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City of Wilsonville
Land Use Application

Wilsonville Fun Center



Site & Architectural Design Review for Major Building Expansion and Remodel, with Modernized Facade & Modified Master Sign Plan

April 5, 2018

APPLICANT:

Darren Harmon, General Manager
Wilsonville Family Fun Center
29111 SW Town Center Loop W.
Wilsonville, OR 97070
503-685-5000, ext. 11

ARCHITECTURE/ENGINEERING:

Kim Vandenberg
Paradigm Design. Inc.
550 3 Mile Road N.W., Suite B
Grand Rapids, MI 49544
616-785-5589





29799 SW Town Center Loop E, 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

Pre-Application Meeting Date: 11-2-17

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

Applicant:

Name: Wilsonville Land Partnership
 Company: Wilsonville Family Fun Center
 Mailing Address: 29111 SW Town Center Loop W.
 City, State, Zip: Wilsonville, OR 97070
 Phone: 503-685-5000x102 Fax: _____
 E-mail: darrenh@fun-center.com

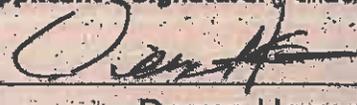
Authorized Representative:

Name: Darren Harmon
 Company: Wilsonville Family Fun Center
 Mailing Address: 29111 SW Town Center Loop W
 City, State, Zip: Wilsonville, OR 97070
 Phone: 503-685-5000x102 Fax: _____
 E-mail: darrenh@fun-center.com

Property Owner:

Name: Same as
 Company: _____
 Mailing Address: _____
 City, State, Zip: _____
 Phone: _____ Fax: _____
 E-mail: _____

Property Owner's Signature:

Printed Name: _____ Date: _____
Applicant's Signature: (if different from Property Owner)

 Printed Name: Darren Harmon Date: 4/9/2018

Site Location and Description:

Project Address if Available: 29111 SW Town Center Loop W., Wilsonville, OR 97070 Suite/Unit _____
 Project Location: _____
 Tax Map #(s): T35RW 14D Tax Lot #(s): 100 & 109 County: Washington Clackamas

Request:

Master plan review for building addition and removal of Batting Cages.

Project Type: Class I Class II Class III

Residential Commercial Industrial Other: _____

Application Type(s):

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input checked="" type="checkbox"/> Planned Development | <input type="checkbox"/> Preliminary Plat | <input checked="" type="checkbox"/> Site Design Review |
| <input type="checkbox"/> Request for Special Meeting | <input type="checkbox"/> Request for Time Extension | <input type="checkbox"/> Signs | <input checked="" type="checkbox"/> Stage II Final Plan |
| <input type="checkbox"/> SROZ/SRIR Review | <input type="checkbox"/> Staff Interpretation | <input checked="" type="checkbox"/> Stage I Master Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Type C Tree Removal Plan | <input checked="" type="checkbox"/> Tree Permit (B or C) | <input type="checkbox"/> Temporary Use | <input type="checkbox"/> Other (describe) |
| <input type="checkbox"/> Villebois SAP | <input type="checkbox"/> Villebois PDP | <input type="checkbox"/> Villebois FDP | |
| <input type="checkbox"/> Zone Map Amendment | <input type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |

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ARCHITECTURE/ENGINEERING:

Kim Vandenberg
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550 3 Mile Road N.W., Suite B
Grand Rapids, MI 49544
616-785-5589

FACT SHEET:

Project Name: Wilsonville Family Fun Center

Type of Application: PDC – Stage II, Final Development Plan, and Design Review for Major Remodel, Expansion, with Modernized Façade & Modified Master Sign Plan

Tax Lot(s): 100 & 109, 3S 1W 14D

Lot Size: 258,030 square feet, or 5.92 Acres

Zoning: PDC, Planned Development Commercial

Existing Land Use: Family Fun Center & Bullwinkle’s Restaurant

Site Location: 29111 SW Town Center Loop W.
Wilsonville, OR 97070

Applicant/Owner: Wilsonville Land Partnership
Db: Wilsonville Family Fun Center
Darren Harmon, General Manager
29111 SW Town Center Loop W.
Wilsonville, OR 97070
503-685-5000, ext 11

Design Team:

Planning

Pioneer Design Group
9020 SW Washington Sq. Rd. #170
Portland, OR 97223
Contact: Ben Altman
971-708-6258
Email: baltman@pd-grp.com

Architecture/Engineering

Paradigm Design A & E
550 3 Mile Road N.W., Suite B
Grand Rapids, MI 49544
Contact: Kim Vandenberg
616-785-5589
Email: kvandenberg@paradigmae.com

Introduction – Project Description

This application is submitted on behalf of Wilsonville Land Partnership, dba Wilsonville Family Fun Center. Darren Harmon, General Manager is an authorized signer for Wilsonville Land Partnership.

The subject property is Tax Lots 100 and 109, Map T3S R1W 14D. The street address is 29111 SW Town Center Loop W. The applicant is proposing a major remodel, with the addition of a 16 lane bowling alley.

Existing Development Plan

The Fun Center was initially approved and developed under Case Files: 92PC05, 92PC14, 94DR14, 95DR07, Res 984, and Res 929. The initial facility opening was December 1994. The case file history is summarized in the Table below.

Family Fun Center – DRB files

TL 100 & 109 Sec 14D

29111 SW Town Center Loop W.

92DR32	Family Fun Center	Architectural, Sign & Landscape Variance	Approved with conditions See 92PC05, 92PC14, 94DR14, 95DR07, Res. 984, Res. 929
92PC05	Family Fun Center	Modify Stage I to include recreation center, Stage II	Approved with conditions See 92DR32, 92PC14
94DR14	Wilsonville Family Fun Center	Arch. revisions / expansion / deletion of Condition No. 18 of Resolution 92DR32	Approved w/ conditions See 92DR32
95DR07	Family Fun Center	Pave Parking Lot, Landscaping & Wall	Approved w/ conditions See 92DR32, 92PC14
98DB10A	Wilsonville Family Fun Center	Appeal tent	Approved with conditions See 92PC05, 98DB10
99DB19	Wilsonville Family Fun Center	Renewal of a 1 year TUP for a tent in the patio area	Approved w/ conditions See 98DB10

00DB27	Wilsonville Family Fun Center and Bullwinkle's Restaurant	Renewal of a one-year TUP for a tent in the patio area	Approved w/conditions See 98DB10, 99DB19
01DB21	Wilsonville Family Fun Center	One-year extension to allow continued use of tent for group activities and seating	Approved w/conditions See 98DB10
02DB17	Wilsonville Family Fun Center	One-year extension to allow continued use of tent on site for group activities and seating	Approved w/conditions See 98DB10, 01DB21
03DB15	Wilsonville Land Partnership / Wilsonville Family Fun Center	1 Yr. TUP Extension Family Fun Center (02DB17)	Approved 90-day See 98DB10, 01DB21, 02DB17
03DB32	Wilsonville Family Fun Center	Stage I Mod., Stage II Final, Site Design Review for bldg. addition	Approved with conditions See 92PC05, 92DR32
DB09-0023	Wilsonville Family Fun Center	Master Sign Plan, with Waiver for freestanding sign height	Approved with conditions
DB12-0070-DB12-0073	Wilsonville Family Fun Center	Stage I Mod., Stage II Final, Site Design Review for Zip Line	Approved with conditions

Current attraction features include:

- Electronic Games (Entertainment Building)
- Restaurant & Event Center (Entertainment Building Addition & Patio)
- Batting Cages (To be removed)
- Miniature Golf Course
- Bumper Boats
- Autotopia Raceway
- Climbing Wall

Proposed Development Plan – Modified Stage I Master Plan

In 2012 the Fun Center added a Zip Line, which has been a very popular attraction. The Stage I Master Plan was updated at that time, identifying planned future phased improvements over the next 3-7 years. These improvements are considered necessary in order to stay current with customer interests and changes in the industry. Several of those phased improvements are the subject of this current land use application for Phase 2 implementation of the Master Plan.

The family entertainment industry is constantly changing and the games are trending towards larger features. The Center has run out of space in the current building to accommodate the current amount of guests being served. Partly because of northwest weather patterns,

especially during the winter, guests desire more indoor activities, which cannot be accommodated with the current building configuration.

Therefore the Fun Center is now proposing a major architectural expansion and modernization of the Entertainment Building. This Remodel will include the following:

- Removing the batting cages;
- Replace cages with additional parking, storm drainage facility and landscaping;
- Expand the entertainment building by 16,018 square feet, one story, with significant interior remodel of the existing:
 - adding new games;
 - Reducing and remodeling the restaurant, reducing area by 1,772 square feet and seating by 75;
 - Adding 16 bowling lanes, with seating; and support areas
- Major modernization of the exterior façade, including new entry plaza; and
- Reconfiguring parking on east side around new building addition.

The building expansion will be on the east side and will replace some existing parking. In addition to the bowling lanes, the uses within the expanded and remodeled building could be any of the following:

1. Indoor attractions like Bumper Cars
2. Carnival Spinning ride
3. Multi-person motion based theater.
4. More Arcade Games
5. Large Climbing Structure.

The building addition will create a new primary entry plaza for the building. The entry plaza will have a direct pedestrian link from the sidewalk on the Loop Road. The entire front façade of the building will also be modernized to enhance the pedestrian and driver visual environment.

Architectural Façade design changes to Wilsonville Family Fun Center and Restaurant will integrate a 16 lane bowling alley addition to an existing multi-venue family centered facility. Design finish materials will include use of insulated metal cladding (vertical and horizontal orientation) at the addition with accents of cultured stone veneer, flush metal panel, wood timber, and kinetic wall (wind driven movement) panels. The color scheme will be neutral in application with the use of beige, warm greys and tonal brown hues in the material types previously specified. A freshening of the existing building will include new paint at existing fractured face and fluted concrete block facades along with an updated paint finish to existing standing seam metal roofing. Additional coordinating accents of flush metal panel fascia and cultured stone veneers will also be applied to the existing building facade to create a cohesive contemporary look between the building addition and existing building exterior facades.

Land Use Area Allocation

We have provided the following Table 1, which reflects the area calculations, for existing and proposed lot coverage, based on the figures listed in case file DB12-0070, with updates related to the current proposed building expansion and remodel.

