus spp.*	6		M		remove	
	942	pine	*Pinus spp.*	6		G		remove	
	943	western redcedar	*Thuja plicata*	8		G		remove	
	944	pine	*Pinus spp.*	6		G		remove	
	945	Scouler's willow	*Salix scouleriana*	14		P		remove	
	946	Scouler's willow	*Salix scouleriana*	25		P		remove	
	947	Scouler's willow	*Salix scouleriana*	16		P		remove	
	948	western redcedar	*Thuja plicata*	8		P		remove	
	950	Scouler's willow	*Salix scouleriana*	18		P		remove	
	961	red alder	*Alnus rubra*	18		P	ivy growing into crown	retain	yes
	962	Scouler's willow	*Salix scouleriana*	14		P	ivy growing into crown	retain	
	993	red alder	*Alnus rubra*	10		P		remove	
	994	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		remove	
	1001	red alder	*Alnus rubra*	16		P		remove	
	1002	Scouler's willow	*Salix scouleriana*	14		P		remove	
	1003	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	remove ivy, safety prune; re-evaluate during construction	retain	yes
	1004	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped; extensive ivy	retain	yes
	1005	Scouler's willow	*Salix scouleriana*	16		P	extensive ivy	retain	
	1007	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	spur branch 1006; re-evaluate during construction	retain	yes
	1008	Oregon white oak	*Quercus garryana*	12		M	extensive ivy	retain	yes
	1009	Scouler's willow	*Salix scouleriana*	30		P	decay	remove	
	1010	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	overtopped	remove	
	1011	Douglas-fir	*Pseudotsuga menziesii*	2*34	20	M	codominant	remove	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	1012	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		remove	
	1013	sweet cherry	*Prunus avium*	14		P	invasive species	retain	yes
	1014	Douglas-fir	*Pseudotsuga menziesii*	40	15	P	sweep, swollen base	remove	
	1015	Douglas-fir	*Pseudotsuga menziesii*	30	14	P	pitch seams at base	remove	
	1016	red alder	*Alnus rubra*	12		P		remove	
	1017	red alder	*Alnus rubra*	12		P		remove	
	1018	red alder	*Alnus rubra*	12		P		remove	
	1019	Oregon white oak	*Quercus garryana*	18	20	M	one-sided crown	likely to be removed	
	1021	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	lean	remove	
	1022	Douglas-fir	*Pseudotsuga menziesii*	20	11	P		remove	
	1023	Oregon white oak	*Quercus garryana*	26	25	I		retain	
	1024	Scouler's willow	*Salix scouleriana*	14		P	decay	remove	
	1025	Douglas-fir	*Pseudotsuga menziesii*	16	10	P	one-sided; small live crown	remove	
	1026	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		retain	
	1027	Douglas-fir	*Pseudotsuga menziesii*	32	14	G		likely to be removed	
	1028	Oregon white oak	*Quercus garryana*	14		M	narrow crown angle, limited response potential	retain	yes
	1029	Douglas-fir	*Pseudotsuga menziesii*	26		G		retain	
	1030	Douglas-fir	*Pseudotsuga menziesii*	26	13	G		retain	
	1031	Douglas-fir	*Pseudotsuga menziesii*	24	13	G		retain	
	1032	Douglas-fir	*Pseudotsuga menziesii*	24		G		retain	
	1033	Oregon white oak	*Quercus garryana*	2*10		M		retain	
	1034	Oregon white oak	*Quercus garryana*	4*12	25	M		remove	
	1035	Oregon white oak	*Quercus garryana*	24	25	I		retain	
4046	1036	red alder	*Alnus rubra*	12		P		remove	
	1037	Douglas-fir	*Pseudotsuga menziesii*	34	15	M	ivy growing up main stem	remove	
	1038	red alder	*Alnus rubra*	6		P	extensive ivy	remove	
	1039	red alder	*Alnus rubra*	12		P		remove	
	1040	red alder	*Alnus rubra*	12		P		remove	
	1041	Oregon white oak	*Quercus garryana*	24		M	ivy growing into crown	retain	
	1042	red alder	*Alnus rubra*	12		P		retain	
	1043	red alder	*Alnus rubra*	12		P		retain	
	1044	Oregon white oak	*Quercus garryana*	26		M	ivy growing into crown	retain	
	1045	Oregon white oak	*Quercus garryana*	12		G		likely to be removed	
4043	1046	Oregon white oak	*Quercus garryana*	10		M		remove	
4045	1047	Oregon white oak	*Quercus garryana*	14		P	overtopped	remove	
	1048	Oregon white oak	*Quercus garryana*	16		G		retain	
4044	1049	Douglas-fir	*Pseudotsuga menziesii*	36	15	G		remove	
	1068	Oregon white oak	*Quercus garryana*	20		M	ivy growing into crown	retain	
	1069	Oregon white oak	*Quercus garryana*	18		M		retain	yes

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	1114	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		retain	
	1120	bigleaf maple	*Acer macrophyllum*	12		M		remove	
	1128	Douglas-fir	*Pseudotsuga menziesii*	17	10	M	small live crown	retain	
	1129	Douglas-fir	*Pseudotsuga menziesii*	14	9	P	overtopped	retain	yes
	1150	Douglas-fir	*Pseudotsuga menziesii*	24	13	G	one-sided crown; remove ivy, retain in group	retain	
	1152	Douglas-fir	*Pseudotsuga menziesii*	29	14	M	one-sided crown; retain in group	retain	
	1153	Douglas-fir	*Pseudotsuga menziesii*	22	12	G	retain in group	retain	
	1154	Douglas-fir	*Pseudotsuga menziesii*	28	14	G	retain in group	retain	
	1156	Douglas-fir	*Pseudotsuga menziesii*	17	10	M	pistol butt; retain in group	retain	
	1157	Douglas-fir	*Pseudotsuga menziesii*	24	13	G	one-sided crown; retain in group	retain	
	1158	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	one-sided crown; retain in group	retain	
	1159	Oregon white oak	*Quercus garryana*	24		P	narrow crown angle, limited response potential	retain	
	1167	Douglas-fir	*Pseudotsuga menziesii*	18	11	G		retain	
	1173	Douglas-fir	*Pseudotsuga menziesii*	20		M	one-sided crown; retain in group	retain	
	1184	Oregon white oak	*Quercus garryana*	25		I	one-sided crown	retain	
	1199	Scouler's willow	*Salix scouleriana*	14		P	poor condition	retain	yes
1255	1255	Oregon white oak	*Quercus garryana*	12		M		retain	
	1256	Scouler's willow	*Salix scouleriana*	18		P	decay	retain	
	1257	Oregon white oak	*Quercus garryana*	2*20	35	I	wide crown, moderate crown density	retain	
	1263	bigleaf maple	*Acer macrophyllum*	12		M		retain	
	1264	Oregon white oak	*Quercus garryana*	36	30	I		retain	
	1274	bigleaf maple	*Acer macrophyllum*	14		M		retain	
	1275	bigleaf maple	*Acer macrophyllum*	12		M		retain	
	1278	bigleaf maple	*Acer macrophyllum*	14		M		retain	
	1284	Oregon white oak	*Quercus garryana*	12		M		retain	
	1285	Oregon white oak	*Quercus garryana*	36	36	I	three codom stems, good crown vigor	retain	
	1292	Oregon white oak	*Quercus garryana*	12		M	one-sided crown	retain	
	1293	Douglas-fir	*Pseudotsuga menziesii*	20	11	G		retain	
	1365	Oregon white oak	*Quercus garryana*	12		G		retain	
	1367	Oregon white oak	*Quercus garryana*	20		G		retain	
	1369	Oregon white oak	*Quercus garryana*	3*12		G		retain	
	1371	Oregon white oak	*Quercus garryana*	14		G		retain	
	1495	Oregon white oak	*Quercus garryana*	52	40	I	four trunks, large canopy	retain	
	1514	bigleaf maple	*Acer macrophyllum*	9		M		retain	
	1515	bigleaf maple	*Acer macrophyllum*	11		M		retain	
	1524	bigleaf maple	*Acer macrophyllum*	11		M		retain	
	1527	bigleaf maple	*Acer macrophyllum*	9		P		remove	
	1615	Oregon white oak	*Quercus garryana*	55	40	I	multiple trunks	retain	
	1715	Scouler's willow	*Salix scouleriana*	18		P	decrepit, decay	retain	

Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	1716	Scouler's willow	*Salix scouleriana*	15		P	decrepit, decay	retain	
	1717	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	1718	Scouler's willow	*Salix scouleriana*	14		P	decrepit, decay	retain	
	1719	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	1720	Scouler's willow	*Salix scouleriana*	12		P	decrepit, decay	retain	
	2864	Scouler's willow	*Salix scouleriana*	2*8	10	P		remove	
	2982	pine	*Pinus spp.*	8		P		remove	
	3003	bigleaf maple	*Acer macrophyllum*	10		M		remove	
	9330	pine	*Pinus spp.*	10		M		remove	
	21018	pine	*Pinus spp.*	10		P		remove	
	21141	Douglas-fir	*Pseudotsuga menziesii*	9		M	suppressed, retain in group only	retain	yes
	21142	Douglas-fir	*Pseudotsuga menziesii*	9		M	suppressed, retain in group only	retain	yes
	21143	Douglas-fir	*Pseudotsuga menziesii*	10		M	retain in group	retain	
	21144	Douglas-fir	*Pseudotsuga menziesii*	9		M	retain in group	retain	
	21145	Douglas-fir	*Pseudotsuga menziesii*	10		M	retain in group	retain	
	21146	Douglas-fir	*Pseudotsuga menziesii*	9		M	retain in group	retain	
2932	21147	Scouler's willow	*Salix scouleriana*	18		P	decrepit, preserve for wildlife habitat if no target	retain	yes
2945	21148	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
2896	21149	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
2895	21150	sweet cherry	*Prunus avium*	2*12		P	invasive species	retain	
2894	21151	sweet cherry	*Prunus avium*	12		P	invasive species	retain	
2893	21152	sweet cherry	*Prunus avium*	14		P	invasive species	retain	
	21153	Scouler's willow	*Salix scouleriana*	9		P		retain	
	21154	Scouler's willow	*Salix scouleriana*	8		P		retain	
2797	21155	Douglas-fir	*Pseudotsuga menziesii*	18		M	high live crown; retain in group only	retain	yes
	21158	lodgepole pine	*Pinus contorta*	8		P		retain	
	21160	Douglas-fir	*Pseudotsuga menziesii*	8		P	failing	retain	yes
	21161	lodgepole pine	*Pinus contorta*	9		M		retain	
	21162	lodgepole pine	*Pinus contorta*	12		M		retain	
	21163	lodgepole pine	*Pinus contorta*	13		M		retain	
	21164	lodgepole pine	*Pinus contorta*	8		M		retain	
2899	21165	ponderosa pine	*Pinus ponderosa*	18	14	M	dead branches, high live crown	retain	
	21166	Scouler's willow	*Salix scouleriana*	8		P	extensive ivy	retain	
	21167	Douglas-fir	*Pseudotsuga menziesii*	8		P		remove	
	21168	Douglas-fir	*Pseudotsuga menziesii*	9		P		remove	
	21169	Douglas-fir	*Pseudotsuga menziesii*	10		M		remove	
	21170	Scouler's willow	*Salix scouleriana*	9		P		retain	
	21171	Scouler's willow	*Salix scouleriana*	12		P	ivy growing into crown	retain	
2992	21173	black cottonwood	*Populus trichocarpa*	16		M	inherent species limitations	remove	

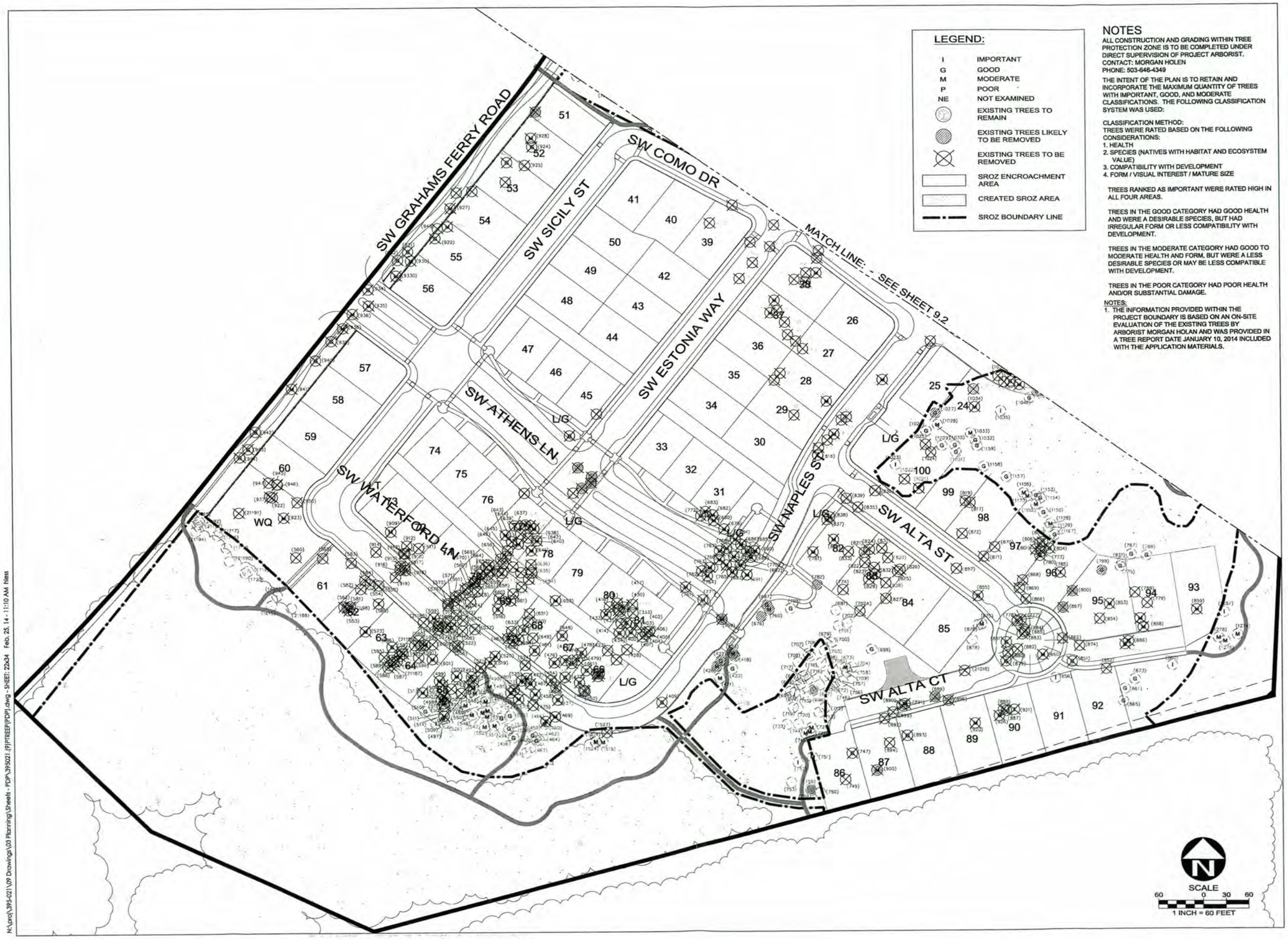
Point No.	Tree No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment 1-10-2014	Re-Evaluate?
	21174	Douglas-fir	*Pseudotsuga menziesii*	11		M		retain	
	21175	Douglas-fir	*Pseudotsuga menziesii*	13		M		retain	
	21176	Douglas-fir	*Pseudotsuga menziesii*	9		M		remove	
	21177	Oregon white oak	*Quercus garryana*	8		P		remove	
	21178	red alder	*Alnus rubra*	6		P		remove	
	21179	red alder	*Alnus rubra*	6		P		remove	
	21180	red alder	*Alnus rubra*	6		P		remove	
	21181	Douglas-fir	*Pseudotsuga menziesii*	6		P		remove	
	21182	red alder	*Alnus rubra*	6		P		remove	
	21183	red alder	*Alnus rubra*	11		P		remove	
	21185	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21186	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21187	Scouler's willow	*Salix scouleriana*	10		P		remove	
	21188	Scouler's willow	*Salix scouleriana*	10		P		retain	
	21190	Scouler's willow	*Salix scouleriana*	8		P		retain	
	21191	Scouler's willow	*Salix scouleriana*	8		P		remove	
	21192	Scouler's willow	*Salix scouleriana*	24		P	decrepit, decay	retain	
	21193	Scouler's willow	*Salix scouleriana*	18		P	decrepit, decay	retain	
	21194	Scouler's willow	*Salix scouleriana*	10		P	decrepit, decay	retain	
2948		deciduous	*unknown*	18		M		likely to be removed	
2949		deciduous	*unknown*	18		M		retain	
2957		Scouler's willow	*Salix scouleriana*	48		M		remove	
2975		Scouler's willow	*Salix scouleriana*	14		M		remove	
2980		magnolia	*Magnolia spp.*	12		P		remove	
2981		magnolia	*Magnolia spp.*	8		P		remove	
2988		deciduous	*unknown*	16		M		remove	
2990		deciduous	*unknown*	12		M		remove	
2994		deciduous	*unknown*	12		M		remove	
3032		deciduous	*unknown*	12		M		remove	
3033		deciduous	*unknown*	6		P		remove	
3034		deciduous	*unknown*	8		P		remove	
3035		deciduous	*unknown*	14		M		remove	
3037		pine	*Pinus spp.*	14		M		remove	
3038		pine	*Pinus spp.*	14		M		remove	