Table 1
Primary Land Area Coverage
Tax Lots 100 and 109

Type of Use	Existing Area in Square Feet	Proposed Remodel Area in Square Feet	New Percent of Total Area
Entertainment Building (Existing - 2 stories Addition – 1 story)	17,371 Ground Floor Foot Print	33,046 Ground Floor Foot Print	12.8
Outdoor Attractions	69,872	60,074	23.3
Paving/Parking & Misc Ped. & Veh. Circulation	111,299	98,480	38.2
Landscaping	59,507	66,449	25.8
Total	258,049	258,049	100

This application involves a Type III Review by the Development Review Board (DRB). Proposed land use actions include the following:

- PDC - Stage I Master Plan – Modified Phased Development Plan, including architectural modernization and updating attractions;
- PDC - Stage II Development Plans (Phase 2):
- Type C Tree Permit;
- Modified Master Sign Plan; and
- Architectural and Site Design Review.

Surrounding Development

The site is surrounded by existing development including:

- West – Les Schwab Tire Store and I-5 Freeway

- South – Bank, Office Buildings, Theater
- East – NAPA auto Parts; and
- North – Holland Group, Jory Trail Apartment Complex.

Existing Utilities

The subject site is currently served by a full range of urban services. The existing facilities are connected to existing water, storm and sanitary sewer lines located within the Town Center Loop road.

The proposed site and building modifications will add impacts to the existing utility services. All public services are available and adequate to support the proposed development. The following sections address compliance with the Comprehensive Plan and Development Code.

Comprehensive Plan Compliance

The subject property is designated for Town Center Commercial use on the Comprehensive Plan Map. The applied zoning is PDC, Planned Development Commercial, which is consistent with the Plan Map designation. Prior approvals confirmed the entertainment functions as appropriate uses within the Town Center.

The applicant is proposing modifications and modernization to site and building improvements consistent with the overall theme of the Fun Center.

The properties do not include any protected resources (SROZ), and also do not contain areas identified for natural hazards, such as steep slopes or flood plain. And is also not within an Area of Special Concern, but is located within the Town Center.

The City's commercial planning objectives focus on providing commercial centers. The Town Center is one of the identified commercial centers.

The Comprehensive Plan also establishes a public facilities concurrency policy, which is implemented through the zoning and Planned Development, Stage II permit process. There are adequate transportation and public facilities available to serve the proposed development, therefore concurrency compliance is maintained.

CONCLUSION – Comprehensive Plan

The applicant is not proposing any changes to the Comprehensive Plan Map or existing PDC zoning. Prior City approvals confirmed that the Fun Center is an appropriate commercial use within the Town Center.

The proposed site and activity improvements are consistent with the established entertainment uses approved for the site, and therefore will maintain consistency with the Comprehensive Plan Map designation.

Compliance with the applicable PDC zoning and Design Review requirements, which further implement the Comprehensive Plan, are addressed in the following sections of this narrative.

Applicable Review Criteria

Section 4.116. Standards Applying To Commercial Developments In Any Zone.

Any commercial use shall be subject to the applicable provisions of this Code and to the following (.05) All businesses, service or processing, shall be conducted wholly within a completely enclosed building;

RESPONSE: The prior development approvals allowed for outdoor activities as being consistent with the allowed entertainment function being provided.

- (.06) In any Commercial Development directly across the street from any Residential District, the loading facilities shall be at least twenty (20) feet from the street, shall be sited whenever practicable at the rear or side, and if facing a residential area, shall be properly screened. Screening shall be provided in a manner that is compatible with the adjacent residential development in terms of quality of materials and design. Such screening shall effectively minimize light glare and noise levels to those of adjacent residential areas.

RESPONSE: Parcel is adjacent to residential but not directly across the street from any Residential District. Generally, there are no specific minimum lot size or setback standards for commercial uses. The proposed site modifications will occur within the established setbacks, based on prior approvals.

- (.07) Uses shall be limited to those which will meet the performance standards specified in Section 4.135(.05), with the exception of 4.135(.05)(M.)(3.).
- (.08) Corner lots shall conform to the vision clearance standards set forth in Section 4.177.

RESPONSE: Based on prior approvals, the uses incorporated within the Fun Center have all been approved, for compliance with the applicable performance criteria. Generally, there are no specific minimum lot size or setback standards for commercial uses. The proposed site modifications will occur within the established setbacks. The Parcel is not a corner lot.

(.10) Commercial developments generally.

- A. No structure shall be erected closer than the right-of-way line then existing or the officially planned right-of-way of any public, county, or state road.

RESPONSE: The proposed addition is not located where it will impact existing or planned right-of-way.

- B. Minimum Front Yard Setback: None required except when front yard abuts a more restrictive district. When front yard abuts a more restrictive district, setbacks shall be the same as the abutting district.

RESPONSE: The front yard of the Site does not abut a more restrictive district. The addition setback is in-line with the existing building setbacks on-site. Across the street is zoned Planned Development Commercial (PDC).

- C. Minimum Rear Yard Setback: None required except when rear yard abuts a more restrictive district. When rear yard abuts a more restrictive district, setbacks shall be the same as for the abutting district.

RESPONSE: Site abuts Planned Development Residential. The addition rear setback is no closer than the existing building to the rear property line.

- D. Minimum Side Yard Setback: None required except when side yard abuts a more restrictive district. When side yard abuts a more restrictive district, setbacks shall be one and one-half (1 1/2) times the setback required for the abutting district.

RESPONSE: Site does not abut a more restrictive district – adjacent zoning to the side is Planned Development Commercial Town Center (PDC-TC) the same as the subject site.

- E. Maximum Building Height: Thirty-five (35) feet, unless taller buildings are specifically allowed in the zone.

RESPONSE: The proposed addition is twenty-eight (28) feet in height which is lower than the existing building.

- F. Minimum Lot Size: No limitation, save and except as may otherwise be affected by other provisions of this Code.

RESPONSE: The existing property is 5.9 acres and will provide adequate space for the proposed uses.

- G. Maximum Lot Coverage: No limitation, save and except as may otherwise be affected by other provisions of this Code.

RESPONSE: As reflected in Table 1 above, the applicant is proposing to meet all lot coverage requirements for parking, landscaping and other development standards.

- H. Minimum Street Frontage: No limitation, save and except as may be necessary to provide minimum access requirements.

RESPONSE: Current parcel has 615+/- feet of frontage on Town Center Loop West which is adequate for the existing two entrances. The two existing entrances conform to prior approvals. No additional access entrances are being proposed.

(.12) Off-Street Parking is to be as specified in Section 4.155.

RESPONSE: See response under Section 4.155. The requirements for parking are determined based on the proposed square foot of buildings and the uses proposed therein. Parking requirements were previously set and in 2012 the Zip Line only impacted 1 existing parking space. The proposed modernization includes revisions to the parking area, which are addressed later in this report.

It is noted that this is a family or group oriented facility so customers typically are not arriving in single-occupant vehicles. Daily operations, including peak periods, have not shown any parking deficiency.

(.13) Signs are subject to the standards of Sections 4.156.01 through 4.156.11. [Amended by Ord. No. 704, 6/18/12]

RESPONSE: See response under Section 4.156

Section 4.131.05. PDC-TC (Town Center Commercial) Zone

(.01) Purpose: The purpose of this zoning is to permit and encourage a Town Center, adhering to planned commercial and planned development concepts, including provision for commercial services, sales of goods and wares, business and professional offices, department stores, shopping centers and other customer-oriented uses to meet the needs of the Wilsonville community as well as to meet the general shopping and service needs on an area-wide basis, together with such multiple family residential facilities, open space, recreational and park areas, and public uses facilities as may be approved as part of the Town Center compatible with the Comprehensive Plan of the City.

(.02) Examples of uses that are typically permitted:

- A. Retail sales.
- B. Planned development permitted commercial uses, including department stores and shopping centers.
- C. Banking and investment services.
- D. Public facilities complex, Governmental offices, and facilities, hospitals, health centers and office complex for the furnishing of professional services, including but not restricted to medical, legal, architectural and engineering.
- E. Planned multiple-dwelling facilities, including motels, apartments and condominiums as may be approved by the Development Review Board.
- F. Such other and further uses as may be approved by the Development Review Board compatible with the Comprehensive Plan.

RESPONSE: Existing uses have been previously approved. Bowling (entertainment) is listed below as an example of uses that are typically recommended.

Section 4.118. Standards applying to all Planned Development Zones:

- (.01) Height Guidelines: In "S" overlay zones, the solar access provisions of Section 4.137 shall be used to determine maximum building heights. In cases that are subject to review by the Development Review Board, the Board may further regulate heights as follows:
- A. Restrict or regulate the height or building design consistent with adequate provision of fire protection and fire-fighting apparatus height limitations.
 - B. To provide buffering of low density developments by requiring the placement of three or more story buildings away from the property lines abutting a low density zone.
 - C. To regulate building height or design to protect scenic vistas of Mt. Hood or the Willamette River.

RESPONSE: The subject site is not in a "S" overlay zone. Building Height of the addition is twenty-eight (28) feet which is lower than the existing building height. The proposed building addition will be two-stories, generally consistent with the existing structure. With 125 feet of horizontal separation to the apartment buildings to the north, the applicant believes that there is no need for any additional setback or special screening.

There are no identified scenic views or vistas from this property that require special height considerations.

Therefore the application complies with this Section.

- (.02) Underground Utilities shall be governed by Sections 4.300 to 4.320. All utilities above ground shall be located so as to minimize adverse impacts on the site and neighboring properties.

RESPONSE: All utilities to the subject site are already in place and their overall layout will not be significantly changed with this project.

- (.03) Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may:
- A. Waive the following typical development standards:
 - 1. minimum lot area;
 - 2. lot width and frontage;
 - 3. height and yard requirements;
 - 4. lot coverage;
 - 5. lot depth;

6. street widths;
7. sidewalk requirements;
8. height of buildings other than signs;
9. parking space configuration and drive aisle design;
10. minimum number of parking or loading spaces;
11. shade tree islands in parking lots, provided that alternative shading is provided;
12. fence height;
13. architectural design standards;
14. transit facilities; and
15. On-site pedestrian access and circulation standards; and
16. Solar access standards, as provided in section 4.137.

[Amended by Ord. #719, 6/17/13.]

- B. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:
 1. open space requirements in residential areas;
 2. minimum density standards of residential zones;
 3. minimum landscape, buffering, and screening standards;
- C. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways, and the action taken will not violate any applicable federal, state, or regional standards:
 1. maximum number of parking spaces;
 2. standards for mitigation of trees that are removed;
 3. standards for mitigation of wetlands that are filled or damaged; and
 4. trails or pathways shown in the Parks and Recreation Master Plan.
- D. Locate individual building, accessory buildings, off-street parking and loading facilities, open space and landscaping and screening without reference to lot lines; and
- E. Adopt other requirements or restrictions, inclusive of, but not limited to, the following:
 1. Percent coverage of land by buildings and structures in relationship to property boundaries to provide stepped increases in densities away from low-density development.
 2. Parking ratios and areas expressed in relation to use of various portions of the property and/or building floor area.
 3. The locations, width and improvement of vehicular and pedestrian access to various portions of the property, including portions within abutting street or private drive. [amended by Ord. 682, 9/9/10]
 4. Arrangement and spacing of buildings and structures to provide appropriate open spaces around buildings.

5. Location and size of off-street loading areas and docks.
6. Uses of buildings and structures by general classification, and by specific designation when there are unusual requirements for parking, or when the use involves noise, dust, odor, fumes, smoke, vibration, glare or radiation incompatible with present or potential development of surrounding property. Such incompatible uses may be excluded in the amendment approving the zone change or the approval of requested permits.
7. Measures designed to minimize or eliminate noise, dust, odor, fumes, smoke, vibration, glare, or radiation which would have an adverse effect on the present or potential development on surrounding properties.
8. Schedule of time for construction of the proposed buildings and structures and any stage of development thereof to insure consistency with the City's adopted Capital Improvements Plan and other applicable regulations.
9. A waiver of the right of remonstrance by the applicant to the formation of a Local Improvement District (LID) for streets, utilities and/or other public purposes.
10. Modify the proposed development in order to prevent congestion of streets and/or to facilitate transportation.
11. Condition the issuance of an occupancy permit upon the installation of landscaping or upon a reasonable scheduling for completion of the installation of landscaping. In the latter event, a posting of a bond or other security in an amount equal to one hundred ten percent (110%) of the cost of the landscaping and installation may be required.
12. A dedication of property for streets, pathways, and bicycle paths in accordance with adopted Facilities Master Plans or such other streets necessary to provide proper development of adjacent properties.

RESPONSE: *This project does not require the waiving of any standards.*

As discussed later under Section 4.156, the Development Code does not set specific parking standards for this particular type of multi-function entertainment facility. Prior approved parking appears to have been based on random ratios, rather than any set standards. Typical customers at the Fun Center will utilize multiple attractions during any single visit, so a straight allocation of a set ratio by square footage does not seem appropriate. Therefore the applicant has coordinated with DKS in evaluating the parking requirement, and does not believe any waiver is necessary.

- (.09) Habitat-Friendly Development Practices. To the extent practicable, development and construction activities of any lot shall consider the use of habitat-friendly development practices, which include:
- A. Minimizing grading, removal of native vegetation, disturbance and removal of native soils, and impervious area;
 - B. Minimizing adverse hydrological impacts on water resources, such as using the practices described in Part (a) of Table NR-2 in Section 4.139.03, unless their use is prohibited by

an applicable and required state or federal permit, such as a permit required under the federal Clean Water Act, 33 U.S.C. §§1251 et seq., or the federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and including conditions or plans required by such permit;

- C. Minimizing impacts on wildlife corridors and fish passage, such as by using the practices described in Part (b) of Table NR-2 in Section 4.139.03; and
- D. Using the practices described in Part (c) of Table NR-2 in Section 4.139.03. [Section 4.118(.09) added by Ord. # 674 11/16/09]

RESPONSE: The proposed expansion area is already paved and in use by the business as parking and drive area. There are no protected or sensitive natural areas or wildlife habitats associate with this development. The site is already developed, and excavation and grading will be consistent with existing site conditions. Trees will be preserved where feasible and added as needed. Storm drainage is designed consistent with City standards.

Section 4.140. Planned Development Regulations.

(.04) Professional Design.

- A. The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.
- B. Appropriate professionals shall include, but not be limited to the following to provide the elements of the planning process set out in Section 4.139:
 - 1. An architect licensed by the State of Oregon;
 - 2. A landscape architect registered by the State of Oregon;
 - 3. An urban planner holding full membership in the American Institute of Certified Planners, or a professional planner with prior experience representing clients before the Development Review Board, Planning Commission, or City Council; or
 - 4. A registered engineer or a land surveyor licensed by the State of Oregon.
- C. One of the professional consultants chosen by the applicant from either 1, 2, or 3, above, shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.

RESPONSE: The professionals listed in the table below are being utilized on this project.

Profession	Name	Company
Architect	William Brunner	Paradigm Design, Inc.
Civil Engineer	John Walsh	Paradigm Design, Inc.
Planner	Ben Altman	Pioneer Design Group
Landscape Architect	Sue Mathis	Sue Mathis Landscape
Survey	Harry Salo	Andy Paris & Associates, Inc.

<i>Geotechnical</i>	<i>Tom Ginsbach</i>	<i>Northwest Geotech, Inc.</i>
<i>Traffic Impact Study</i>	<i>Scott Mansur</i>	<i>DKS</i>

(.05) D. All planned developments require a planned development permit. The planned development permit review and approval process consists of the following multiple stages, the last two or three of which can be combined at the request of the applicant:

1. Pre-application conference with Planning Department;

RESPONSE: Pre-application meeting was held on 11-02-2017.

(.07) Preliminary Approval (Stage One):

A. Applications for preliminary approval for planned developments shall:

1. Be made by the owner of all affected property or the owner's authorized agent; and
2. Be filed on a form prescribed by the City Planning Department and filed with said Department.
3. Set forth the professional coordinator and professional design team as provided in subsection (.04), above.
4. State whether the development will include mixed land uses, and if so, what uses and in what proportions and locations.

RESPONSE: The existing development does not include mixed land uses. This application represents implementation of master planned improvements identified in 2012. The proposed improvements are consistent with the approved Stage I Master Plan.

Section 4.133.02. Where These Regulations Apply

The provisions of this Section shall apply to land use applications subject to Section 4.004, Development Permit Required, for parcels wholly or partially within the IAMP Overlay Zone, as shown on Figure I-1. Any conflict between the standards of the IAMP Overlay Zone and those contained within other chapters of the Development Code shall be resolved in favor of the Overlay Zone.

RESPONSE: Subject Parcel is located within the IAMP Overlay Zone.

Section 4.133.04. Access Management

(.04) Access Approval.

- A. Access to public streets within the IAMP Overlay Zone shall be reviewed for consistency with the IAMP Access Management Plan.
- B. Approval of access to City streets within the IAMP Overlay Zone shall be granted only after joint review by the City and the Oregon Department of Transportation (ODOT). Coordination of this review will occur pursuant to Section 4.133.05(.02).

- C. Access approval is a Class II decision, pursuant to Section 4.030, and is based on the standards contained in this Section, the provisions in Section 4.177 and Section 4.237 of this Code, and the Access Management Plan in the Wilsonville Road Interchange Area Management Plan.
1. Where the recommendations of the Access Management Plan conflict with other access and spacing requirements in Section 4.177 of this Code, the IAMP Access Management Plan shall govern.
 2. Where development proposals are inconsistent with the Access Management Plan, modifications to the Access Management Plan are required pursuant to (.03) in this Section.

RESPONSE: No new access locations are proposed for this site. DKS has prepared a traffic impact report for the proposed improvements, and has concluded that the development meets the planned development permit criteria for level of service.

(.05) Cross-access easements.

- A. Prior to approving access for tax lots that are identified in the Access Management Plan (see Table 3 and Figure 5 in the Wilsonville Road Interchange Area Management Plan), the City shall require that:
1. The applicant demonstrate how cross access can be accomplished for sites contiguous to the subject property or properties, consistent with the circulation and planned local street network shown in the Interchange Area Management Plan;
 2. If access across an adjacent parcel or parcels is necessary for the development of the subject site, a signed cross-access agreement is submitted with the application; and,
 3. For applications reviewed as part of a subdivision approval process, necessary cross-access easements are shown and recorded on the final plat. Access widths shall consistent with City Public Works standards unless based on a Transportation Impact Analysis, developed pursuant to Section 4.133.05(.01) and approved by the City Engineer.

RESPONSE: Cross-access easement (Reciprocal Easement) is currently in place with the Les Schawb Tier Center to the east for shared access.

Section 4.133.05. Administration

(.01) Traffic Impact Analysis.

- A. Purpose. The purpose of this section of the code is to implement Section 660-012-0045 (2) (e) of the State Transportation Planning Rule that requires the City to adopt a process to apply conditions to development proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal in the IAMP Overlay Zone must be reviewed for potential traffic

impacts; when a Traffic Impact Analysis must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Study; and who is qualified to prepare the Study.

- B. **Typical Average Daily Trips.** The latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips, unless a specific trip generation study is approved by the City Engineer. A trip generation study could be used to determine trip generation for a specific land use which is not well represented in the ITE Trip Generation Manual and for which a similar facility is available to count.
- C. **When required, a Traffic Impact Analysis shall be required to be submitted to the City with a land use application, when the following conditions apply:**
 1. **The development application involves one or more of the following actions:**
 - a. **A change in zoning or a plan amendment designation; or**
 - b. **The development requires a Development Permit pursuant to Section 4.004; or**
 - c. **The development may cause one or more of the following effects to access or circulation, which can be determined by site observation, traffic impact analysis or study, field measurements, and information and studies provided by the local reviewing jurisdiction and/or ODOT:**
 - i. **The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate, creating a safety hazard; or**
 - ii. **The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or**
 - iii. **The location of the access driveway is inconsistent with the Wilsonville Road Interchange Area Management Plan Access Management Plan.**
 - iv. **A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area.**
- D. **Traffic Impact Analysis Requirements.**
 1. **Preparation.** A Traffic Impact Analysis shall be prepared by a professional engineer under retainer to the city. The traffic analysis will be paid for by the applicant.
 2. **Transportation Planning Rule Compliance.** The traffic impact analysis shall be sufficient in detail to determine compliance with Oregon Administrative Rule (OAR) 660-012-0060.
 3. **Traffic Impact Analysis Scoping.** The applicant will coordinate with the Wilsonville City Engineer prior to submitting an application that requires a Traffic Impact

Analysis. The City has the discretion to determine the required elements of the TIA and the level of analysis expected. Coordination with ODOT is advisable and is at the City's discretion.