DBH: Diameter at Breast Height (measured 4.5-feet above ground level in inches); trees with multiple trunks splitting below DBH are measured separately and individual trunk measurements are separated by a comma, except multiple trunks of the same size are indicated with an asterisk (quantity * size)

C-Rad: Crown Radius, the distance from the center of the tree to the edge of the dripline (measured in feet)

Condition Codes: I -Important; G - Good; M- Moderate; P - Poor

Re-evaluate: Yes identifies trees recommended for re-evaluation at the time of construction in terms of general condition, hazard potential, and safety.



LEGEND:

I	IMPORTANT
G	GOOD
M	MODERATE
P	POOR
NE	NOT EXAMINED
	EXISTING TREES TO REMAIN
	EXISTING TREES LIKELY TO BE REMOVED
	EXISTING TREES TO BE REMOVED
	SROZ ENCROACHMENT AREA
	CREATED SROZ AREA
	SROZ BOUNDARY LINE

NOTES

ALL CONSTRUCTION AND GRADING WITHIN TREE PROTECTION ZONE IS TO BE COMPLETED UNDER DIRECT SUPERVISION OF PROJECT ARBORIST.
CONTACT: MORGAN HOLEN
PHONE: 503-646-4349

THE INTENT OF THE PLAN IS TO RETAIN AND INCORPORATE THE MAXIMUM QUANTITY OF TREES WITH IMPORTANT, GOOD, AND MODERATE CLASSIFICATIONS. THE FOLLOWING CLASSIFICATION SYSTEM WAS USED:

CLASSIFICATION METHOD:
TREES WERE RATED BASED ON THE FOLLOWING CONSIDERATIONS:
1. HEALTH
2. SPECIES (NATIVES WITH HABITAT AND ECOSYSTEM VALUE)
3. COMPATIBILITY WITH DEVELOPMENT
4. FORM / VISUAL INTEREST / MATURE SIZE

TREES RANKED AS IMPORTANT WERE RATED HIGH IN ALL FOUR AREAS.

TREES IN THE GOOD CATEGORY HAD GOOD HEALTH AND WERE A DESIRABLE SPECIES, BUT HAD IRREGULAR FORM OR LESS COMPATIBILITY WITH DEVELOPMENT.

TREES IN THE MODERATE CATEGORY HAD GOOD TO MODERATE HEALTH AND FORM, BUT WERE A LESS DESIRABLE SPECIES OR MAY BE LESS COMPATIBLE WITH DEVELOPMENT.

TREES IN THE POOR CATEGORY HAD POOR HEALTH AND/OR SUBSTANTIAL DAMAGE.

NOTES:
1. THE INFORMATION PROVIDED WITHIN THE PROJECT BOUNDARY IS BASED ON AN ON-SITE EVALUATION OF THE EXISTING TREES BY ARBORIST MORGAN HOLAN AND WAS PROVIDED IN A TREE REPORT DATE JANUARY 10, 2014 INCLUDED WITH THE APPLICATION MATERIALS.

N:\proj\395-021\09 Drawings\03 Planning\Sheets - PDP\395021_(P)TREEP(PDP).dwg - SHEET: 22x34 Feb. 25, 14 - 11:10 AM hles

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tree Preservation Plan

DATE 01/17/2014

9.1

LEGEND:

I	IMPORTANT
G	GOOD
M	MODERATE
P	POOR
NE	NOT EXAMINED
	EXISTING TREES TO REMAIN
	EXISTING TREES LIKELY TO BE REMOVED
	EXISTING TREES TO BE REMOVED
	SROZ ENCROACHMENT AREA
	CREATED SROZ AREA
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3. COMPATIBILITY WITH DEVELOPMENT
4. FORM / VISUAL INTEREST / MATURE SIZE

TREES RANKED AS IMPORTANT WERE RATED HIGH IN ALL FOUR AREAS.

TREES IN THE GOOD CATEGORY HAD GOOD HEALTH AND WERE A DESIRABLE SPECIES, BUT HAD IRREGULAR FORM OR LESS COMPATIBILITY WITH DEVELOPMENT.

TREES IN THE MODERATE CATEGORY HAD GOOD TO MODERATE HEALTH AND FORM, BUT WERE A LESS DESIRABLE SPECIES OR MAY BE LESS COMPATIBLE WITH DEVELOPMENT.

TREES IN THE POOR CATEGORY HAD POOR HEALTH AND/OR SUBSTANTIAL DAMAGE.

NOTES:
1. THE INFORMATION PROVIDED WITHIN THE PROJECT BOUNDARY IS BASED ON AN ON-SITE EVALUATION OF THE EXISTING TREES BY ARBORIST MORGAN HOLAN AND WAS PROVIDED IN A TREE REPORT DATE JANUARY 10, 2014 INCLUDED WITH THE APPLICATION MATERIALS.

Villebois

POLYGON NW COMPANY

Pacific Community Design

OTTEN LANDSCAPE ARCHITECTS, INC
GEODESIGN, INC

PDP 7S
VILLEBOIS

Preliminary Development Plan

Tree Preservation Plan

DATE 01/17/2014

9.2

SECTION VI) FINAL DEVELOPMENT PLAN

SUPPORTING COMPLIANCE REPORT
FINAL DEVELOPMENT PLAN 7 - SOUTH

SECTION VIA

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I. WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE

SECTION 4.125. VILLAGE (V) ZONE

(.02) Permitted Uses

Examples of principle uses that typically permitted:

H. Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association.

Response: The parks and open space areas include non-commercial parks to be owned and operated by a homeowners association. Therefore, proposed park and open space uses within PDP 7S are permitted.

(.07) General Regulations - Off-Street Parking, Loading & Bicycle Parking

Response: Amenities planned within PDP 7S park and open areas do not require off-street parking. Therefore, this section does not apply.

(.08) Open Space.

Response: PDP 7S includes open space areas that are 24.06 acres in size, or approximately 56% of the total PDP area. This FDP application is included with the PDP 7S submittal. Therefore, the FDP is consistent with the open space area in PDP 7S with open space area in excess of the 25% minimum requirement.

(.09) Street and Access Improvement Standards.

Response: The PDP Supporting Compliance Report (see Notebook Section IIA) demonstrates that streets and access improvement standards are met. This code section does not apply to the proposed parks and open space areas, except to assure that vision clearance standards are met in proposed planting schemes for these areas. Proposed landscaping is sited to meet vision clearance standards (see Notebook Section VIB).

(.10) Sidewalk and Pathway Improvement Standards.

Response: This code section refers directly to code Section 4.176, which is addressed in subsequent sections of this report.

(.11) Landscaping, Screening and Buffering

A. Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:

1. Streets in the Village zone shall be developed with street trees as described in the Community Elements Book.

Response: The applicable provisions of Section 4.176 are addressed in the subsequent sections of this report. The PDP provides information regarding street trees for the proposed streets (See Notebook Section IIB). This FDP application reflects the provision of street trees consistent with that shown in the PDP application.

(.12) Master Signage and Wayfinding

Response: The SAP South *Signage & Wayfinding Plan* indicates the provision of Secondary Site Identifier at the site entrance from Grahams Ferry Road. The attached FDP plans (see Notebook Section VIB) show provision of the 'Secondary Site Identifier' with the future construction of the site entrance.

(.14) Design Standards Applying to the Village Zone

A. The following design standards implement the Design Principles found in (.13), above, and enumerate the architectural details and design requirements applicable to buildings and other features within the Village (V) zone. The Design Standards are based primarily on the features, types, and details of the residential traditions in the Northwest, but are not intended to mandate a particular style or fashion. All development within the Village zone shall incorporate the following:

2. Building and site design shall include:

b. Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Architectural Pattern Book, Community Elements Book or approved Village Center Design.

Response: The materials proposed for the parks of the subject PDP are consistent with the approved SAP - South Community Elements Book as shown in the FDP Approval Criteria section of this report. The SAP - South Architectural Pattern Book is not applicable to the proposed park uses. The FDP plans include the locations of mailbox kiosks (see Notebook Section VIB). Mailbox kiosks will be located and designed consistent with other areas of SAP - South. Sample elevations of mailbox kiosks are provided as Notebook Section VIC.

f. The protection of existing significant trees as identified in an approved Community Elements Book.

Response: The design of the parks will protect existing significant trees consistent with the Tree Protection component of the *Community Elements Book* and *Sheet 9 - Tree Preservation Plan* (see Notebook Section IIB). The FDP plans (Notebook Section VIB) show retention of existing significant trees.

g. A landscape plan in compliance with Sections 4.125(.07) and (.11), above.

Response: A detailed landscape plan is provided with this FDP application in accordance with the requirements of Section 4.125 (.07) and (.11), 4.176(.09), and 4.440(.01)B (see attached plans in Notebook Section VIB).

3. Lighting and site furnishings shall be in compliance with the approved Community Elements Book.

Response: Lighting and site furnishings as identified in the approved *Community Elements Book* for SAP - South (as submitted for Plan Area 2) are addressed in the FDP Approval Criteria section of this report. The FDP plans include the locations of mailbox kiosks (see Notebook Section VIB). Mailbox kiosks will be located and designed consistent with other areas of SAP - South.

(.18) Village Zone Development Permit Process

L. Final Development Plan Approval Procedures (Equivalent to Site Design Review):

1. Unless an extension has been granted by the Development Review Board as enabled by Section 4.023, within two (2) years after the approval of a PDP, an application for approval of a FDP shall:

a. Be filed with the City Planning Division for the entire FDP, or when submission of the PDP in phases has been authorized by the development Review Board, for a phase in the approved sequence.

b. Be made by the owner of all affected property or the owner's authorized agent.

c. Be filed on a form prescribed by the City Planning Division and filed with said division and accompanied by such fee as the City Council may prescribe by resolution.

d. Set forth the professional coordinator and professional design team for the project.

Response: This application has been made by the owner and applicant of the affected property and has been filed on the prescribed form and accompanied by the prescribed fee (copies of the application form and fee payment are included in Notebook Sections IB and IC). The professional coordinator and professional design team for the project are listed in the Introductory Narrative (see Notebook Section IA).

M. FDP Application Submittal Requirements:

1. An application for approval of a FDP shall be subject to the provisions of Section 4.034.

Response: Section 4.034(.08), states that "Applications for development approvals within the Village zone shall be reviewed in accordance with the standards and procedures set forth in Section 4.125." The proposed FDP is reviewed in accordance with the standards and procedures set forth in Section 4.125, as demonstrated by this report.

N. FDP Approval Procedures

1. An application for approval of a FDP shall be subject to the provisions of Section 4.421.

Response: The provisions of Section 4.421 are addressed in the following sections of this report.

O. FDP Refinements to an Approved Preliminary Development Plan

Response: This FDP is submitted for review and approval along with the PDP (see Notebook Section II). Therefore, the FDP is consistent with the PDP. No PDP refinements or amendments are proposed.

P. FDP Approval Criteria

1. An application for approval of a FDP shall be subject to the provisions of Section 4.421.

Response: The provisions of Section 4.421 are addressed in the following sections of this report.

2. An application for an FDP shall demonstrate that the proposal conforms to the applicable Architectural Pattern Book, Community Elements Book, Village Center Design and any other conditions of a previously approved PDP.

Response: This FDP addresses parks and landscaping within PDP 7S. The *Architectural Pattern Book* is not applicable to this FDP because no architecture is proposed. The Village Center Design is not applicable as the FDP is outside the Village Center. The FDP is submitted for review and approval along with the PDP (see Notebook Section II). Given concurrent submittal, there are no conditions of a previously approved PDP that apply to this request. Conformance of the proposed FDP with the *Community Elements Book* as amended by SAP - South Plan Area 2 is demonstrated as follows.

LIGHTING MASTER PLAN

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently and proposed amendments to the *Community Elements Book*. Proposed amendments consisted of additional lighting detail and updated page numbers. The lighting shown on the attached plans (see Notebook Section VIB) is consistent with the Lighting Master Plan Diagram shown on page 3b of the *Community Elements Book*, as submitted with SAP South - Plan Area 2. The FDP is submitted for review and approval along with the PDP (see Notebook Section II). Therefore, there are no conditions of a previously approved PDP that apply to this request.