E. Approval Criteria.

1. Criteria. When a Traffic Impact Analysis is required, approval of the development proposal requires satisfaction of the following criteria:
 - a. The Traffic Impact Analysis was prepared by a professional engineer selected by the City; and
 - b. If the proposed development meets the criteria in Section C, above, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the City's performance standards (i.e. Level-of-Service and/or Volume/Capacity ratio) and are satisfactory to the City Engineer and ODOT; and
 - c. The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:
 - i. Have the least negative impact on all applicable transportation facilities; and
 - ii. Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable; and
 - iii. Make the most efficient use of land and public facilities as practicable; and
 - iv. Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and
 - v. Otherwise comply with applicable requirements of the City of Wilsonville's Development Code.

F. Conditions of Approval. The City may deny, approve, or approve a development proposal with appropriate conditions.

1. Where the existing transportation system will be impacted by the proposed development, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or access ways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed use.
2. Where the existing transportation system is shown to be burdened by the proposed use, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, access ways, paths, or streets that serve the proposed use may be required.
3. Where planned local street connectivity is required to improve local circulation for the betterment of interchange function, local street system improvements will be required.

RESPONSE: Traffic Impact Analysis was completed by the City's traffic consultant – DKS. DKS has concluded that the development meets the planned development permit criteria for level of service.

Section 4.133.06. Comprehensive Plan and Zoning Map Amendments

This Section applies to all Comprehensive Plan Map and Zoning Map amendments to parcels wholly or partially within the IAMP Overlay Zone.

- (.01) IAMP Amendment. If the proposed land use is inconsistent with the current Comprehensive Plan Map or Zoning Map land use designation the applicant will be required to undertake a legislative process to amend and update the Wilsonville Road Interchange Area Management Plan in order to demonstrate that the proposed amendment will be consistent with the planned improvements in the Overlay Zone.

RESPONSE: No Comprehensive Plan or Zoning Map Amendments are proposed for this project. Therefore this criterion is not applicable.

(.02) Transportation Planning Rule Requirements.

A. Review of Applications for Effect on Transportation Facilities. A proposed comprehensive plan amendment, zone change or land use regulation change pertaining development within the IAMP Overlay Zone, whether initiated by the City or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – "TPR"). "Significant" means the proposal would:

1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);
2. Change standards implementing a functional classification system; or
3. As measured at the end of the planning period identified in the adopted transportation system plan:
 - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
 - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or
 - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

B. Amendments That Affect Transportation Facilities. Amendments to the comprehensive plan and land use regulations that significantly affect a transportation facility shall

ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

1. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.
 2. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.
 3. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.
 4. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.
- C. Traffic Impact Analysis. A Traffic Impact Analysis shall be submitted with a plan amendment or zone change application. [See Section 4.133.05(.01) Traffic Impact Analysis]. [Section 4.133.00 – 4.133.06 added by Ord. 672, 11/16/09]

RESPONSE: This project does not include a comprehensive plan amendment or zone change. No changes are proposed to any functional classifications of street. Therefore these criteria are not applicable. Traffic Impact Analysis was completed by the City's traffic consultant – DKS.

Section 4.154. On-site Pedestrian Access and Circulation.

(.01) On-site Pedestrian Access and Circulation

- A. The purpose of this section is to implement the pedestrian access and connectivity policies of the Transportation System Plan. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.
- B. Standards. Development shall conform to all of the following standards:
 1. Continuous Pathway System. A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable.
 2. Safe, Direct, and Convenient. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:
 - a. Pedestrian pathways are designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.

- b. The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between destinations that does not involve a significant amount of unnecessary out-of-direction travel.
 - c. The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.
 - d. All parking lots larger than three acres in size shall provide an internal bicycle and pedestrian pathway pursuant to Section 4.155(.03)(B.)(3.)(d.).
3. Vehicle/Pathway Separation. Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.
 4. Crosswalks. Where a pathway crosses a parking area or driveway, it shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).
 5. Pathway Width and Surface. Primary pathways shall be constructed of concrete, asphalt, brick/masonry pavers, or other durable surface, and not less than five (5) feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.
 6. All pathways shall be clearly marked with appropriate standard signs.

[Added by Ord. #719, 6/17/13]

RESPONSE: Pedestrian pathway meeting ADA requirements has been provided from the eastern drive entrance to the main building entrance via 5' minimum concrete sidewalks and crosswalks. The parking lot is less than 3 acres therefore internal bicycle and pedestrian pathways per 4.155 are not required. However, sidewalks are provided along the perimeter of the building.

Section 4.155. General Regulations - Parking, Loading and Bicycle Parking.

(.01) Purpose:

- A. The design of parking areas is intended to enhance the use of the parking area as it relates to the site development as a whole, while providing efficient parking, vehicle circulation and attractive, safe pedestrian access.
- B. As much as possible, site design of impervious surface parking and loading areas shall address the environmental impacts of air and water pollution, as well as climate change from heat islands.
- C. The view from the public right of way and adjoining properties is critical to meet the aesthetic concerns of the community and to ensure that private property rights are met. Where developments are located in key locations such as near or adjacent to the I-5

interchanges, or involve large expanses of asphalt, they deserve community concern and attention.

RESPONSE: Modification of existing parking and addition of parking is oriented to be efficient while providing good circulation and pedestrian access. Site landscaping has been added to enhance the parking lot and address heat islands. A rain garden and storm water planters are being utilized to treat storm water run-off from the new and improved parking areas.

(.02) General Provisions:

- B. No area shall be considered a parking space unless it can be shown that the area is accessible and usable for that purpose, and has maneuvering area for the vehicles, as determined by the Planning Director.
- C. In cases of enlargement of a building or a change of use from that existing on the effective date of this Code, the number of parking spaces required shall be based on the additional floor area of the enlarged or additional building, or changed use, as set forth in this Section. Current development standards, including parking area landscaping and screening, shall apply only to the additional approved parking area.
- D. In the event several uses occupy a single structure or parcel of land, the total requirement for off-street parking shall be the sum of the requirements of the several uses computed separately, except as modified by subsection "E," below.
- E. Owners of two (2) or more uses, structures, or parcels of land may utilize jointly the same parking area when the peak hours of operation do not overlap, provided satisfactory legal evidence is presented in the form of deeds, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them. [Amended by Ord. # 674 11/16/09]
- F. Off-street parking spaces existing prior to the effective date of this Code may be included in the amount necessary to meet the requirements in case of subsequent enlargement of the building or use to which such spaces are necessary.
- G. Off-Site Parking. Except for single-family dwellings, the vehicle parking spaces required by this Chapter may be located on another parcel of land, provided the parcel is within 500 feet of the use it serves and the DRB has approved the off-site parking through the Land Use Review. The distance from the parking area to the use shall be measured from the nearest parking space to the main building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced in the form of recorded deeds, easements, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them. [Amended by Ord. # 674 11/16/09]
- H. The conducting of any business activity shall not be permitted on the required parking spaces, unless a temporary use permit is approved pursuant to Section 4.163.
- I. Where the boundary of a parking lot adjoins or is within a residential district, such parking lot shall be screened by a sight-obscuring fence or planting. The screening shall be continuous along that boundary and shall be at least six (6) feet in height.

- J. Parking spaces along the boundaries of a parking lot shall be provided with a sturdy bumper guard or curb at least six (6) inches high and located far enough within the boundary to prevent any portion of a car within the lot from extending over the property line or interfering with required screening or sidewalks.
- K. All areas used for parking and maneuvering of cars shall be surfaced with asphalt, concrete, or other surface, such as pervious materials (i. e. pavers, concrete, asphalt) that is found by the City's authorized representative to be suitable for the purpose. In all cases, suitable drainage, meeting standards set by the City's authorized representative, shall be provided. [Amended by Ord. # 674 11/16/09]
- L. Artificial lighting which may be provided shall be so limited or deflected as not to shine into adjoining structures or into the eyes of passers-by.
- M. Off-street parking requirements for types of uses and structures not specifically listed in this Code shall be determined by the Development Review Board if an application is pending before the Board. Otherwise, the requirements shall be specified by the Planning Director, based upon consideration of comparable uses.
- N. Up to forty percent (40%) of the off-street spaces may be compact car spaces as identified in Section 4.001 - "Definitions," and shall be appropriately identified.
- O. Where off-street parking areas are designed for motor vehicles to overhang beyond curbs, planting areas adjacent to said curbs shall be increased to a minimum of seven (7) feet in depth. This standard shall apply to a double row of parking, the net effect of which shall be to create a planted area that is a minimum of seven (7) feet in depth.

RESPONSE: *The boundary between existing parking lot and residential district is screened by a fence and landscaping. It is also noted that the apartments to the north are further buffered by garages and drive isles, providing significant physical separation for the Fun Center parking. The closest apartment building is setback at least 50 from the Fun Center's north property line.*

Parking spaces along the boundary of the parcel utilize concrete curbs to prevent the vehicle from interfering with screening or sidewalks. No new parking spaces will be any closer to the property line than existing spaces, which have been found to be compatible with the apartment complex. All existing and proposed parking and maneuvering areas will be surfaced with asphalt. 30% of parking is compact spaces have been provided in different areas of the parking lot.

The code does not provide any specific set of parking standard for this type of multi-function entertainment facility, other than for general office and bowling alleys. There are no standards listed for the mix of general entertainment functions provided.

Typical customers at the Fun Center will utilize multiple attractions during any single visit, so a straight allocation of a set ratio by square footage does not seem appropriate. There are several unique factors in play for the Fun Center related to the normal customer parking and on-site activities.

For example with the proposed addition of bowling lanes, they will not operate like a typical dedicated bowling alley, such as Wilsonville Bowling. For one thing, the Fun Center will not be scheduling any league activities. Bowlers using these lanes will tend to be some of the same customers (families & groups) that are utilizing other attractions provided.

A family of 3-5, members, will likely bowl together, which means they would tend to arrive in one car, as compared to 2-4 cars for typical league bowlers. Further, customers using the bumper boats may also be driving the autotopia carts, playing miniature golf, and playing indoor games all during the same visit.

The existing uses and use feature revisions are designed for family-oriented entertainment. Because this facility is family orientated, customers typically do not arrive in single-occupant vehicles. Families and small groups tend to carpool, while often buses are utilized for larger groups. This ridesharing reduces the demand for individual parking spaces.

A tabulation of the land area allocation devoted to various uses, including the new expansion and remodel is shown in the following tables for the calculation of parking requirements.

Parking Analysis

In granting prior approval (03DB32), the City relied upon certain square footage ratios for the various uses and features to determine parking requirements. The original calculation for the facility was determined to be 105 spaces. The prior approved site plan provided 275 parking spaces. However, the source of those ratios was not specified.

Therefore the calculation for the minimum parking requirements has been coordinated with DKS in order to establish a reliable and consistent methodology.

As reflected in Table 2 below, the revised minimum parking for the modified facilities and uses calculates to 222 spaces.

The proposed Site and Building modifications provides for reconfigured parking including a total of 277 spaces. Therefore, there is adequate parking available, exceeding determined code requirements.

(.03) Minimum and Maximum Off-Street Parking Requirements:

- A. Parking and loading or delivery areas shall be designed with 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. Circulation patterns shall be clearly marked.

RESPONSE: *Loading and delivery area has been separated from customer and/or employee parking and pedestrian areas to the extent possible since the existing site did not require a loading area. Deliveries will occur during off peak hours.*

2. To the greatest extent possible, separate vehicle and pedestrian traffic.

RESPONSE: *Vehicle and pedestrian traffic have been separated to the extent possible considering the existing conditions of the site with the proposed addition and additional parking area.*

- B. Parking and loading or delivery areas shall be landscaped to minimize the visual dominance of the parking or loading area, as follows:

1. Landscaping of at least ten percent (10%) of the parking area designed to be screened from view from the public right-of-way and adjacent properties. This landscaping shall be considered to be part of the fifteen percent (15%) total landscaping required in Section 4.176.03 for the site development.

RESPONSE: *Perimeter and interior landscaping has been provided within the parking lot which totals 11% of the parking area. Screening of the parking from the ROW is provided by an existing hedge row within the right-of-way. The proposed improvements are not changing the parking lot along the road right-of-way.*

3. Landscape tree planting areas shall be a minimum of eight (8) feet in width and length and spaced every eight (8) parking spaces or an equivalent aggregated amount.
 - a. Trees shall be planted in a ratio of one (1) tree per eight (8) parking spaces or fraction thereof, except in parking areas of more than two hundred (200) spaces where a ratio of one (1) tree per six (six) spaces shall be applied as noted in subsection (.03)(B.)(3.). A landscape design that includes trees planted in areas based on an aggregated number of parking spaces must provide all area calculations.
 - b. Except for trees planted for screening, all deciduous interior parking lot trees must be suitably sized, located, and maintained to provide a branching minimum of seven (7) feet clearance at maturity.

RESPONSE: *Islands in the new parking area are eight (8) feet minimum. The parking lot contains existing islands which do not meet this minimum. Existing trees have been supplemented with new trees to meet the ratio of 1:6 parking spaces.*

3. Due to their large amount of impervious surface, new development with parking areas of more than two hundred (200) spaces that are located in any zone, and that may be viewed from the public right of way, shall be landscaped to the following additional standards:
 - a. One (1) trees shall be planted per six (6) parking spaces or fraction thereof. At least twenty-five percent (25%) of the required trees must be planted in the interior of the parking area.
 - b. Required trees may be planted within the parking area or the perimeter, provided that a minimum of forty percent (40%) of the canopy dripline of

mature perimeter trees can be expected to shade or overlap the parking area. Shading shall be determined based on shadows cast on the summer solstice.

- c. All parking lots in excess of two hundred (200) parking spaces shall provide an internal pedestrian walkway for every six (6) parking aisles. Minimum walkway clearance shall be at least five (5) feet in width. Walkways shall be designed to provide pedestrian access to parking areas in order to minimize pedestrian travel among vehicles. Walkways shall be designed to channel pedestrians to the front entrance of the building.
- d. Parking lots more than three acres in size shall provide street-like features along principal drive isles, including curbs, sidewalks, street trees or planting strips, and bicycle routes.
- e. All parking lots viewed from the public right of way shall have a minimum twelve (12) foot landscaped buffer extending from the edge of the property line at the right of way to the edge of the parking area. Buffer landscaping shall meet the low screen standard of 4.176(.02)(D) except that trees, groundcovers and shrubs shall be grouped to provide visual interest and to create view openings no more than ten (10) feet in length and provided every forty (40) feet. Notwithstanding this requirement, view of parking area that is unscreened from the right of way due to slope or topography shall require an increased landscaping standard under 4.176(.02) in order to buffer and soften the view of vehicles as much as possible. For purposes of this section, "view from the public right of way" is intended to mean the view from the sidewalk directly across the street from the site, or if no sidewalk, from the opposite side of the adjacent street or road.
- f. Where topography and slope condition permit, the landscape buffer shall integrate parking lot storm water treatment in bioswales and related plantings. Use of berms or drainage swales are allowed provided that planting areas with lower grade are constructed so that they are protected from vehicle maneuvers. Drainage swales shall be constructed to Public Works Standards.
- g. In addition to the application requirements of section 4.035(.04)(6)(d), where view of signs is pertinent to landscape design, any approved or planned sign plan shall accompany the application for landscape design approval. [Amended by Ord. #719, 6/17/13]

RESPONSE: *This project is not a new development, but the parking lot does contain more than 200 spaces. Every effort has been made to meet the standards above where improvements are being made to the extent possible. Some of the existing conditions do not allow the above standards to be met (i.e. 12' landscape buffer extending from edge of property line to the edge of the parking lot. The applicant is relying upon prior approvals for compliance with this requirement.*

- C. Off Street Parking shall be designed for safe and convenient access that meets ADA and ODOT standards. All parking areas which contain ten (10) or more parking spaces, shall for every fifty (50) standard spaces., provide one ADA-accessible parking space that is constructed to building code standards, Wilsonville Code 9.000.

RESPONSE: *7 ADA accessible parking spaces have been provided for the site which exceeds 1 per 50 parking spaces.*

- D. Where possible, parking areas shall be designed to connect with parking areas on adjacent sites so as to eliminate the necessity for any mode of travel of utilizing the public street for multiple accesses or cross movements. In addition, on-site parking shall be designed for efficient on-site circulation and parking.

RESPONSE: *The existing parking lot connects to adjacent parking to the west entrance which is a shared access point.*

- G. Tables 5 shall be used to determine the minimum and maximum parking standards for various land uses. The minimum number of required parking spaces shown on Tables 5 shall be determined by rounding to the nearest whole parking space. For example, a use containing 500 square feet, in an area where the standard is one space for each 400 square feet of floor area, is required to provide one off-street parking space. If the same use contained more than 600 square feet, a second parking space would be required. Structured parking and on-street parking are exempted from the parking maximums in Table 5. [Amended by Ordinance No. 538, 2/21/02.]

RESPONSE: *Required parking has been determined in accordance with the table below for the various uses at this site:*

Table 2
Primary Building Areas for Parking Calculation
Tax Lots 100 and 109

Type of Use	Land Area in Square Feet	Parking Ratio Per DKS	Minimum Parking Spaces	Minimum Bike Ratio	Minimum Bike Spaces
Entertainment Building:					
Office upstairs	1,750	2.7/1000 sf	5	1/5000 sf, Min. 2	2
Restaurant	2,400 -4727	15.3/1000	37 -73	1/4000 sf Min. 4	4
Indoor Games	5,590 (down) 5,350 (up)	1/200 sf	28 40	0	0
Bowling - 16 lanes		4/lane	64	1/10 lanes, min 2	2
Common Areas & Storage	4,800	0	0	0	0

Outdoor Attractions:					
Bat Cages (9)	<8,466>	0	0	0	0
Mini Golf 36 holes	26,440	1/hole	36	0	0
Bumper Boats	4,500	1/750	6	0	0
Autotopia	27,870	1/5000	6	0	0
Climb Wall, & Misc.	2,596	0	0	0	0
Total			222-258		

H. Electrical Vehicle Charging Stations:

1. Parking spaces designed to accommodate and provide one or more electric vehicle charging stations on site may be counted towards meeting the minimum off-street parking standards.
2. Modification of existing parking spaces to accommodate electric vehicle charging stations on site is allowed outright.

RESPONSE: No electric vehicle charging stations are proposed for this site.

I. Motorcycle parking:

1. Motorcycle parking may substitute for up to 5 spaces or 5 percent of required automobile parking, whichever is less. For every 4 motorcycle parking spaces provided, the automobile parking requirement is reduced by one space.
2. Each motorcycle space must be at least 4 feet wide and 8 feet deep. Existing parking may be converted to take advantage of this provision.

[Amended by Ord. #719, 6/17/13]

RESPONSE: No specific motorcycle parking is being provided on this site.

(.04) Bicycle Parking:

A. Required Bicycle Parking - General Provisions.

1. The required minimum number of bicycle parking spaces for each use category is shown in Table 5, Parking Standards.
2. Bicycle parking spaces are not required for accessory buildings. If a primary use is listed in Table 5, bicycle parking is not required for the accessory use.
3. When there are two or more primary uses on a site, the required bicycle parking for the site is the sum of the required bicycle parking for the individual primary uses.
4. Bicycle parking space requirements may be waived by the Development Review Board per Section 4.118(.03)(A.)(9.) and (10.).

B. Standards for Required Bicycle Parking

1. Each space must be at least 2 feet by 6 feet in area and be accessible without moving another bicycle.

2. An aisle at least 5 feet wide shall be maintained behind all required bicycle parking to allow room for bicycle maneuvering. Where the bicycle parking is adjacent to a sidewalk, the maneuvering area may extend into the right-of-way.
3. When bicycle parking is provided in racks, there must be enough space between the rack and any obstructions to use the space properly.
4. Bicycle lockers or racks, when provided, shall be securely anchored.
5. Bicycle parking shall be located within 30 feet of the main entrance to the building or inside a building, in a location that is easily accessible for bicycles. For multi-tenant developments, with multiple business entrances, bicycle parking may be distributed on-site among more than one main entrance.

C. Long-term Bicycle Parking

1. Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for several hours a weather-protected place to park bicycles.
2. For a proposed multi-family residential, retail, office, or institutional development, or for a park and ride or transit center, where six (6) or more bicycle parking spaces are required pursuant to Table 5, 50% of the bicycle parking shall be developed as long-term, secure spaces. Required long-term bicycle parking shall meet the following standards:
 - a. All required spaces shall meet the standards in subsection (B.) above, and must be covered in one of the following ways: inside buildings, under roof overhangs or permanent awnings, in bicycle lockers, or within or under other structures.
 - b. All spaces must be located in areas that are secure or monitored (e.g., visible to employees, monitored by security guards, or in public view).
 - c. Spaces are not subject to the locational criterion of (B.)(5.).