CURB EXTENSIONS

Response: Specific Area Plan - South Plan Area 2 has been submitted concurrently and proposed amendments to the *Community Elements Book*. Proposed amendments consisted of the addition of Plan Area 2 on Curb Extension Diagrams. PDP 7S will be developed with curb extensions as shown on the Curb Extension Concept Plan Diagram located on page 6 of the *Community Elements Book*, as submitted with SAP South - Plan Area 2. The FDP is submitted for review and approval along with the PDP (see Notebook Section II). Therefore, there are no conditions of a previously approved PDP that apply to this request.

STREET TREE MASTER PLAN

Response: The location and species of street trees shown on the attached plans (see Notebook Section VIB) is consistent with the Street Tree Master Plan Diagram and List shown on pages 7-10 of the *Community Elements Book* for SAP - South Plan Area 2. These tree species will be planted along the perimeter of the parks in the FDP where streets are located. The FDP is submitted for review and approval along with the PDP (see Notebook Section II). Therefore, there are no conditions of a previously approved PDP that apply to this request

SITE FURNISHINGS

Response: The furnishings shown on the attached plans (see Notebook Section VIB) were selected to maintain the identity and continuity of Villebois. The site furnishings shown in the parks are consistent with those described in the Site Furnishings Concept shown on pages 11-13 of the *Community Elements Book*.

The FDP plans include the locations of mailbox kiosks (see Notebook Section VIB). Mailbox kiosks will be located and designed consistent with other areas of SAP - South.

The FDP is submitted for review and approval concurrent with the PDP; therefore, there are no conditions of a previously approved PDP that apply to this request.

PLAY STRUCTURES

Response: Two (2) play structures are proposed in Pocket Park 16, located within the subject FDP. One play structure has been designed for children of older ages and one play structure has been designed for children of older ages. The FDP plans include the locations of the play structures (see Notebook Section VIB), which will be consistent with the design shown in the *Community Elements Book* on Page 14. The FDP is submitted for review and approval concurrent with the PDP; therefore, there are no conditions of a previously approved PDP that apply to this request.

TREE PROTECTION

Response: The Tree Protection component shown on page 15 of the *Community Elements Book* for SAP - South describes the goal, policies, and implementation measures that were used to promote the protection of existing trees in the design of the PDP area. Tree preservation and removal is shown in conjunction with the concurrent PDP and Tree Removal Plan applications (see Notebook Sections II and Section V, respectively). The proposed FDP, which includes numerous parks, is consistent with the tree protection shown in PDP and Tree Removal Plan. The FDP is submitted for review and approval concurrent with the PDP; therefore, there are no conditions of a previously approved PDP that apply to this request.

PLANT LIST

Response: The *Community Elements Book* for SAP - South contains a Plant List (pages 16-18) of non-native and native trees, shrubs, and herbs/grasses for species to be used within Villebois. The attached plans (see Notebook Section VIB) list the plants that will be planted in the proposed parks. The proposed plantings are consistent with the Plant List in the SAP - South *Community Elements Book*. Additionally, the FDP is submitted for review and approval concurrent with the PDP;

therefore, there are no conditions of a previously approved PDP that apply to this request.

GENERAL DEVELOPMENT REGULATIONS

SECTION 4.156. SIGN REGULATIONS

Response: The amended SAP South *Signage & Wayfinding Plan* indicates the provision of 'Secondary Site Identifier' with the site entrance on Grahams Ferry Road. The attached PDP plans (see Notebook Section IIB) and FDP plans (see Notebook Section VIB) show the provision of the 'Secondary Site Identifier' with the future entrance construction.

SECTION 4.176. LANDSCAPING, SCREENING & BUFFERING

(.02) Landscaping and Screening Standards.

Response: Parks will be landscaped as illustrated on the FDP plans (see Notebook Section VIB). Streets and public right-of-way improvements, including street trees, are reviewed with the PDP (see Notebook Section II). This FDP consistently reflects street trees shown in the PDP.

(.03) Landscape Area.

Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to define, soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable.

Response: FDP plans (see Notebook Section VIB) and the SRIR (see Notebook Section IIF) illustrate that existing forested areas will remain and park and open space areas including some landscaping will be added. Due to the proximate location of SROZ areas to parks and open space tracts, existing vegetation is retained to the greatest possible extent.

(.04) Buffering and Screening.

Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

A. All intensive or higher density developments shall be screened and buffered from less intense or lower density developments.

B. Activity areas on commercial and industrial sites shall be buffered and screened from adjacent residential areas. Multi-family

developments shall be screened and buffered from single-family areas.

C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.

D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.

E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.

F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fenceline shall require Development Review Board approval.

Response: None of the above-listed areas or uses exist within the proposed parks. Therefore, no buffering or screening is required in relation to the FDP.

(.05) Sight-Obscuring Fence or Planting.

The use for which a sight-obscuring fence or planting is required shall not begin operation until the fence or planting is erected or in place and approved by the City. A temporary occupancy permit may be issued upon a posting of a bond or other security equal to one hundred ten percent (110%) of the cost of such fence or planting and its installation. (See Sections 4.400 to 4.470 for additional requirements.)

Response: No sight-obscuring fence or planting is required in this FDP area.

(.06) Plant Materials.

A. **Shrubs and Ground Cover. All required ground cover plants and shrubs must be of sufficient size and number to meet these standards within three (3) years of planting. Non-horticultural plastic sheeting or other impermeable surface shall not be placed under mulch. Surface mulch or bark dust are to be fully raked into soil of appropriate depth, sufficient to control erosion, and are confined to areas around plantings. Areas exhibiting only surface mulch, compost or barkdust are not to be used as substitutes for plants areas.**

1. **Shrubs. All shrubs shall be well branched and typical of their type as described in current AAN Standards and shall be equal to or better than 2-gallon containers and 10" to 12" spread.**

Response: As shown on the attached plans (see Notebook Section VIB) all shrubs will be equal to or better than 2-gallon size with a 10 to 12 inch spread. All shrubs

will be well branched and typical of their type as described in current AAN standards.

2. **Ground cover. Shall be equal to or better than the following depending on the type of plant materials used: Gallon containers spaced at 4 feet on center minimum, 4" pot spaced 2 feet on center minimum, 2-1/4" pots spaced at 18 inch on center minimum. No bare root planting shall be permitted. Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within three (3) years of planting. Where wildflower seeds are designated for use as a ground cover, the City may require annual re-seeding as necessary.**

Response: As shown on the attached plans (see Notebook Section VIB) all ground covers will be at least 4" pots and spaced appropriately. These plants will be installed as required.

3. **Turf or lawn in non-residential developments. Shall not be used to cover more than ten percent (10%) of the landscaped area, unless specifically approved based on a finding that, due to site conditions and availability of water, a larger percentage of turf or lawn area is appropriate. Use of lawn fertilizer shall be discouraged. Irrigation drainage runoff from lawns shall be retained within lawn areas.**

Response: The subject FDP area is within a residential development. Therefore, this criterion does not apply.

4. **Plant materials under trees or large shrubs. Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.**

Response: FDP plans (see Notebook Section VIB) show the provision of appropriate plant materials beneath canopies of trees and/or large shrubs, only within parks that are not SROZ open space areas.

B. **Trees. All trees shall be well-branched and typical of their type as described in current American Association of Nurserymen (AAN) Standards and shall be balled and burlapped. The trees shall be grouped as follows:**

1. **Primary trees which define, outline or enclose major spaces, such as Oak, Maple, Linden, and Seedless Ash, shall be a minimum of 2" caliper.**

2. **Secondary trees which define, outline or enclose interior areas, such as Columnar Red Maple, Flowering Pear, Flame Ash, and Honeylocust, shall be a minimum of 1-3/4" to 2" caliper.**

3. **Accent trees which, are used to add color, variation and accent to architectural features, such as Flowering Pear and Kousa Dogwood, shall be 1-3/4" minimum caliper.**

4. **Large conifer trees such as Douglas Fir or Deodar Cedar shall be installed at a minimum height of eight (8) feet.**

5. **Medium-sized conifers such as Shore Pine, Western Red Cedar or Mountain Hemlock shall be installed at a minimum height of five to six (5 to 6) feet.**

Response: As shown on the attached plans (see Notebook Section VIB), proposed tree species have been selected from the Villebois Plant List in the *Community Elements Book*. All proposed trees meet the minimum 2" caliper code requirement or the minimum height requirement for conifers as appropriate. All proposed trees will be well-branched, typical of their type as described in current AAN, and balled and burlapped.

C. **Where a proposed development includes buildings larger than twenty-four (24) feet in height or greater than 50,000 square feet in footprint area, the Development Review Board may require larger or more mature plant materials:**

Response: This standard does not apply to the subject FDP as no buildings larger than 24 feet in height or greater than 50,000 SF in footprint area are proposed in the parks.

D. **Street Trees.**

Response: Notebook Section II is the Preliminary Development Plan. Review of streets and rights-of-way, including street trees, occurs with the PDP. Street trees shown in the plans for this FDP are consistent with those shown in the PDP application. Additionally, compliance with the Street Tree Master Plan is demonstrated in the PDP Supporting Compliance Report (see Notebook Section IIA).

E. **Types of Plant Species.**

1. **Existing landscaping or native vegetation may be used to meet these standards, if protected and maintained during the construction phase of the development and if the plant species do not include any that have been listed by the City as prohibited. The existing native and non-native vegetation to be incorporated into the landscaping shall be identified.**

Response: As shown on the attached plans (see Notebook Section VIB), there are existing trees in the FDP area to be retained. The existing trees will be protected and maintained during the construction phase and are incorporated into the landscaping as appropriate.

2. **Selection of plant materials. Landscape materials shall be selected and sited to produce hardy and drought-tolerant landscaping. Selection shall be based on soil characteristics, maintenance requirements, exposure to sun and wind, slope**

and contours of the site, and compatibility with other vegetation that will remain on the site. Suggested species lists for street trees, shrubs and groundcovers shall be provided by the City of Wilsonville.

Response: All proposed landscaping materials are selected from the Villebois Plant List in the *Community Elements Book*. SROZ mitigation will occur as described in the SRIR (see Notebook Section IIF). Specific materials were selected to best meet the site characteristics of the subject property.

3. Prohibited plant materials. The City may establish a list of plants that are prohibited in landscaped areas. Plants may be prohibited because they are potentially damaging to sidewalks, roads, underground utilities, drainage improvements, or foundations, or because they are known to be invasive to native vegetation.

Response: No plant materials listed as "Prohibited Plant Species" on the Villebois Plant List are included in the proposed landscaping.

F. Tree Credit.

Response: Tree credits are not applicable to this FDP application.

G. Exceeding Standards. Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met.

H. Compliance with Standards. The burden of proof is on the applicant to show that proposed landscaping materials will comply with the purposes and standards of this Section.

Response: The attached plans (see Notebook Section VIB) and this report demonstrate that the proposed landscaping complies with the standards of the Wilsonville Development Code and the *Community Elements Book*.

(.07) Installation and Maintenance.

A. Installation. Plant materials shall be installed to current industry standards and shall be properly staked to assure survival. Support devices (guy wires, etc.) shall not be allowed to interfere with normal pedestrian or vehicular movement.

B. Maintenance. Maintenance of landscaped areas is the on-going responsibility of the property owner. Any landscaping installed to meet the requirements of this Code, or any condition of approval established by a City decision-making body acting on an application, shall be continuously maintained in a healthy, vital and acceptable manner. Plants that die are to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. Failure to maintain landscaping as required in this Section shall constitute a violation of this Code for which appropriate legal remedies, including the revocation of any applicable land development permits, may result.

C. **Irrigation. The intent of this standard is to assure that plants will survive the critical establishment period when they are most vulnerable due to a lack of watering and also to assure that water is not wasted through unnecessary or inefficient irrigation. Approved irrigation system plans shall specify one of the following:**

1. **A permanent, built-in, irrigation system with an automatic controller. Either a spray or drip irrigation system, or a combination of the two, may be specified.**

2. **A permanent or temporary system designed by a landscape architect licensed to practice in the State of Oregon, sufficient to assure that the plants will become established and drought-tolerant.**

3. **Other irrigation system specified by a licensed professional in the field of landscape architecture or irrigation system design.**

4. **A temporary permit issued for a period of one year, after which an inspection shall be conducted to assure that the plants have become established. Any plants that have died, or that appear to the Planning Director to not be thriving, shall be appropriately replaced within one growing season. An inspection fee and a maintenance bond or other security sufficient to cover all costs of replacing the plant materials shall be provided, to the satisfaction of the Community Development Director. Additionally, the applicant shall provide the City with a written license or easement to enter the property and cause any failing plant materials to be replaced.**

Response: Plants will be installed and maintained properly. A permanent-built-in irrigation system with an automatic controller will be installed underground to irrigate the proposed landscaping areas, as needed. Additional details about the irrigation system will be provided with construction plans.

D. **Protection. All required landscape areas, including all trees and shrubs, shall be protected from potential damage by conflicting uses or activities including vehicle parking and the storage of materials.**

Response: The attached planting plans demonstrate that all landscape areas will be protected from potential damage by vehicle travel along streets and alleys.

(.08) Landscaping on Corner Lots.

All landscaping on corner lots shall meet the vision clearance standards of Section 4.177. If high screening would ordinarily be required by this Code, low screening shall be substituted within vision clearance areas. Taller screening may be required outside of the vision clearance area to mitigate for the reduced height within it.

Response: All landscaping at corners will meet the vision clearance standards of Section 4.177.

(.09) Landscape Plans.

Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated. Landscape plans shall divide all landscape areas into the following categories based on projected water consumption for irrigation:

A. High water usage areas (+/- two (2) inches per week): small convoluted lawns, lawns under existing trees, annual and perennial flower beds, and temperamental shrubs;

B. Moderate water usage areas (+/- one (1) inch per week): large lawn areas, average water-using shrubs, and trees;

C. Low water usage areas (Less than one (1) inch per week, or gallons per hour): seeded field grass, swales, native plantings, drought-tolerant shrubs, and ornamental grasses or drip irrigated areas.

D. Interim or unique water usage areas: areas with temporary seeding, aquatic plants, erosion control areas, areas with temporary irrigation systems, and areas with special water-saving features or water harvesting irrigation capabilities.

These categories shall be noted in general on the plan and on the plant material list.

Response: The attached plans (see Notebook Section VIB) include the required information listed in Section 4.176(.09).

(.10) Completion of Landscaping.

The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages. In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review.

Response: The applicant does not anticipate deferring the installation of plant materials. Should it be necessary to defer installation of plant materials, the applicant will apply for a temporary permit.

(.11) Street Trees Not Typically Part of Site Landscaping.