[Section 4.155(.04) Added by Ord. #719, 6/17/13]

RESPONSE: *Site plan has identified bicycle parking meeting the standard requirements listed above for the use categories listed in table 5 as follows as shown in Table 2 above.*

RESPONSE: *No long term bike spaces have been provided since the project is not proposed multi-family residential, retail, office, or institutional development, or for a park and ride or transit center.*

Section 4.167. General Regulations - Access, Ingress and Egress.

(.01) Each access onto streets or private drives shall be at defined points as approved by the City and shall be consistent with the public's health, safety and general welfare. Such defined points of access shall be approved at the time of issuance of a building permit if not previously

RESPONSE: *Site plan utilizes existing curb cuts for ingress and egress from the site. No new access points are requested.*

Section 4.171. General Regulations - Protection of Natural Features and Other Resources.

(.01) **Purpose.** It is the purpose of this Section to prescribe standards and procedures for the use and development of land to assure the protection of valued natural features and cultural resources. The requirements of this Section are intended to be used in conjunction with those of the Comprehensive Plan and other zoning standards. It is further the purpose of this Section:

- A. To protect the natural environmental and scenic features of the City of Wilsonville.
- B. To encourage site planning and development practices which protect and enhance natural features such as riparian corridors, streams, wetlands, swales, ridges, rock outcroppings, views, large trees and wooded areas.
- C. To provide ample open space and to create a constructed environment capable and harmonious with the natural environment.

RESPONSE: *The proposed improvement will not significantly impact the natural features and other resources of the site. Current impervious surfaces will be replaced with either building additions or parking lot.*

(.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 landforms.
- 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 required under the Uniform Building Code, all developments shall be planned, designed, constructed and maintained so as to:
 - i. 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 proposed building addition will not alter the general terrain significantly.*

(.03) Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:

- A. An engineering geologic study approved by the City, establishes that the site is stable for the proposed development, and any conditions and recommendations based on the study are incorporated into the plans and construction of the development. The study shall include items specified under subsection 4.171(.07)(A.)(2.)(a-j):
- B. Slope stabilization and re-vegetation plans shall be included as part of the applicant's landscape plans.
- C. Buildings shall be clustered to reduce alteration of terrain and provide for preservation of natural features.
- D. Creation of building sites through mass pad grading and successive padding or terracing of building sites shall be avoided where feasible.
- E. Roads shall be of minimum width, with grades consistent with the City's Public Works Standards.
- F. Maintenance, including re-vegetation, of all grading areas is the responsibility of the developer, and shall occur through October 1 of the second growing season following receipt of Certificates of Occupancy unless a longer period is approved by the Development Review Board.
- G. The applicant shall obtain an erosion and sediment control permit from the City's Building and Environmental Services Division's.

RESPONSE: *This provision does not apply, no slopes greater than 25%.*

(.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 project will propose minimal disturbance of the existing trees that are located in the landscaped areas. There are no woodland areas located on the property.*

(.05) High Voltage Powerline 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 easements 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: *There are no powerline or petroleum pipeline easements or right of ways on the property.*

(.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.

(.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:
 - 1. Stabilization of the identified hazardous condition based on established and proven engineering techniques which ensure protection of public and private property. Appropriate conditions of approval may be attached by the City.
 - 2. An engineering geologic study approved by the City establishing that the site is stable for the proposed use and development. The study shall include the following:
 - a. Index map.
 - b. Project description, to include: location; topography, drainage, vegetation; discussion of previous work; and discussion of field exploration methods.
 - c. Site geology, to include: site geologic map; description of bedrock and superficial materials including artificial fill; location of any faults, folds, etc.; and structural data including bedding, jointing, and shear zones.
 - d. Discussion and analysis of any slope stability problems.
 - e. Discussion of any off-site geologic conditions that may pose a potential hazard to the site or that may be affected by on-site development.
 - f. Suitability of site for proposed development from geologic standpoint.

- g. Specific recommendations for cut slope stability, seepage and drainage control, or other design criteria to mitigate geologic hazards.
 - h. Supportive data, to include: cross sections showing subsurface structure; graphic logs of subsurface explorations; results of laboratory tests; and references.
 - i. Signature and certification number of engineering geologist registered in the State of Oregon.
 - j. Additional information or analyses as necessary to evaluate the site.
- B. Vegetative cover shall be maintained or established for stability and erosion control purposes.
 - C. Diversion of storm water into these areas shall be prohibited.
 - D. The principal source of information for determining earth movement hazards is the State Department of Geology and Mineral Industries (DOGAMI) Bulletin 99 and any subsequent bulletins and accompanying maps. Approved site specific engineering geologic studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the earth movement hazards database.

RESPONSE: This provision does not apply.

(.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 bulletins 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: This provision does not apply.

(.09) Historic Protection: Purpose:

- A. To preserve structures, sites, objects, and areas within the City of Wilsonville having historic, cultural, or archaeological significance.
- B. Standards:
 - 1. All developments shall be planned, designed, constructed, and maintained to assure protection of any designated historic or cultural resource on or near the site. Restrictions on development may include:
 - a. Clustering of buildings and incorporation of historic and/or cultural resources into site design in a manner compatible with the character of such resource.
 - b. Limitations on site preparation and grading to avoid disturbance of areas within any historic or archaeological sites, monuments or objects of antiquity.
 - c. Provision of adequate setbacks and buffers between the proposed development and the designated resources.

2. The city may attach additional conditions with respect to the following design factors in protecting the unique character of historic/cultural resources:
 - a. Architectural compatibility;
 - b. Proposed intensity of development;
 - c. Relationship to designated open space;
 - d. Vehicular and pedestrian access; and
 - e. Proposed building or structural mass in relation to the designated resource.

C. Review Process:

1. The Development Review Board shall be the review body for:
 - a. All development which proposes to alter a designated historic, or cultural resource or resource site; and
 - b. All development which proposes to use property adjacent to a designated cultural resource; and
 - c. All applications requesting designation of a cultural or historic resource
2. The application shall include the following:
 - a. A complete list of exterior materials, including color of these materials.
 - b. Drawings:
 - i. Side elevation for each side of any affected structure.
 - ii. Drawings shall show dimensions or be to scale.
 - iii. Photographs may be used as a substitute for small projects.
 - c. Plot plans shall be submitted for new structures, fences, additions exceeding fifty (50) square feet, or any building relocation.
3. Any improvement proposed for property adjacent to a designated, cultural or historic resource site, shall be subject to the following provisions:
 - a. All uses and structures which are incompatible with the character of the cultural or historic resource are prohibited. The criteria used to determine incompatibility shall include the following:
 - i. The intensity and type of use when compared with the historic use patterns of the areas.
 - ii. The orientation, setback, alignment, spacing and placement of buildings.
 - iii. The scale, proportions, roof forms, and various architectural features of building design.
 - b. Setbacks may be required which are over and above those required in the base zone in order to protect the resource. Setbacks should be appropriate to the scale and function of the resource, but allow reasonable use of the adjacent property.
 - c. An appropriate buffer or screen may be required between the new or converting use on the adjacent property and the resource.
4. Nothing in this chapter shall be construed to prevent the ordinary maintenance or repair of any exterior architectural feature in or on any property covered by this chapter that does not involve a change in design, material or external reconstruction thereof, nor does this Code prevent the construction, reconstruction, alteration, restoration, demolition or removal of any such feature when the Building Official certifies to the Development Review Board that such action is required for

the public safety due to an unsafe or dangerous condition which cannot be rectified through the use of acceptable building practices.

5. The owner, occupant or other person in actual charge of a cultural resource, or an improvement, building or structure in an historic district shall keep in good repair all of the exterior portions of such improvement, building or structure, all of the interior portions thereof when subject to control as specified in the designating ordinance or permit, and all interior portions thereof whose maintenance is necessary to prevent deterioration and decay or any exterior architectural feature.

RESPONSE: *This provision does not apply.*

(.10) Alteration and Development Criteria:

- A. Demolition or alteration of any structure, or any change in any site or object which has been designated as a cultural resource, is prohibited unless it is determined:
 1. In the case of a designated cultural resource, the proposed work would not detrimentally alter, destroy or adversely affect any exterior architectural or other identified feature; or
 2. In the case of any property located within a historic district, the proposed construction, removal, rehabilitation, alteration, remodeling, excavation or exterior alteration conforms to any prescriptive standards as adopted by the City, and does not adversely affect the character of the district; or
 3. In the case of construction of a new improvement, building or structure upon a cultural resource site, the exterior of such improvements will not adversely affect and will be compatible with the external appearance of existing designated improvements, buildings and structures on said site; or
 4. That no reasonable use can be made of the property without such approval.

(.11) Cultural Resource Designation Criteria: A cultural resource may be designated and placed on the Cultural Resources Inventory if it meets the following criteria:

- A. It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering or architectural history; or
- B. It is identified with persons or events significant in local, state, or national history; or
- C. It embodies distinctive characteristics of a style, type, period, or method of construction, or it is a valuable example of the use of indigenous materials or craftsmanship; or
- D. It is representative of the notable work of a builder, designer, or architect.

RESPONSE: *These provisions do not apply.*

Section 4.175. Public Safety and Crime Prevention.

(.01) All developments shall be designed to deter crime and insure public safety.

(.02) Addressing and directional signing shall be designed to assure identification of all buildings and structures by emergency response personnel, as well as the general public.

(.03) Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties.

(.04) Exterior lighting shall be designed and oriented to discourage crime.

RESPONSE: *The project will incorporate the above provisions in the design. This development has been designed to deter crime and insure public safety. It is not only in the public's interest, but also the applicant's interest to minimize opportunities for criminal activities on this property. The site has been designed to minimize areas vulnerable to crime, with efforts to provide good site surveillance. No additional lighting is proposed. However, some of the existing poles will be relocated to fit the new parking layout.*

The site and main building are already clearly addressed for easy identification from the Loop Road. However, the new entry plaza will allow for enhanced building addressing.

The parking areas are designed so they are screened from the street view. On-site lighting is designed to ensure maximum visibility and customer safety, as well as easy police surveillance in their course of routine patrol duties.

Therefore the proposed development plans comply with the applicable elements of this section.

Section 4.177. Street Improvement Standards.

This section contains the City's requirements and standards for pedestrian, bicycle, and transit facility improvements to public streets, or within public easements. The purpose of this section is to ensure that development, including redevelopment, provides transportation facilities that are safe, convenient, and adequate in rough proportion to their impacts.

(.02) Street Design Standards.

E. Vertical clearance - a minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives.

RESPONSE: *Vertical clearance of 12' above pavement surface will be maintained over all access drives.*

(.03) Sidewalks. Sidewalks shall be provided on the public street frontage of all development. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the City Engineer.

A. Sidewalk widths shall include a minimum through zone of at least five feet. The through zone may be reduced pursuant to variance procedures in Section 4.196, a waiver pursuant to Section 4.118, or by authority of the City Engineer for reasons of traffic operations, efficiency, or safety.

- B. Within a Planned Development, the Development Review Board may approve a sidewalk on only one side. If the sidewalk is permitted on just one side of the street, the owners will be required to sign an agreement to an assessment in the future to construct the other sidewalk if the City Council decides it is necessary.

RESPONSE: Sidewalks existing along the frontage of the property.

(.06) Transit Improvements

Development on sites that are adjacent to or incorporate major transit streets shall provide improvements as described in this section to any bus stop located along the site's frontage, unless waived by the City Engineer for reasons of safety or traffic operations. Transit facilities include bus stops, shelters, and related facilities. Required transit facility improvements may include the dedication of land or the provision of a public easement.

A. Development shall at a minimum provide:

1. Reasonably direct pedestrian connections, as defined by Section 4.154, between building entrances and the transit facility and between buildings on the site and streets adjoining transit stops.
 2. Improvements at major transit stops. Improvements may include intersection or mid-block traffic management improvements to allow for pedestrian crossings at major transit stops.
- B. Developments generating an average of 49 or more pm peak hour trips shall provide bus stop improvements per the Public Works Standards. Required improvements may include provision of benches, shelters, pedestrian lighting; or provision of an easement or dedication of land for transit facilities.
- C. In addition to the requirements of 4.177(.06)(A.)(2.), development generating more than 199 pm peak hour trips on major transit streets shall provide a bus pullout, curb extension, and intersection or mid-block traffic management improvements to allow for pedestrian crossings at major transit stops.
- D. In addition to the requirements of 4.177(.06)(A.) and (B.), development generating more than 500 pm peak-hour trips on major transit streets shall provide on-site circulation to accommodate transit service.

(.08). Access Drive and Driveway Approach Development Standards.

- A. An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.
- B. Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.
- C. Where emergency vehicle access is required, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.

- D. 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.
- E. Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.
- F. The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.
- G. The City may limit the number or location of connections to a street, or impose access restrictions where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.
- H. The City may require a driveway to extend to one or more edges of a parcel and be designed to allow for future extension and inter-parcel circulation as adjacent properties develop. The City may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).
- I. Driveways shall accommodate all projected vehicular traffic on-site without vehicles stacking or backing up onto a street.
- J. Driveways shall be designed so that vehicle areas, including but not limited to drive-up and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.
- K. Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements, and shall be designed to minimize crossing distances for pedestrians.
- L. As it deems necessary for pedestrian safety, the City, in consultation with the roadway authority, may require traffic-calming features, such as speed tables, textured driveway surfaces, curb extensions, signage or traffic control devices, or other features, be installed on or in the vicinity of a site.
- M. Approaches and driveways shall be located and designed to allow for safe maneuvering in and around loading areas, while avoiding conflicts with pedestrians, parking, landscaping, and buildings.
- N. Where a proposed driveway crosses a culvert or drainage ditch, the City may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant applicable Public Works standards.
- O. Except as otherwise required by the applicable roadway authority or waived by the City Engineer, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.
- P. Unless constrained by topography, natural resources, rail lines, freeways, existing or planned or approved development, or easements or covenants, driveways proposed as part of a residential or mixed-use development shall meet local street spacing standards and shall be constructed to align with existing or planned streets, if the driveway.

1. Intersects with a public street that is controlled, or is to be controlled in the planning period, by a traffic signal;
2. Intersects with an existing or planned arterial or collector street; or
3. Would be an extension of an existing or planned local street, or of another major driveway.

(.09) Minimum street intersection spacing standards.

- A. New streets shall intersect at existing street intersections so that centerlines are not offset. Where existing streets adjacent to a proposed development do not align properly, conditions shall be imposed on the development to provide for proper alignment.
- B. Minimum intersection spacing standards are provided in Transportation System Plan Table 3-2.

(.10) Exceptions and Adjustments. The City may approve adjustments to the spacing standards of subsections (.08) and (.09) above through a Class II process, or as a waiver per Section 4.118(.03)(A.), where an existing connection to a City street does not meet the standards of the roadway authority, the proposed development moves in the direction of code compliance, and mitigation measures alleviate all traffic operations and safety concerns. Mitigation measures may include consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one-way), turning restrictions (e.g., right in/out only), or other mitigation.

[Section 4.177 amended by Ord. 719, 6/17/13]

RESPONSE: No alteration of current access points and work in public right of way is proposed. Access to the site is provided by two existing driveway curb cuts: One is shared with the Les Schwab Tire Store and the other is located 486 feet to the east. Therefore this criterion is met.

Section 4.176. Landscaping, Screening, and Buffering.

Note: the reader is encouraged to see Section 4.179, applying to screening and buffering of storage areas for solid waste and recyclables.

- (.01) Purpose. This Section consists of landscaping and screening standards and regulations for use throughout the City. The regulations address materials, placement, layout, and timing of installation. The City recognizes the ecological and economic value of landscaping and requires the use of landscaping and other screening or buffering to:
- A. Promote the re-establishment of vegetation for aesthetic, health, erosion control, flood control and wildlife habitat reasons;
 - B. Restore native plant communities and conserve irrigation water through establishment, or re-establishment, of native, drought-tolerant plants;
 - C. Mitigate for loss of native vegetation;
 - D. Establish and enhance a pleasant visual character which recognizes aesthetics and safety issues;

- E. Promote compatibility between land uses by reducing the visual, noise, and lighting impacts of specific development on users of the site and abutting sites or uses;
- F. Unify development and enhance and define public and private spaces;
- G. Promote the retention and use of existing topsoil and vegetation. Amended soils benefit stormwater retention and promote infiltration;
- H. Aid in energy conservation by providing shade from the sun and shelter from the wind; and
- I. Screen from public view the storage of materials that would otherwise be considered unsightly.
- J. Support crime prevention, create proper sight distance clearance, and establish other safety factors by effective landscaping and screening.
- K. Provide landscaping materials that minimize the need for excessive use of fertilizers, herbicides and pesticides, irrigation, pruning, and mowing to conserve and protect natural resources, wildlife habitats, and watersheds.

(.02) Landscaping and Screening Standards.

- A. Subsections "C" through "I," below, state the different landscaping and screening standards to be applied throughout the City. The locations where the landscaping and screening are required and the depth of the landscaping and screening is stated in various places in the Code.
- B. 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 (e.g., a landscaped area of between 800 and 1600 square feet shall have two trees if the standard calls for one tree per 800 square feet.
- C. General Landscaping Standard.
 - 1. Intent. The General Landscaping Standard is a landscape treatment for areas that are generally open. It is intended to be applied in situations where distance is used as the principal means of separating uses or developments and landscaping is required to enhance the intervening space. Landscaping may include a mixture of ground cover, evergreen and deciduous shrubs, and coniferous and deciduous trees.
 - 2. Required materials. Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:
 - a. Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.
 - b. Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.

RESPONSE: *General Landscaping Standard will be followed. As previously noted, no additional buffering of screening is necessary given existing setbacks on-site and on the adjacent apartment site.*

- (.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. (For recommendations refer to the Native Plant List maintained by the City of Wilsonville). [Amended by Ord. # 674 11/16/09]

RESPONSE: *Appropriate Landscape area will be provided. The landscape coverage is shown in Table 1 above.*

- (.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 fence line shall require Development Review Board approval.

RESPONSE: *Buffering and screening already exists on site in the appropriate areas*

- (.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. Native topsoil shall be preserved and reused to the extent feasible. 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 plant areas. [Amended by Ord. # 674 11/16/09]

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.
 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.
 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.
 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.
 5. Integrate compost-amended topsoil in all areas to be landscaped, including lawns, to help detain runoff, reduce irrigation and fertilizer needs, and create a sustainable, low-maintenance landscape. [Added by Ord. # 674 11/16/09]
- 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.
- 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:
1. At maturity, proposed trees shall be at least one-half the height of the building to which they are closest, and building walls longer than 50 feet shall require tree

groups located no more than fifty (50) feet on center, to break up the length and height of the façade.

2. Either fully branched deciduous or evergreen trees may be specified depending upon the desired results. Where solar access is to be preserved, only solar-friendly deciduous trees are to be used. Where year-round sight obscuring is the highest priority, evergreen trees are to be used.
3. The following standards are to be applied:
 - a. Deciduous trees:
 - i. Minimum height of ten (10) feet; and
 - ii. Minimum trunk diameter (caliper) of 2 inches (measured at four and one-half [4 1/2] feet above grade).
 - b. Evergreen trees: Minimum height of twelve (12) feet.

RESPONSE: *The existing and proposed addition to the building will not be 50,000 square feet. However, the building is taller than 24 feet. However, in prior approvals, the DRB has not required any larger trees.*

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.
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.
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.

[Section 4.176(.06)(E.) amended by Ordinance No. 538, 2/21/02.]

F. Tree Credit.

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 (measured at four and one-half feet above grade and rounded to the nearest inch):

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

- 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 applicant has a history of maintaining the landscaping consistent with these criteria, and will continue to do so.*

- (.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 fieldgrass, 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.

- (.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.
- (.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.