Street trees are not subject to the requirements of this Section and are not counted toward the required standards of this Section. Except, however, that the Development Review Board may, by granting a waiver or variance, allow for special landscaping within the right-of-way to compensate for a lack of appropriate on-site locations for landscaping. See subsection (.06), above, regarding street trees.

Response: Street trees are not counted toward the required standards of this Section.

(.12) Mitigation and Restoration Plantings.

Response: No additional tree removal is proposed with the FDP. The PDP includes a concurrent Tree Removal Plan (see Notebook Section V) which addresses required tree mitigation. Additionally, the separate SAP Amendment application includes an SRIR that provide a Mitigation Planting Plan for the proposed SROZ mitigation and creation areas.

SECTION 4.177. STREET IMPROVEMENT STANDARDS

(.01) Except as specifically approved by the Development Review Board, all street and access improvements shall conform to the Street System Master Plan, together with the following standards:

H. Access drives and lanes.

Response: The proposed parks are accessible from the adjacent street rights-of way and/or pathways as shown on the attached plans. All streets and alleys accommodate 2-way traffic.

I. Corner or clear vision area.

1. A clear vision area shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. No structures, plantings, or other obstructions that would impede visibility between the height of 3- inches and 10 feet shall be allowed within said area. Measurements shall be made from the top of the curb, or, when there is no curb, from the established street center line grade. However, the following items shall be exempt:

a. Light and utility poles with a diameter less than 12 inches.

b. An existing tree, trimmed to the trunk, 10 feet above the curb.

c. Official warning or street sign.

d. Natural contours where the natural elevations are such that there can be no cross-visibility at the intersection and necessary excavation would result in an

unreasonable hardship on the property owner or deteriorate the quality of the site.

Response: Landscaping at the corners of the parks will be less than 30 inches in height to assure that visibility is not blocked.

SECTION 4.178. SIDEWALK & PATHWAY STANDARDS

(.01) Sidewalks. All sidewalks shall be concrete and a minimum of five (5) feet in width, except where the walk is adjacent to commercial storefronts. In such cases, they shall be increased to a minimum of ten (10) feet in width.

Response: All street adjacent sidewalks in the subject FDP area are at least 5 feet in width and concrete. All pathways within the park and open spaces will be soft surface nature trails. Trails will be match the nature trail section shown on *Sheet 7 - Street Sections* of the PDP plans (see Notebook Section IIB).

(.03) Pavement surface.

A. All bike paths shall be paved with asphalt to provide a smooth riding surface. Where pathways are adjacent to and accessible from improved public streets, the Public Works Director may require a concrete surface. At a minimum the current AASHTO "Guide for the Development of Bicycle Facilities" and the State "Oregon Bicycle Plan" shall be used to design all bicycle facilities within the City of Wilsonville. Any deviation from the AASHTO, ODOT, and City standards will require approval from the City Engineer prior to implementation of the design.

B. To increase safety, all street crossings shall be marked and should be designed with a change of pavement such as brick or exposed aggregate. All arterial crossings should be signalized.

C. All pathways shall be clearly posted with standard bikeway signs.

D. Pedestrian and equestrian trails may have a gravel or sawdust surface if not intended for all weather use.

Response: There are no bicycle pathways in this FDP area. Details about sidewalks in the public right-of-way were addressed in the PDP application (see Notebook Section II). No Major or Minor pathways are identified on the subject property. As shown on the attached FDP plans (see Notebook Section VIB), the subject area includes a system of soft surface nature pathways throughout open space areas and connecting to adjacent residential areas and to the Graham Oaks Natural Area. Soft surface trails are proposed to limit impact to the surrounding natural areas. Pathways will comply with the nature trail section shown on *Sheet 7 - Street Sections* of the PDP plans (see Notebook Section IIB).

(.06) Pathway Clearance.

A. Vertical clearance of at least 8 feet 6 inches shall be maintained above the surface of all pathways. The clearance above equestrian trails shall be a minimum of ten feet.

B. All landscaping, signs and other potential obstructions shall be set back at least (1) foot from the edge of the pathway surface. No exposed rock should be permitted within two (2) feet of the path pavement and all exposed earth within two (2) feet of the pavement shall be planted with grass, sod or covered with 2" of barkdust.

Response: As shown on the attached plans, all potential obstructions are at least one foot from the edge of the pathway surfaces, and vertical clearance will be maintained. Pathways within SROZ areas will be field located to meander around trees and follow level natural grades, in order to minimize impacts to trees and natural habitat.

SITE DESIGN REVIEW

SECTION 4.400. PURPOSE.

(.01) Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefore.

Response: The amended SAP South Signage & Wayfinding Plan indicates the provision of 'Secondary Site Identifier' with the site entrance from Grahams Ferry Road, as well as the continuation of Enhanced Full View or Partial View Fence with Landscaping along Grahams Ferry Road and SROZ fencing where lots are adjacent to the SROZ. The attached FDP plans (see Notebook Section VIB) show provision of the 'Secondary Site Identifier' with the future entrance construction. The FDP plans include the locations of mailbox kiosks and the location of a shelter in PP-16 (see Notebook Section VIB). Mailbox kiosks will be located and designed consistent with other areas of SAP - South.

The proposed landscaping within the parks is designed in compliance with the standards for the rest of Villebois, so the entire development will have a cohesive, harmonious appearance, creating a desirable place of residence and adding to the overall quality of life in the City.

(.02) The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:

A. Assure that Site Development Plans are designed in a manner that insures proper functioning of the site and maintains a high quality visual environment.

Response: The parks in the FDP area have been designed to assure proper functioning of the site and to maintain an aesthetically pleasing environment. The proposed landscaping and park design will add to the quality of the environment as well as the functioning of the site. Natural vegetation within the SROZ open space areas will be retained, except for invasive species removal as identified in the SRIR.

B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;

Response: The FDP includes landscaping as shown on the attached plans (see Notebook Section VIB), which will enhance the visual environment of the site. Pedestrian connections to sidewalks, trails, and adjacent residences will be provided to enhance the site's connectivity to surrounding uses.

C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;

Response: The FDP area will include landscaping as shown on the attached plans (see Notebook Section VIB). Landscaping will consist of an appropriate mixture of ground cover, shrubs, and trees selected from the Villebois Plant List to create a harmonious appearance throughout the larger Villebois development. The proposed landscaping will contribute to an interesting and aesthetically appealing development.

D. Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain and landscaping, and that proper attention is given to exterior appearances of structures, signs and other improvements;

Response: The parks will incorporate landscaping that makes sense for a Pacific Northwest community, while matching the City's natural beauty and visual character.

E. Protect and enhance the City's appeal and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial purposes;

Response: The parks, along with their pedestrian connections to adjacent residences and streets, will help to maintain the appeal of Villebois as a unique and attractive community in which to live, work, and recreate. Residents of Villebois will stimulate the local economy by opening new businesses and thus creating jobs and by spending money in existing businesses.

F. Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;

Response: The proposed parks will create neighborhood amenities that will help to maintain property values in this new community. A Home Owners Association will ensure that these areas are properly maintained over time.

G. Insure that adequate public facilities are available to serve development as it occurs and that proper attention is given to site planning and development so as to not adversely impact the orderly, efficient and economic provision of public facilities and services.

Response: The process used to plan for Villebois incorporates a tiered system that originates at the *Villebois Village Master Plan*. The *Master Plan* shows how facilities, including parks and open space, are distributed and available to residents throughout Villebois.

Figure 5 - Parks & Open Space Plan of the *Master Plan* shows that approximately 33% of Villebois will be in parks and open space. Phase 7 South is consistent with the amount of parks and open space originally shown for the Future Study Area on the *Villebois Village Master Plan*, as demonstrated in the PDP (see Notebook Section II). This FDP is consistent with the PDP, SAP - South Plan Area 2, and the *Villebois Village Master Plan*, and therefore, complies with this criterion.

H. Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and, thus, decrease the cost of governmental services and reduce opportunities for crime through careful consideration of physical design and site layout under defensible space guidelines that clearly define all areas as either public, semi-private, or private, provide clear identity of structures and opportunities for easy surveillance of the site that maximize resident control of behavior -- particularly crime;

Response: The *Villebois Village Master Plan* shows that the community will include a variety of housing options (living) and the Village Center will contain places for employment (working). This FDP shows a living environment in Phase 7 of SAP - South that is enhanced by proximity to park and open space areas. Residents who will surround the parks and open spaces will provide on-going surveillance and control.

I. Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvements;

Response: The design of the Villebois Village has been created to develop a community that is truly unique. The City, as well as the Applicant, are working in partnership with nearby residents, property owners, and local and regional governments to create a complete, livable, pedestrian-oriented community that will be an asset to the City of Wilsonville and Portland region. This partnership has generated citizen participation in the project and the unique design shall foster civic pride and community spirit amongst the residents of Villebois.

J. Sustain the comfort, health, tranquillity and contentment of residents and attract new residents by reason of the City's

favorable environment and, thus, to promote and protect the peace, health and welfare of the City.

Response: The design of the Villebois Village revolves around three guiding principles: connectivity, diversity, and sustainability. These principles are intended to sustain the comfort, health, tranquility, and contentment of Villebois residents, while also promoting and protecting the peace, health and welfare of the City. *Connectivity* refers to creating connections between Villebois neighborhoods and between Villebois and other parts of the City and region for multiple modes of transportation. *Diversity* includes multiple choices of housing styles, housing affordability, recreation, employment, goods and services, and infrastructure for transportation. *Sustainability* involves the protection of natural resources and open space, energy conservation, and storm and rainwater management.

SECTION 4.421. CRITERIA AND APPLICATION OF DESIGN STANDARDS.

(.01) The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards. (Even in the Boones Ferry Overlay Zone, a range of architectural styles will be encouraged.)

A. Preservation of Landscape. The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

Response: As shown in the attached plans (see Notebook Section VIB), proposed plant materials are drawn from the Villebois Plant List, which includes native species, to ensure consistency of general appearance within the Villebois community. In addition, native vegetation is retained within SROZ open space areas. Mitigation plantings are provided per Mitigation Planting Plan for the proposed SROZ mitigation and creation areas.

B. Relation of Proposed Buildings to Environment. Proposed structures shall be located and designed to assure harmony with the natural environment, including protection of steep slopes, vegetation and other naturally sensitive areas for wildlife habitat and shall provide proper buffering from less intensive uses in accordance with Sections 4.171 and 4.139 and 4.139.5. The achievement of such relationship may include the enclosure of space in conjunction with other existing buildings or other proposed buildings and the creation of focal points with respect to avenues of approach, street access or relationships to natural features such as vegetation or topography.

Response: Chapter 3 of the *Villebois Village Master Plan* takes into account scenic views, topography, existing vegetation, and other natural features in the design and location of parks and open spaces in the Villebois development. The FDP conforms to the *Villebois Village Master Plan* with respect to the natural environment. The FDP area does not include any steep slopes or flood plains. The FPD area includes a large SROZ area. A Significant Resource Impact Report has been prepared and submitted concurrently with the SAP - South Plan Area 2, which depicts refined SROZ boundaries and proposed encroachments and mitigation (see Notebook Section IIF). The SRIR illustrates that proposed mitigation exceeds the encroachment mitigation ratio of 2.5:1 set forth by Wilsonville Development Code Section 4.139.07. Compliance with Planning & Development Ordinance Section 4.139 is demonstrated in the PDP (see Notebook Section IIA). Existing trees within the parks are largely retained as reviewed in the concurrent PDP and Tree Removal Plan applications (see Notebook Sections II and V).

C. Drives, Parking and Circulation. With respect to vehicular and pedestrian circulation, including walkways, interior drives and parking, special attention shall be given to location and number of access points, general interior circulation, separation of pedestrian and vehicular traffic, and arrangement of parking areas that are safe and convenient and, insofar as practicable, do not detract from the design of proposed buildings and structures and the neighboring properties.

Response: No driveways or parking areas are proposed or required with this FDP. The parks included in the FDP are all accessible from adjacent streets and pathways, as shown on the FDP plans (see Notebook Section VIB).

D. Surface Water Drainage. Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties of the public storm drainage system.

Response: Surface water drainage is addressed in the PDP application (see Notebook Section II). The FDP is consistent with grading and drainage shown in the PDP. This system has been carefully designed so as not to adversely affect neighboring properties.

E. Utility Service. Any utility installations above ground shall be located so as to have an harmonious relation to neighboring properties and site. The proposed method of sanitary and storm sewage disposal from all buildings shall be indicated.

Response: The PDP application addresses utility installation (see Notebook Section II). The FDP is consistent with the PDP.

F. Advertising Features. In addition to the requirements of the City's sign regulations, the following criteria should be included: the size, location, design, color, texture, lighting and materials of all exterior signs and outdoor advertising structures or features shall

not detract from the design of proposed buildings and structures and the surrounding properties.

Response: No advertising features are proposed in this FDP.

G. Special Features. Exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall be required to prevent their being incongruous with the existing or contemplated environment and its surrounding properties. Standards for screening and buffering are contained in Section 4.176.

Response: This FDP does not propose any exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures or other accessory areas and structures. Compliance with Section 4.176 is addressed earlier in this report.

(.02) The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures.

Response: No accessory buildings or structures are proposed.

(.03) The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.

Response: Compliance with the purpose of Section 4.400 has been addressed earlier in this report.

SECTION 4.440. PROCEDURE.

(.01) Submission of Documents.

A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:

A. A site plan, drawn to scale, showing the proposed layout of all structures and other improvements including, where appropriate, driveways, pedestrian walks, landscaped areas, fences, walls, off-street parking and loading areas, and railroad tracks. The site plan shall indicate the location of entrances and exits and direction of traffic flow into and out of off-street parking and loading areas, the location of each parking space and each loading berth and areas of turning and maneuvering vehicles. The site plan shall indicate how utility service and drainage are to be provided.

B. A Landscape Plan, drawn to scale, showing the location and design of landscaped areas, the variety and sizes of trees and plant materials to be planted on the site, the location and design of landscaped areas, the varieties, by scientific and common name,

and sizes of trees and plant materials to be retained or planted on the site, other pertinent landscape features, and irrigation systems required to maintain trees and plant materials. An inventory, drawn at the same scale as the Site Plan, of existing trees of 4" caliper or more is required. However, when large areas of trees are proposed to be retained undisturbed, only a survey identifying the location and size of all perimeter trees in the mass in necessary.

C. Architectural drawings or sketches, drawn to scale, including floor plans, in sufficient detail to permit computation of yard requirements and showing all elevations of the proposed structures and other improvements as they will appear on completion of construction. Floor plans shall also be provided in sufficient detail to permit computation of yard requirements based on the relationship of indoor versus outdoor living area, and to evaluate the floor plan's effect on the exterior design of the building through the placement and configuration of windows and doors.

D. A Color Board displaying specifications as to type, color, and texture of exterior surfaces of proposed structures. Also, a phased development schedule if the development is constructed in stages.

E. A sign plan, drawn to scale, showing the location, size, design, material, color and methods of illumination of all exterior signs.

F. The required application fee.

Response: Notebook Section VIB includes FDP plans that meet the requirements of Section 4.440 (.01). A copy of the application fee submitted is included in Notebook Section IC. Architectural drawings, etc., and a color board are not required with this FDP.

SECTION 4.450. INSTALLATION OF LANDSCAPING.

(.01) All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant.

Response: The applicant understands that they must provide a security to guarantee installation of the proposed landscaping.

(.02) Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code.

Response: The applicant understands that changes to the landscape plan included in this application cannot be made without official action of the Planning Director or the Development Review Board.

(.03) All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval.

Response: The applicant understands that they are responsible for the ongoing maintenance of the proposed landscaping.

(.04) If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that has been accepted or approved through the City's development review process, that removal or modification must first be approved through the procedures of Section 4.010.

Response: This FDP does not include the addition of landscaping for any existing development; therefore this criterion does not apply.

II. CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable requirements of the City of Wilsonville Planning & Land Development Ordinance for the requested Final Development Plan. Therefore, the applicant requests approval of this application.

PHASE 7 SOUTH
VILLEBOIS
FINAL DEVELOPMENT PLAN

TL 2890 & 2800, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SECTION 15 W.M.
CITY OF WILSONVILLE, OREGON

APPLICANT:

POLYGON NORTHWEST COMPANY
109 E. 13TH ST.
VANCOUVER, WA 98660
[P] 503-221-1920
CONTACT: FRED GAST

OWNER:

POLYGON NORTHWEST COMPANY
109 E. 13TH ST.
VANCOUVER, WA 98660
[P] 503-221-1920
CONTACT: FRED GAST

PLANNER:

PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Stret
Tigard, OR 97223
[P] 503-941-9484
CONTACT: STACY CONNERY, AICP

CIVIL ENGINEER:

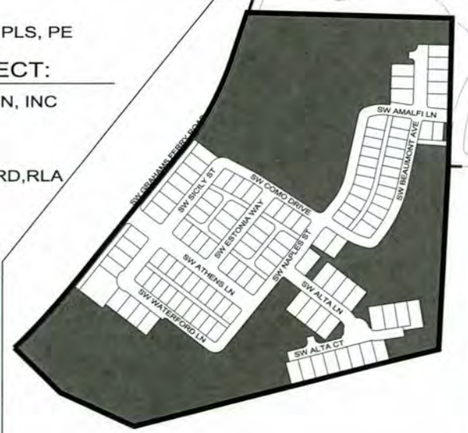
PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Street
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: PATRICK ESPINOSA, PE

SURVEYOR:

PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Street
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: TRAVIS JANSEN, PLS, PE

LANDSCAPE ARCHITECT:

PACIFIC COMMUNITY DESIGN, INC
12564 SW Main Street
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: KERRY LANKFORD,RLA



VICINITY MAP

UTILITIES & SERVICES:

WATER:	CITY OF WILSONVILLE
STORM:	CITY OF WILSONVILLE
SEWER:	CITY OF WILSONVILLE
POWER:	PORTLAND GENERAL ELECTRIC
GAS:	NORTHWEST NATURAL
FIRE:	TUALATIN VALLEY FIRE & RESCUE
POLICE:	CLACKAMAS COUNTY SHERIFF
SCHOOL:	WEST LINN / WILSONVILLE SCHOOL DISTRICT 3JT
PARKS:	CITY OF WILSONVILLE
PHONE:	FRONTIER
WASTE DISPOSAL:	UNITED DISPOSAL SERVICE
CABLE:	COMCAST

BENCHMARK:

OREGON STATE PLANE COORDINATE 5818 LOCATED IN MONUMENT BOX IN CENTERLINE OF TOOZE ROAD .2 MILES WEST OF 110TH.

ELEVATION DATUM: NAVD 88, ELEVATION = 202.991

SHEET INDEX:

L0 COVER SHEET
L1 STREET TREE PLAN
L2 PLANTING PLAN NORTH
L3 PLANTING PLAN SOUTH
L4 POCKET PARK-16 PARK PLAN
L5 ENTRY PLAN EAST
L6 ENTRY PLAN WEST
L7 NATURE TRAIL ACTIVITY AREA PLAN
L8 PLANT LEGEND AND DETAILS
L9 DETAILS

GEOTECHNICAL ENGINEER:

GEODESIGN, INC.
15575 SW SEQUOIA PARKWAY, SUITE 100
PORTLAND, OR 97224
[P] 503-968-8787
CONTACT: CRAIG WARE, PE

N

SCALE
300 0 150 300
1 INCH = 300 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

PDP 7S
VILLEBOIS

Final Development Plan

Cover Sheet

DATE 2/05/14

L0

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1 **GRANDE POINTE STREET TREE PLAN**

STREET TREE LEGEND:

QTY.	SYMBOL	BOTANICAL NAME Common Name	SIZE	SPACING
17		CERCIDOPHYLLUM JAPONICUM Katsura Tree	2" cal.	30' o.c.
39		CRATAEGUS VIRDIS 'WINTER KING' Winter King Hawthorne	2" cal.	30' o.c.
17		FAGUS SYLVATICA European Beech	2 1/2" cal.	40' o.c.
67		FRAXINUS AMER. 'AUTUMN APPLAUSE' Autumn Applause Ash	2" cal.	30' o.c.
64		TILIA x EUCHLORA Crimean Linden	2" cal.	30' o.c.
67		ZELKOVA SERR. 'GREEN VASE' Green Vase Zelkova	2" cal.	30' o.c.

Street Tree List

Arterial/Collector Street Trees: Grahams Ferry Road
*Quercus rubra - Red Oak
Quercus coccinea - Scarlet Oak
Tilla tomentosa - Silver Linden
Tilla x euchlora - Crimean Linden
Fagus sylvatica - European Beech
Quercus macrocarpa - Bur Oak

Significant Residential Street Trees: A Street - +/- 30' O.C.
Landscape Strips 6'-8' Wide
Acer x fremanii 'Autumn Blaze' - Autumn Blaze Maple
Zelkova serrata 'Green Vase' - Green Vase Zelkova
Zelkova serrata 'Village Green' - Village Green Zelkova
Landscape Strips 8'+ Wide
Aesculus x carnea 'Briotti' - Red Horsechestnut
Platanus acerifolia 'Blookgood' - Bloodgood London Planetree
Cercidophyllum japonicum - Katsura Tree
Quercus palustris - Pink Oak
Quercus macrocarpa - Bur Oak
Ginkgo biloba- Ginkgo (availability)

Primary Residential Street Trees: B, C, D, F, H, and I Streets - +/- 30' O.C.
Landscape Strips 6'-8'
Tilla x euchlora - Crimean Linden
Fagus sylvatica - European Beech
Fagus sylvatica 'Riverell' - Rivera Beech
Acer x fremanii 'Autumn Blaze' - Autumn Blaze Maple
Fraxinus oxycarpe 'Raywood' - Raywood Ash
Fraxinus americana 'Autumn Applause' - Autumn Applause Ash
Landscape Strips 8'+ Wide
Aesculus x carnea 'Briotti' - Red Horsechestnut
Quercus coccinea - Scarlet Oak
Celtis occidentallis - Huckleberry
Quercus phellos - Willow Oak

Secondary Residential Street Trees: E, G, and J Streets - +/- 30' O.C.
Landscape Strips 5'-8' Wide
Acer pseudoplantanus - Sycamore Maple
Koelreuteria paniculata - Goldenrain Tree
Acer rubrum 'Red Sunset' - Red Sunset Maple
Cornus florida - Flowering Dogwood
Crataegus viridis 'Winter King' - Winter King Hawthorn
Landscape Strips 8'+ Wide
Quercus robur - English Oak
Catalpa apaclosa - Northern Catalpa
Quercus acutissima - Sewtooth Oak
Quercus macrocarpa - Bur Oak

Notes:
1. An Asterisk in the Street Tree List denotes preferred tree type to be used for no less than 600 lineal feet. All other species are considered substitutes. For streets without a preferred species, trees should be consistent for entire block but can change after intersections to add variety to the street characteristics.

2. There are no street types proposed on sides of streets abutting parks and open spaces. Grouping of trees will occur at intervals as shown on the open space plan.

3. Street Tree Plan is diagrammatic showing approximate locations and quatities of trees. Specific location will be shown in PDP plans.

4. Street trees are required to be 25' min. setback at intersections of residential streets and 30' min setback at collector and arterial intersections and 10' setback at alleys.

5. Street trees will match on opposite sides of all streets.

SCALE
100 0 50 100
1 INCH = 100 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

PDP 7S
VILLEBOIS

Final Development Plan

STREET TREE PLAN

DATE 2/05/14

L1

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1 **GRANDE POINTE PLANTING PLAN- NORTH**

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Villebois

POLYGON NW COMPANY

Pacific Community Design

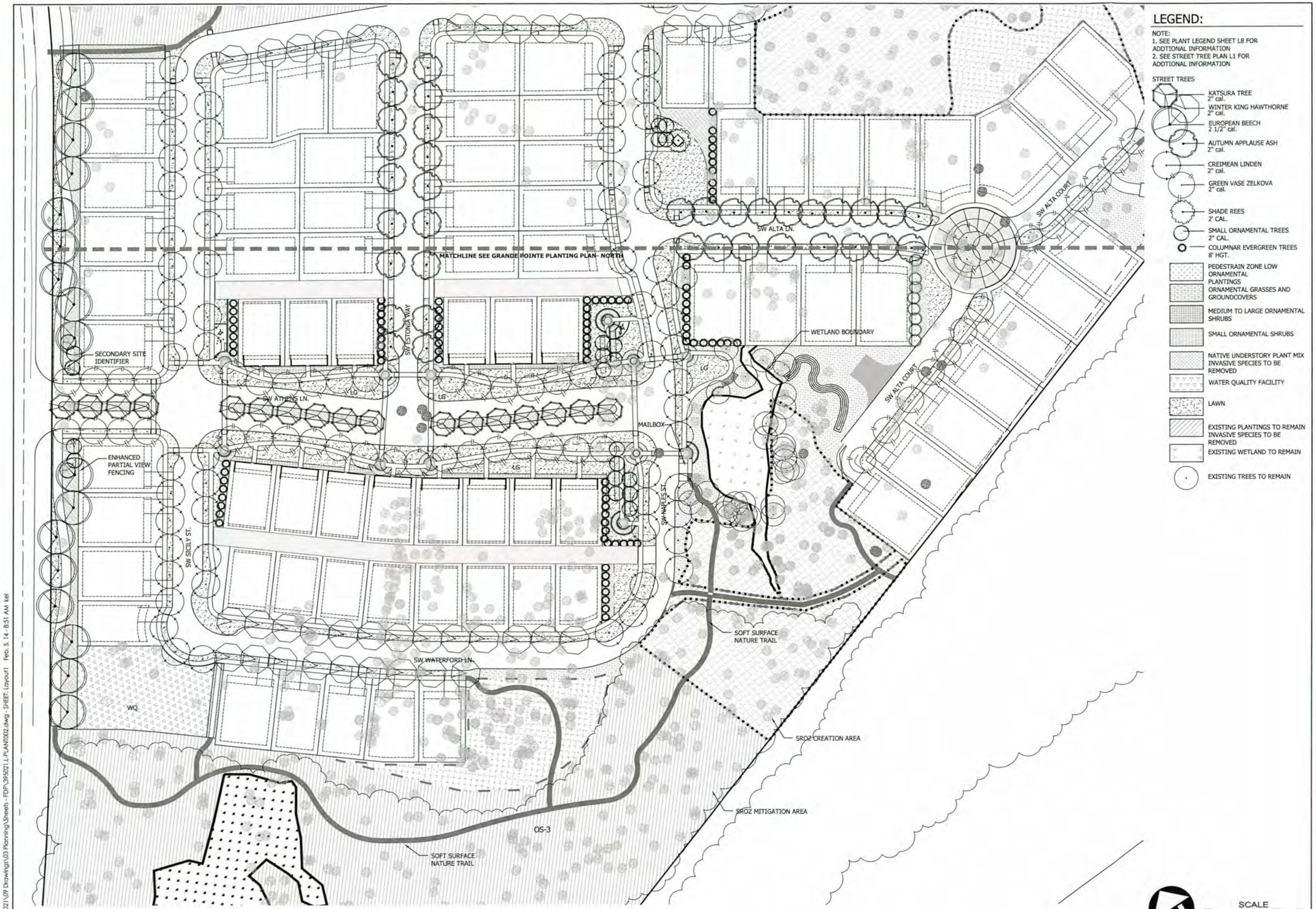
PDP 7S
VILLEBOIS

Final Development Plan

PLANTING PLAN NORTH

DATE 2/05/14

L2



1 **GRANDE POINTE PLANTING PLAN- SOUTH**

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Villebois

POLYGON NW COMPANY

Pacific Community Design

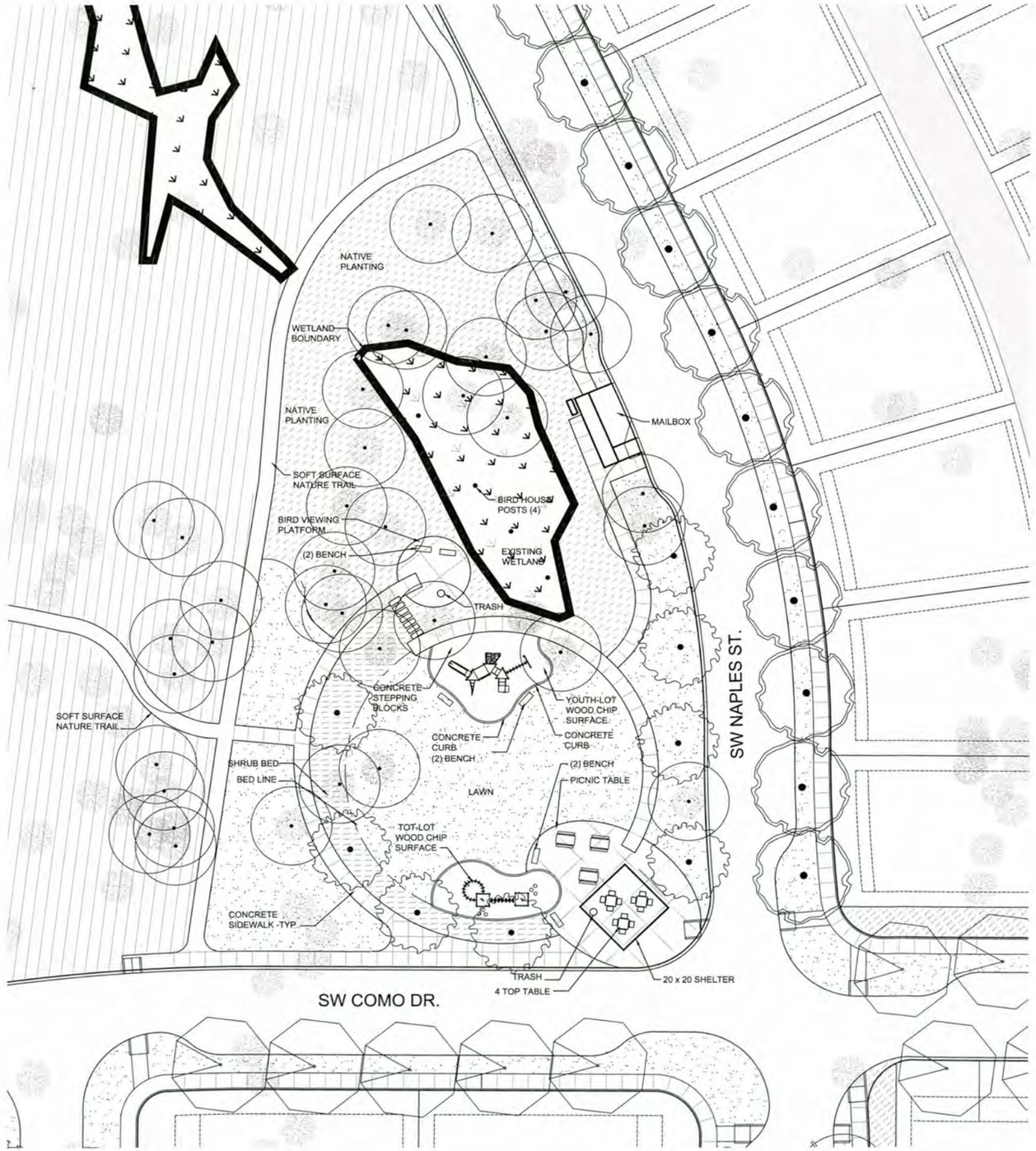
PDP 7S
VILLEBOIS

Final Development Plan

PLANTING PLAN SOUTH

DATE 2/05/14

L3



1 **GRANDE POINTE PARK PLAN**

Open Space 3 (OS-3): Forested Wetland Preserve (21.48 Acres)
Preserves existing functional wetlands and wildlife habitat within SROZ areas. Includes smaller soft surface nature trails, with benches and nature trail activity areas that meander through the forest and link with neighborhoods to the north and east and to trails in the Graham Oaks Nature Area to the east and south. Nature trails, benches and nature trail activity areas will comply with SROZ regulations and any impacts will be mitigated through SROZ enhancement and/or creation.

Pocket Park 16 (PP-16) (0.89 Acres)
Provides a neighborhood focal point and gathering spot, connections to nature trail system, and opportunities for creative play through interaction with a non-locally significant wetland and an active lawn area located to complement child play structures. Includes child play structures for younger and older-aged children, a sheltered seating area and hardscape plaza, hardscape paths, and benches.

Linear Greens (LG) (1.14 Acres)
Provides visual and physical linkages to the neighborhood gathering spot and the nature trail system within Open Space areas. Includes small patches of lawn areas, seating areas and small creative play features. Provides aesthetic appeal of open space, a sense of place, and safer pedestrian environment along major road from Grahams Ferry Road site entrance.

LEGEND

- PAVERS ALTERNATING COLORS
- 8" WIDE FREE STANDING WALL
- PLAY AREA EQUIPMENT
- CLIMBING FROG AND LILLY PADS
- SCORED CONCRETE SIDEWALK CAST IN PLACE
- OVERLOOK
- 20 X 20 SHELTER
- PICNIC TABLE
- TRASH RECETACLE
- 4 TOP TABLE AND CHAIR
- STEPPING STONES CAST IN PLACE
- BIRD STAND / HOUSE
- BIKE RACK
- SOFT SURFACE NATURE TRAIL
- ENTRY MONUMENT
- PLAY EQUIPMENT
- ORNAMENTAL GRASSES
- NATIVE PLANTING
- LOW PEDESTRIAN ZONE PLANTING
- LOW ORNAMENTAL PLANTING
- MEDIUM ORNAMENTAL PLANTING
- LAWN
- EXITING PLANTING TO REMAIN INVASIVES TO BE REMOVED

NOTES:
1.) SEE PLANT LEGEND SHEET L8 FOR ADDITIONAL INFORMATION
2.) LOTS ABUTTING SROZ OPEN SPACE ARE TO HAVE 6' FULL VIEW FENCING ALONG SIDE AND REAR LOT LINES

GENERAL NOTE:
THE SYMBOLS SHOWN ON THE PLAN REPRESENTING SITE FURNISHINGS HAVE BEEN PROVIDED TO GUIDE FOR FUTURE DESIGN AND PLANTING EFFORTS. GENERAL LOCATIONS AND NUMBERS OF FURNISHINGS ARE TO BE CONSISTENT WITH OR EXCEED THE INTENT OF THIS PLAN. SEE THE COMMUNITY ELEMENTS BOOK FOR SITE FURNISHINGS PRODUCT INFORMATION.

SCALE
20 0 10 20
1 INCH = 20 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

PDP 7S
VILLEBOIS

Final Development Plan

POCKET PARK 16
PARK PLAN

DATE 2/05/14

L4

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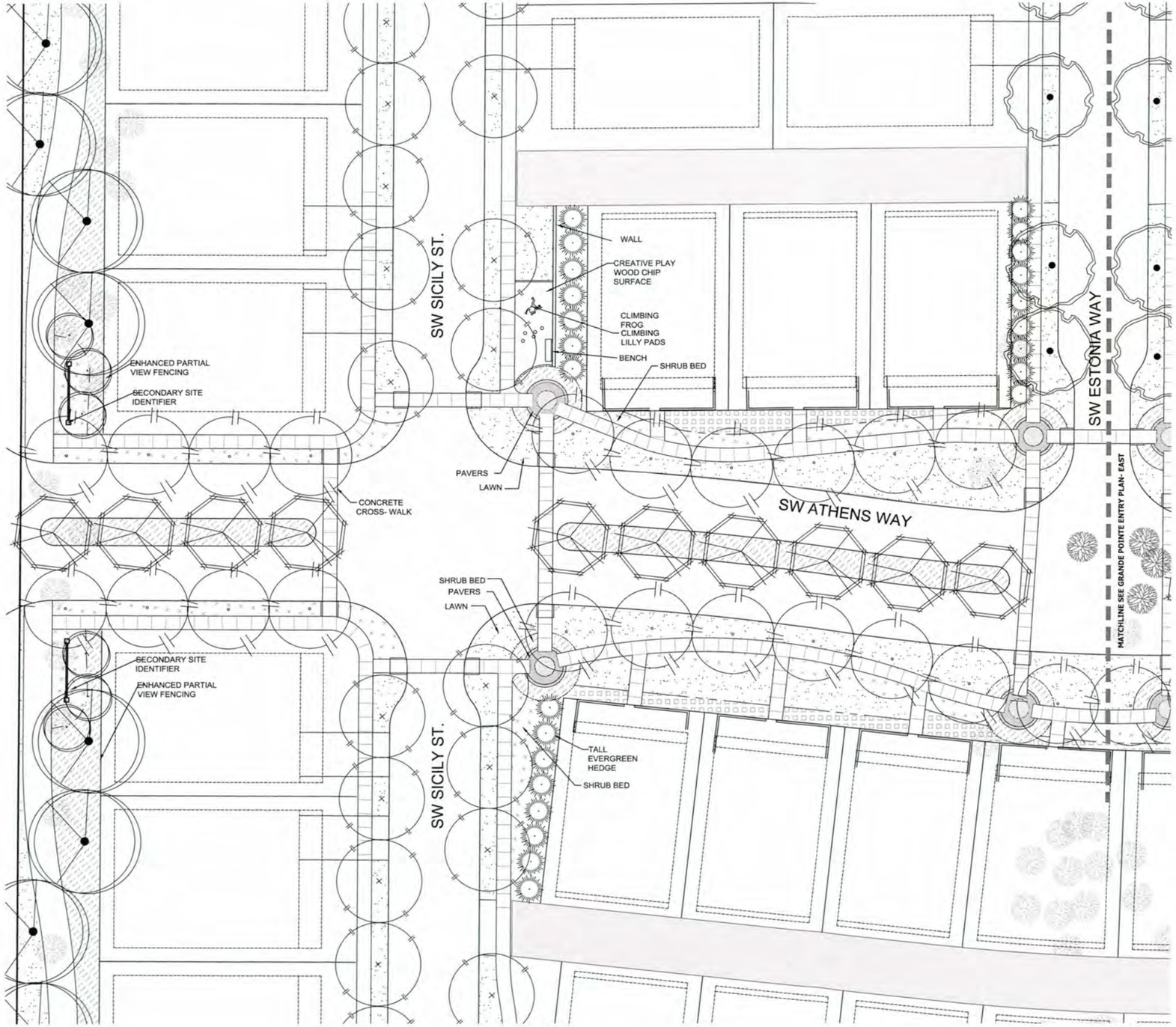

1 **GRANDE POINTE ENTRY PLAN- WEST**

LEGEND

- PAVERS ALTERNATING COLORS
- 8" WIDE FREE STANDING WALL
- PLAY AREA EQUIPMENT CLIMBING FROG AND LILLY PADS
- BENCH
- SCORED CONCRETE SIDEWALK CAST IN PLACE
- OVERLOOK
- 20 X 20 SHELTER
- PICNIC TABLE
- TRASH RECETACLE
- 4 TOP TABLE AND CHAIR
- STEPPING STONES CAST IN PLACE
- BIRD STAND / HOUSE
- BIKE RACK
- SOFT SURFACE NATURE TRAIL
- ENTRY MONUMENT
- PLAY EQUIPMENT
- ORNAMENTAL GRASSES
- NATIVE PLANTING
- LOW PEDESTRIAN ZONE PLANTING
- LOW ORNAMENTAL PLANTING
- MEDIUM ORNAMENTAL PLANTING
- LAWN
- EXITING PLANTING TO REMAIN INVASIVES TO BE REMOVED

NOTES:

1.) SEE PLANT LEGEND SHEET L8 FOR ADDITIONAL INFORMATION

2.) LOTS ABUTTING SROZ OPEN SPACE ARE TO HAVE 6' FULL VIEW FENCING ALONG SIDE AND REAR LOT LINES

SCALE
20 0 10 20
1 INCH = 20 FEET

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Final Development Plan

ENTRY PLAN WEST

DATE 2/05/14

L5

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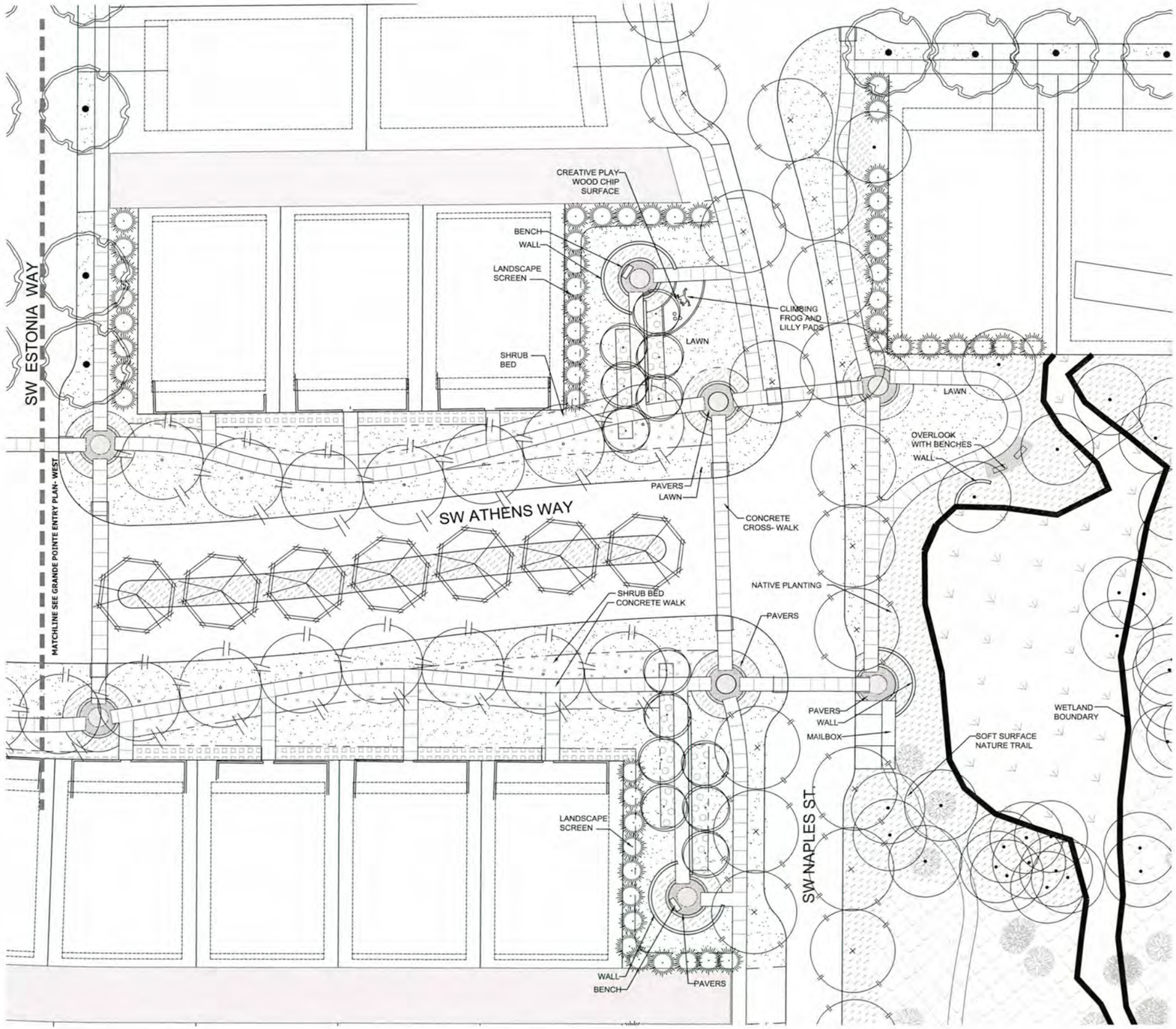

1 **GRANDE POINTE ENTRY PLAN- EAST**
SCALE: 1" = 20'

LEGEND

- PAVERS ALTERNATING COLORS
- 8" WIDE FREE STANDING WALL
- PLAY AREA EQUIPMENT CLIMBING FROG AND LILLY PADS
- BENCH
- SCORED CONCRETE SIDEWALK CAST IN PLACE
- OVERLOOK
- 20 X 20 SHELTER
- PICNIC TABLE
- TRASH RECETACLE
- 4 TOP TABLE AND CHAIR
- STEPPING STONES CAST IN PLACE
- BIRD STAND / HOUSE
- BIKE RACK
- SOFT SURFACE NATURE TRAIL
- ENTRY MONUMENT
- PLAY EQUIPMENT
- ORNAMENTAL GRASSES
- NATIVE PLANTING
- LOW PEDESTRIAN ZONE PLANTING
- LOW ORNAMENTAL PLANTING
- MEDIUM ORNAMENTAL PLANTING
- LAWN
- EXITING PLANTING TO REMAIN INVASIVES TO BE REMOVED

NOTES:

1.) SEE PLANT LEGEND SHEET L8 FOR ADDITIONAL INFORMATION
2.) LOTS ABUTTING SROZ OPEN SPACE ARE TO HAVE 6' FULL VIEW FENCING ALONG SIDE AND REAR LOT LINES

SCALE
20 0 10 20
1 INCH = 20 FEET

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PDP 7S
VILLEBOIS

Final Development Plan

ENTRY PLAN EAST

DATE 2/05/14

L6

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NATURE TRAIL ACTIVITY AREAS

Description
Nature Trail Activity Areas are a community feature located along nature paths throughout Open Space 3. There are two types of Nature Trail Activity Areas: active and passive. Active areas are designed for children of different age groups and include physical challenge activities. Passive areas are intended for all ages. Design concepts for active and passive areas are listed in the table to the right.

These areas provide opportunities to explore and engage with the significant natural resources that surround the local residential neighborhood. Children benefit from opportunities for both structured and unstructured environmental education. Hands-on interaction with natural areas promotes healthy childhood development.

Safety will be ensured through regular maintenance and compliance with the required rules and specifications. The Homeowner's Association will be responsible for developing and implementing a Maintenance Plan and Safety Review.

Nature Trail Activity Areas are designated locations, marked by entry signs and/or physical markers. The preservation of SROZ areas will be carefully considered in the design of Activity Areas. Natural materials, on-site materials, nature-themed materials, and soft surfaces are used to construct the activity areas in order to blend activity areas with the natural surroundings and to limit impact to healthy habitat. In addition, impacts to natural resource areas are limited by concentrating opportunities for recreational activity in OS-3 to designated areas.

Rules & Specifications
Nature Trail Activity Areas will be owned and maintained by the Homeowner's Association (HOA). The HOA will be responsible for developing, regularly updating, and implementing a Maintenance Plan for Nature Trail Activity Areas. A required component of the Maintenance Plan will be a Safety Review, which shall be conducted by a professional parks consultant or City parks inspector.

The following rules and specifications are intended to guide Nature Trail Activity Area development and maintenance to ensure the safety of activity areas and the protection of natural resources. These rules and specifications shall also be incorporated into the development of the Maintenance Plan.

- Physical challenge activities shall be composed of natural or on-site materials to the extent feasible. Other materials shall be nature-themed and shall be designed to blend into the natural landscaped with minimal impact to healthy habitat.
- Invasive non-native or noxious vegetation shall be removed.
- Stations must be anchored. No trail activity structures installed on-site may be mobile, e.g. have the ability to roll or tip.
- Balance stations shall be less than 30" in height.
- Fall zone shall be bark or wood chips (no treatment).

CONCEPTUAL PLAN
Not to Scale

Nature Trail Activity Area Examples

Nature Trail

Nature Trail Activity Area (Passive)

Nature Trail Activity Area (Active)

Passive Areas
Stump seating
Obstacle walk
Story telling pole
Benches
Listening station
Spring/autumn color
Smell garden
Butterfly observation
Bird houses
Nature art
Find the 13 worms
Plant ID labels

Active Areas
Stump steppers
Covered net climber
Log climber
Musical instruments
See-saws
Log fort
Tee-pee
Rope bridge
Net climber
Crawl-through log
Digging areas
Tree cookies

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Final Development Plan

Nature Trail Activity Area Plan

DATE 2/07/14

L7

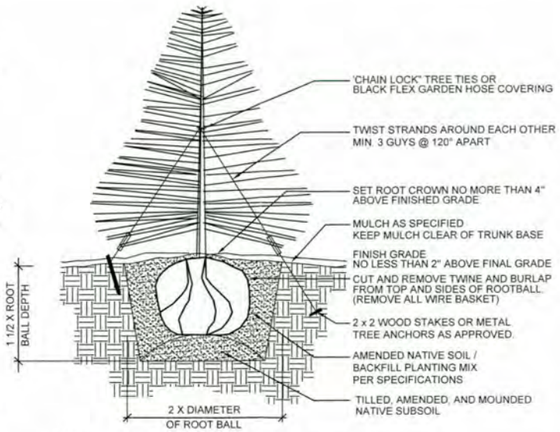
LEGEND:

STREET TREES
SEE STREET TREE PLAN SHEET L1 FOR
ADDTIONAL INFORMATION

	CERCIDOPHYLLUM JAPONICUM / KATSURA TREE 2" cal.	
	CRATAEGUS VIRDIS 'WINTER KING' / WINTER KING HAWTHORNE 2" cal.	
	FAGUS SYLVATICA / EUROPEAN BEECH 2 1/2" cal.	
	FRAXINUS AMER. 'AUTUMN APPLAUSE' / AUTUMN APPLAUSE ASH 2" cal.	
	TILIA x EUCHLORA / CREIMEAN LINDEN 2" cal.	
	ZELKOVA SERR. 'GREEN VASE' / GREEN VASE ZELKOVA 2" cal.	
	SHADE REES 2' CAL.	RED SUNSET MAPLE / Acer rubrum 'Franksred' EMERALD VASE LACEBARK ELM / Ulmus parvifolia 'Emerald Vase' ENGLISH OAK / Quercus robur WHITE OAK / Quercus alba RED OAK / Quercus rubra AMERICAN HOPHORNBEAM / Ostrya virginiana BLOODGOOD LONDON PLANETREE - Platanus acerifolia 'Bloodgood'
	SMALL ORNAMENTAL TREES 2" CAL.	CHINESE REDBUD / Cercis chinensis: 2" Cal., B&B CAPITAL SELECT FLOWERING PEAR / Pyrus calleryana 'Capital' : 2" Cal., B&B BLIREIANA PLUM / Prunus x blireiana: 2" Cal. B&B CHINESE KOUSA DOGWOOD / Cornus kousa 'Chinensis': 2" Cal., B&B JAPANESE MAPLE / ACER PALMATUM : 8' HT. YOSHINO FLOWERING CHERRY / PRUNUS X YEDOENSIS: 2" CAL., B&B
	COLUMNAR EVERGREEN TREES 8' HGT.	LELAND CYPRESS / CUPRESSOCYPARIS LEYLANDII: 8'-10' HT., B&B PYRAMIDAL ATLAS CEDAR / CEDRUS ATLANTICA 'FASTIGIATA' INCENSE CEDAR / Calocedrus decurrens COLUMNAR EASTERN WHITE PINE / Pinus strobus fastigiata
	PEDESTRAIN ZONE LOW ORNAMENTAL PLANTINGS 1-2 GAL.	BLUE OAT GRASS / Helictotrichon sempervirens DWARF FOUNTAIN GRASS /PENNISETUM ALOPECUROIDES 'HAMELN' SCARLET MEIDILAND ROSE / ROSA MEIDILAND 'MEIKROTAL' DAYLILIES / HEMEROCALLIS 'STELLA DORO', 'LA PECHE' AND HEATH / ERICA CARNEA 'KING GEORGE', ERICDXDARLYENSIS 'CD EASON' ENGLISH LAVENDAR VARITES / LAVANDULA ANGUSTIFOLIA VAR.
	ORNAMENTAL GRASSES AND GROUNDCOVERS 1-2 GAL.	DWARF FOUNTAIN GRASS /Pennisetum alopecuroides ' Hamlen' BLUE OAT GRASS / Helictotrichon sempervirens PURPLE FOUNTAIN GRASS /PENNISETUM SETACEUM 'RUBRUM' "MASSACHUSETTS KINNIKINICK' / ARCTOSTAPHYLOS UVA-URSI 'MASS.' BEARBERRY COTONEASTER / COTONEASTER DAMMERI SCARLET MEIDILAND ROSE / ROSA MEIDILAND 'MEIKROTAL'
	MEDIUM TO LARGE ORNAMENTAL SHRUBS 3 GAL.	SHOWA-NO-SAKAE CAMELLIA / CAMELLIA SASANQUA 'SHOWA-NO-SAKAE' FOREST FLAME PIERIS / PIERIS JAPONICA 'FOREST FLAME' RHODODENDRON 'JEAN MARIE DE MONTEGUE' 'NIKKO BLUE' HYDRANGEA / HYDRANGEA MACROPHYLLA 'NIKKO BLUE' RENAISSANCE SPIREA / SPIREA VANHOUTTEI 'RENAISSANCE' DOUBLFILE VIBURNUM / VIBURNUM P. TOMENTOSUM: 24"-30" HT. THUNBERG SPIREA / SPIREA THUNBERGII
	SMALL ORNAMENTAL SHRUBS 3 GAL.	DAVID VIBURNUM / VIBURNUM DAVIDII ISANTI REDOSER DOGWOOD / CORNUS SERICEA 'ISANTI' COMPACT JAPANESE HOLLY / ILEX CRENATA 'COMPACTA' 'CRIMSON PYGMY' BARBERRY / BERBERIS THUNBERGII 'CRIMSON PYGMY' AZALEA / VARIES ANTHONY WATERER SPIREA / SPIREA BUMALDA 'ANTHONY WATERER'
	NATIVE UNDERSTORY PLANT MIX 2 GAL. INVASIVE SPECIES TO BE REMOVED	RED FLOWERING CURRENT /Ribes sanguineum OREGON GRAPE / Mahonia nervosa PACIFIC NINEBARK / Physocarpus capitatus SNOWBERRY / Symphorocarpus alba RED TWIG DOGWOOD / Cornus sericea: SHINY LEAF SPIRAEA / Spiraea betulifolia SALAL / Gaultheria shallon
	WATER QUALITY FACILITY	TO BE PLANTED PER CITY OF WILSONVILLE STANDARDS: 3 EVERGREEN TREES / 1000 S.F. 6' HEIGHT 2 DECIDUUS TREES / 1000 S.F., 1.6" CAL. 30 SHRUBS / 1000 S.F., 1 GAL 1 WETLAND PLANT / 2 SF. EMERGENT ZONE, AQUATIC PLANTS, PLUGS
	LAWN	FINE LAWN, SEED
	EXISTING PLANTINGS TO REMAIN INVASIVE SPECIES TO BE REMOVED	
	EXISTING WETLAND TO REMAIN	
	EXISTING TREES TO REMAIN	

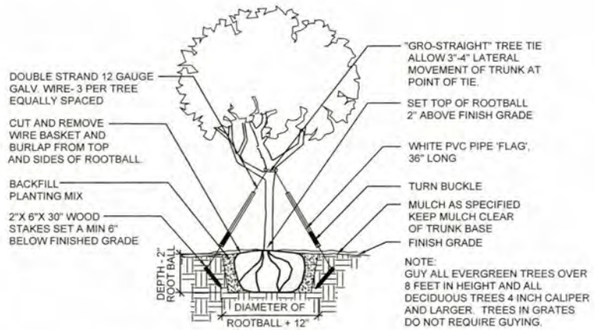
general notes: landscape plan

1. the contractor shall verify with owner and utility companies the locations of all utilities prior to construction. the contractor shall determine in the field the actual locations and elevations of all existing utilities whether shown on the plans or not. the contractor shall call utility protection service 72 hours prior to construction.
2. the contractor shall examine finish surface, grades, topsoil quality and depth. do not start any work until unsatisfactory conditions have been corrected. verify limits of work before starting.
3. contractor to report all damages to existing conditions and inconsistencies with plans to odr.
4. all plant masses to be contained within a bark mulch bed, unless noted otherwise.
5. bed edge to be no less than 12" and no more than 18" from outer edge of plant material branching. where ground-cover occurs, plant to limits of area as shown.
6. contractor shall maintain positive drainage in all landscape beds and all lawn areas.
7. contractor to fine grade and rock-hound all turf areas prior to seeding, to provide a smooth and continual surface, free of irregularities (bumps or depressions) & extraneous material or debris.
8. quantities shown are intended to assist contractor in evaluating their own take-offs and are not guaranteed as accurate representations of required materials. the contractor shall be responsible for his bid quantities as required by the plans and specifications. if there is a discrepancy between the number labeled on the plant tag and the quantity of graphic symbols shown, the graphic symbol quantity shall govern
9. coordinate landscape installation with installation of underground sprinkler and drainage systems.
10. with the exception of those trees indicated on the tree removal plan, contractor shall not remove any trees during construction without the express written consent of the odr. existing vegetation to remain shall be protected as directed by the odr.
11. where proposed tree locations occur under existing overhead utilities or crowd existing trees, notify odr to adjust tree locations.
12. landscape maintenance period begins immediately after the completion of all planting operations and written notification to the odr. maintain trees, shrubs, lawns and other plants until final acceptance or 90 days after notification and acceptance, whichever is longer.
13. remove existing weeds from project site prior to the addition of organic amendments and fertilizer. apply amendments and fertilizer per the recommendations of the soil analysis from the site.
14. back fill material for tree and shrub planting shall contain: one part fine grade compost to one part topsoil by volume, bone meal per manufacture's recommendation, and slow release fertilizer per manufacturer's recommendation.
15. ground covers and perennials shall be planted with a maximum 2 inch cover of bark mulch with no foliage covered.
16. contractor shall obtain written approval for all plant material substitutions from the landscape architect prior to installation. plant substitutions without prior written approval that do not comply with the drawings and specifications may be rejected by the landscape architect at no cost to the owner. these items may be required to be replaced with plant materials that are in compliance with the drawings.
17. all plant materials shall be nursery grown with healthy root systems and full branching, disease and insect free and without defects such as sun scald, abrasions, injuries and disfigurement.
18. all plant material shall be installed at the size and quantity specified. the landscape architect is not responsible for sub-standard results caused by reduction in size and/or quantity of plant materials.

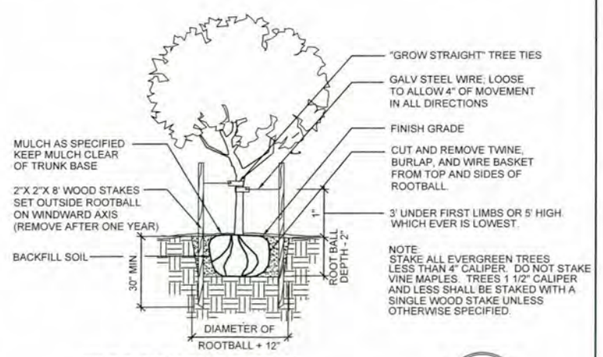


NOTE:
1. TIE BRIGHTLY COLORED P.V.C. RIBBON ON WIRE GUYS. (MIN. 1 PER GUY.))
2. IN LAWN AREAS CUT TREE CIRCLE AT 12' RADIUS FROM TRUNK

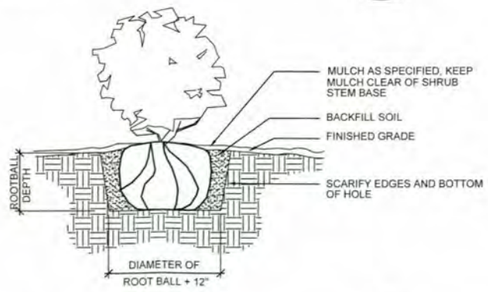
CONFIER TREE GUYING DETAIL — 1 / L8
SCALE: N.T.S



TREE GUYING DETAIL — 2 / L8
SCALE: N.T.S



TREE STAKING DETAIL — 3 / L8
SCALE: N.T.S



SHRUB PLANTING DETAIL — 4 / L8
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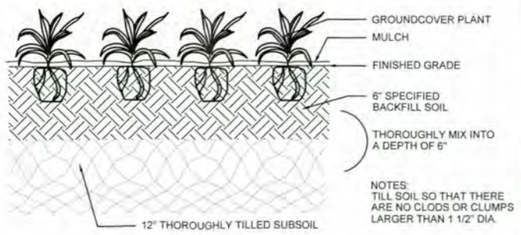

GROUNDCOVER PLANTING DETAIL — 5 / L8
SCALE: N.T.S

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Final Development Plan

PLANT LEGEND AND DETAILS

DATE 2/05/14

L8

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WLG 16x28

ROOF COLOR: WEATHERED COPPER (AEP SPAN)
STONE VENEER: HUDSON BAY COUNTRY LEDGESTONE
(MUTUAL MATERIALS)

CONCEPTUAL SHELTER 1 / L9

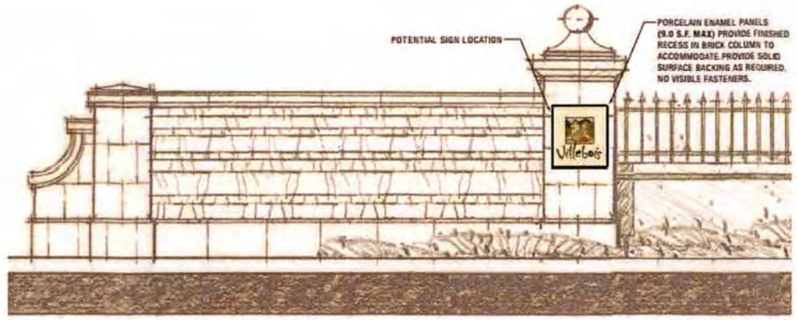
SCALE: N.T.S

FROG CLIMBER 2 / L9

SCALE: N.T.S

FROG LILY PAD PEDESTALS 3 / L9

SCALE: N.T.S



SECONDARY SITE IDENTIFIER 4 / L9

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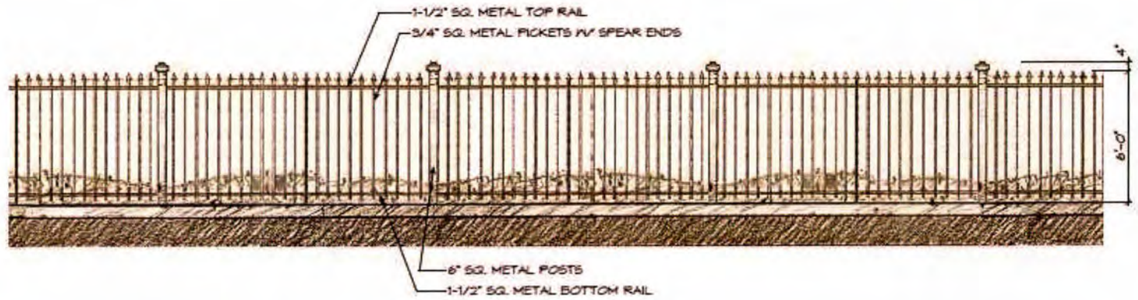
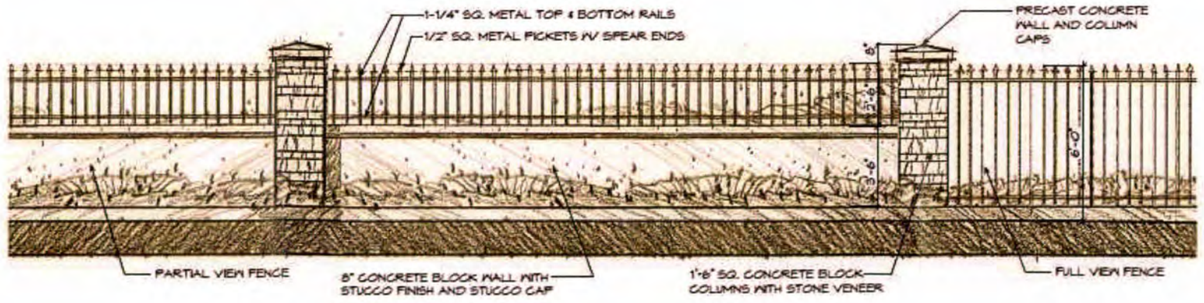


SROZ-FULL VIEW FENCE 5 / L9

SCALE: N.T.S



ENHANCED PARTIAL VIEW FENCING 6 / L9

SCALE: N.T.S

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VILLEBOIS

Final Development Plan

DETAILS

DATE 2/05/14

L9

GRANDE POINTE AT VILLEBOIS

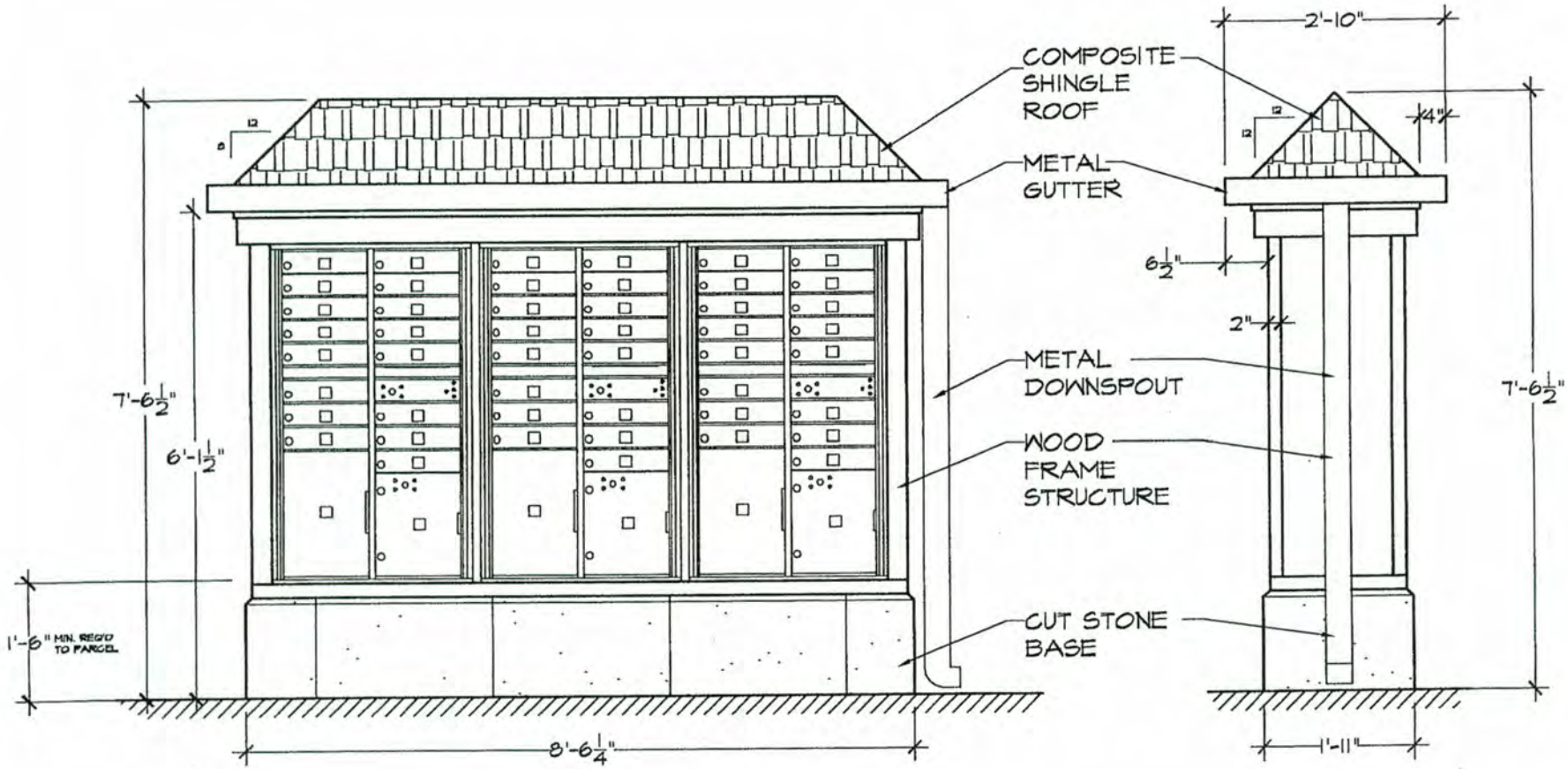
Lot Layout No. 15

Grande Pointe at Villebois

Lot Layout No. 15

Grande Pointe at Villebois

Lot Layout No. 15



FRONT ELEVATION

SIDE ELEVATION

VILLEBOIS MAIL BOX STRCUTURE

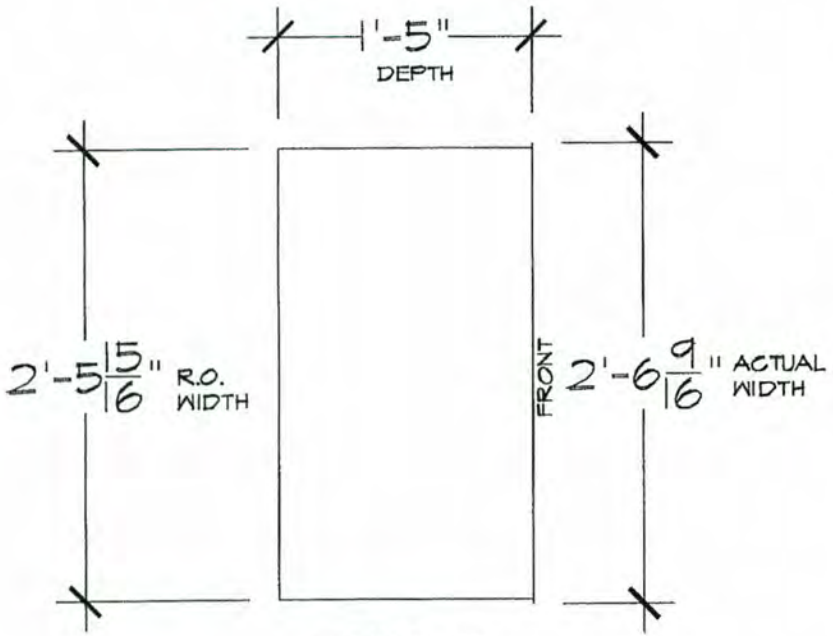
UPDATED ELEVATIONS PER NEW USPS REQUIREMENTS

SCALE: ½=1'-0"

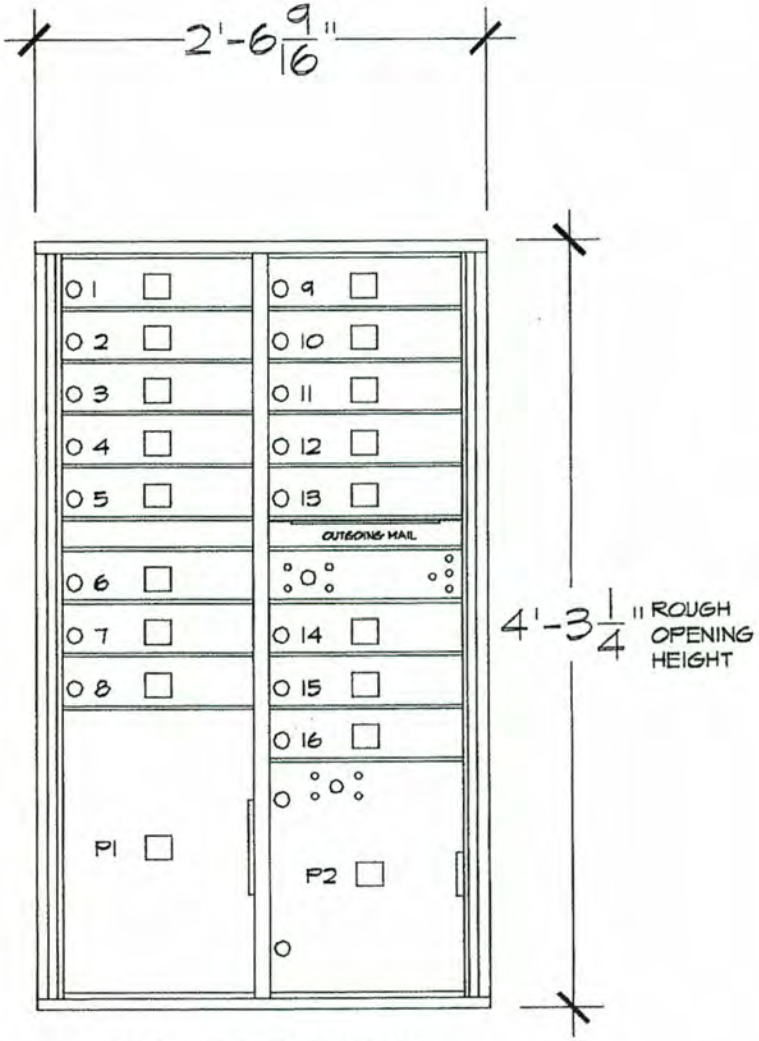
MANUFACTURER: AUTH-FLORENCE
HORIZONTAL MAILBOX SYSTEMS
4CCT2-16

IVERSON ARCHITECTS

0112 03-30-06



PLAN VIEW



MAIL BOX ELEVATION

VILLEBOIS MAIL BOX STRUCTURE

UPDATED ELEVATIONS PER NEW USPS REQUIREMENTS
SCALE: 1"=1'-0"

MANUFACTURER: AUTH-FLORENCE
HORIZONTAL MAILBOX SYSTEMS
4CCT2-16

IVERSON ARCHITECTS
0112 03-30-06