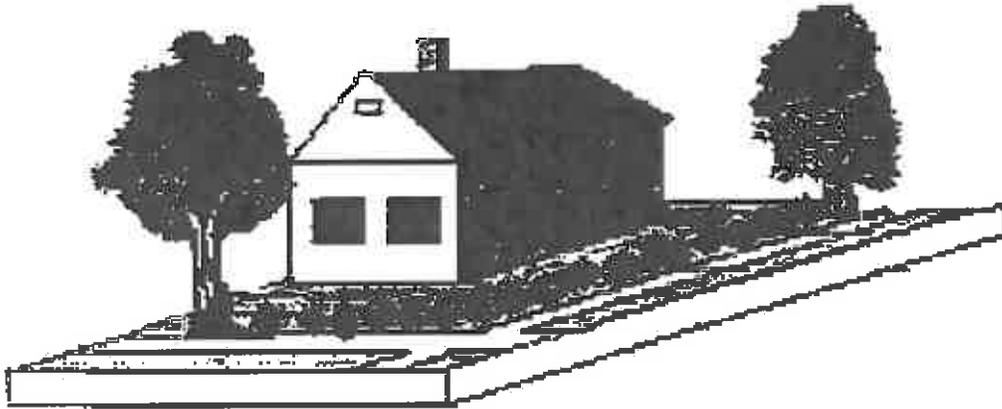


Figure 21: General Landscaping

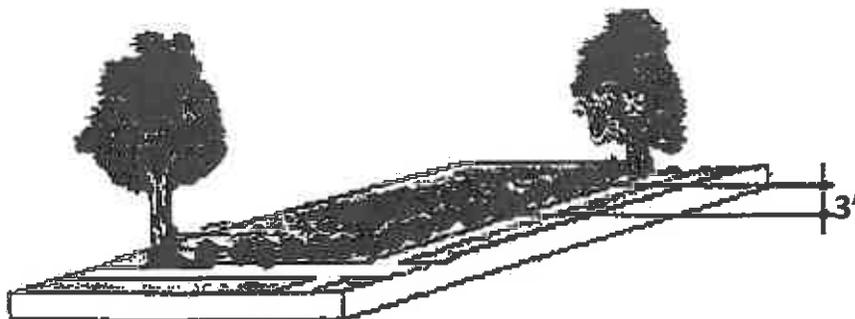


Figure 22: Low Screen Landscaping

TREE CLEARANCES

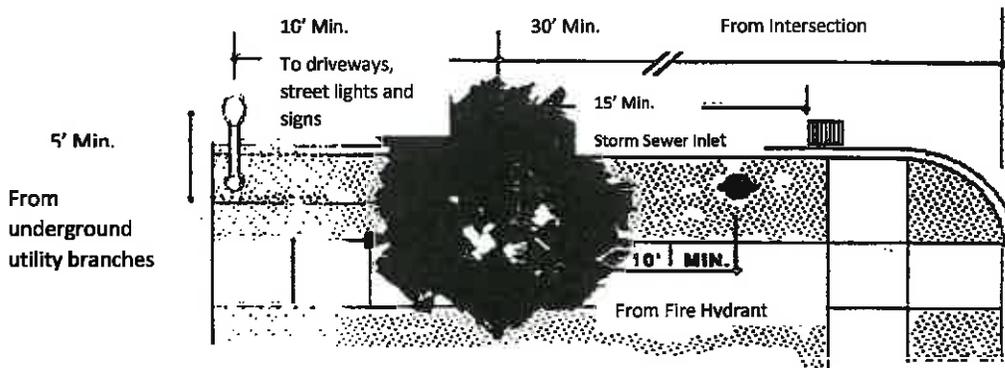
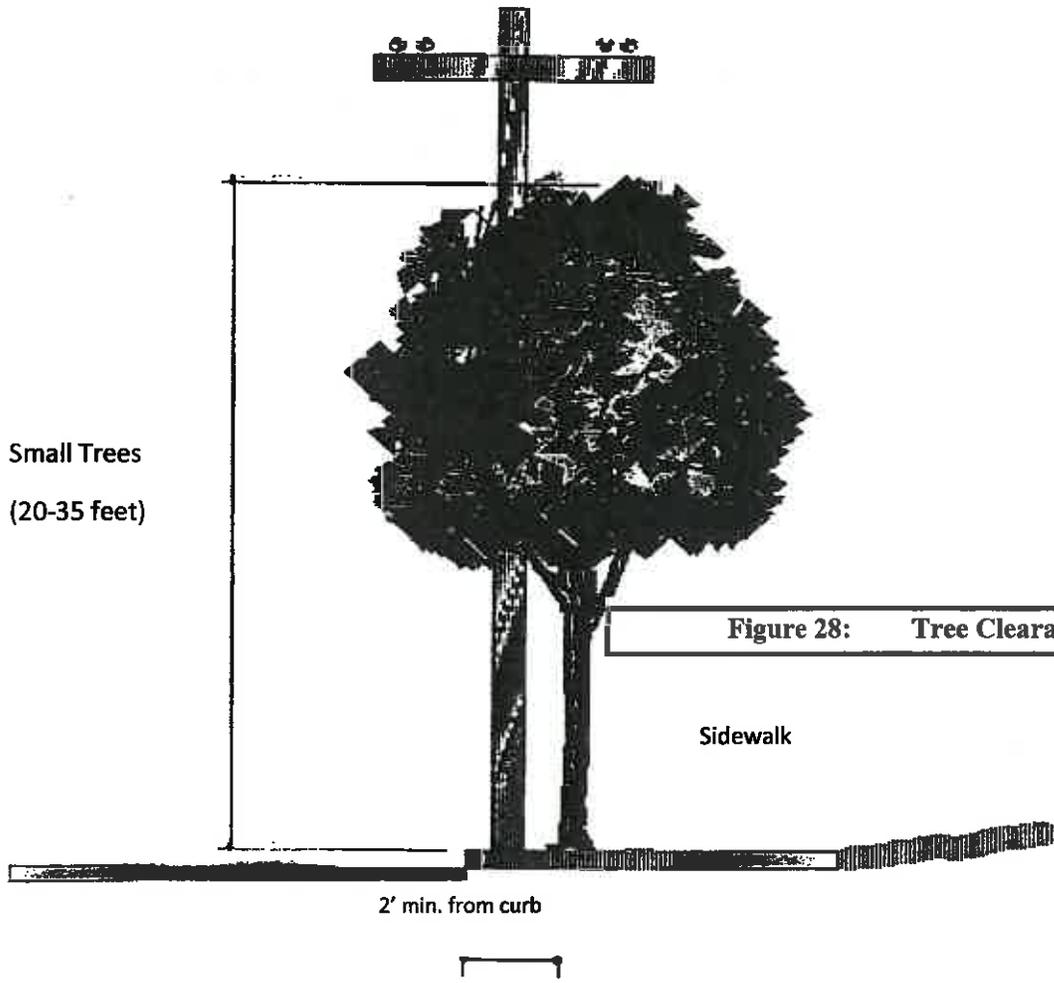


Figure 29: Tree Clearances

RESPONSE: *The applicant has provided a Landscaping Plan, consistent with these criteria. This plan represents a modification of existing landscaping, most of the work will be done on interior of established site.*

Section 4.179. Mixed Solid Waste and Recyclables Storage in New Multi-Unit Residential and Non-Residential Buildings.

- (.01) All site plans for multi-unit residential and non-residential buildings submitted to the Wilsonville Development Review Board for approval shall include adequate storage space for mixed solid waste and source separated recyclables. [Amended by Ordinance No. 538, 2/21/02.]
- (.02) The floor area of an interior or exterior storage area shall be excluded from the calculation of building floor area for purposes of determining minimum storage requirements.
- (.03) The storage area requirement shall be based on the predominant use(s) of the building. If a building has more than one of the uses listed herein and that use occupies 20 percent or less of the floor area of the building, the floor area occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one of the uses listed herein and that use occupies more than 20 percent of the floor area of the building, then the storage area requirement for the whole building shall be the sum of the requirement for the area of each use.
- (.04) Storage areas for multiple uses on a single site may be combined and shared.
- (.05) The specific requirements are based on an assumed storage height of four feet for solid waste/recyclables. Vertical storage higher than four feet but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space. Where vertical or stacked storage is proposed, the site plan shall include drawings to illustrate the layout of the storage area and dimensions for the containers.
- (.06) The specific requirements for storage area are as follows:
 - A. Multi-unit residential buildings containing five-ten units shall provide a minimum storage area of 50 square feet. Buildings containing more than ten residential units shall provide an additional five square feet per unit for each unit above ten.
 - B. Non-residential buildings shall provide a minimum storage area of ten square feet, plus:
 - 1. Office: Four square feet per 1,000 square feet gross floor area (GFA);
 - 2. Retail: Ten square feet per 1,000 square feet GFA;
 - 3. Wholesale / Warehouse / Manufacturing: Six square feet per 1,000 square feet GFA; and
 - 4. Other: Four square feet per 1,000 square feet GFA.
- (.07) The applicant shall work with the City's franchised garbage hauler to ensure that site plans provide adequate access for the hauler's equipment and that storage area is adequate for the anticipated volumes, level of service and any other special circumstances which may result in the storage area exceeding its capacity. The hauler shall notify the City by letter of their review of site plans and make recommendations for changes in those plans pursuant to the other provisions of this section.

- (.08) Existing multi-unit residential and non-residential developments wishing to retrofit their structures to include storage areas for mixed solid waste and recycling may have their site plans reviewed and approved through the Class I Administrative Review process, according to the provisions of Section 4.035. Site plans for retrofitting existing developments must conform to all requirements of this Section, "Mixed Solid Waste and Recyclables Storage In New Multi-Unit Residential and Non-Residential Buildings," and 4.430, "Location, Design and Access Standards for Mixed Solid Waste and Recycling Areas," of the Wilsonville City Code. [Added by Ordinance #426 - April 4, 1994]

RESPONSE: *The Fun Center has an existing trash storage area along the north side of the parking lot, with established service by Republic Services. Adjustments to the storage area and/or schedule service will be coordinated with Republic Services. The project will include an area for the current amount of storage.*

Section 4.199 OUTDOOR LIGHTING

Section 4.199.10 Outdoor Lighting In General.

Section 4.199.20 Applicability.

Section 4.199.30 Lighting Zones.

Section 4.199.40 Lighting Systems Standards for Approval.

Section 4.199.50 Submittal Requirements.

Section 4.199.60 Major Additions or Modifications.

Section 4.199.10. Outdoor Lighting In General.

- (.01) Purpose: The purpose of this Code is to provide regulations for outdoor lighting that will:
- A. Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, productivity, enjoyment and commerce.
 - B. Conserve energy and resources to the greatest extent possible.
 - C. Minimize glare, particularly in and around public rights-of-way; and reduce visual discomfort and improve visual acuity over large areas by avoiding "light islands" and "spotlighting" that result in reduced visual perception in areas adjacent to either the source of the glare or the area illuminated by the glare.
 - D. Minimize light trespass, so that each owner of property does not cause unreasonable light spillover to other property.
 - E. Curtail the degradation of the nighttime environment and the night sky.
 - F. Preserve the dark night sky for astronomy and enjoyment.
 - G. Protect the natural environment, including wildlife, from the damaging effects of night lighting from human sources.

- (.02) Purpose Statement as Guidelines: Declaration of purpose statements are guidelines and not approval criteria in the application of WC Section 4.199.

Section 4.199.20. Applicability.

- (.01) This Ordinance is applicable to:

- A. Installation of new exterior lighting systems in public facility, commercial, industrial and multi-family housing projects with common areas.
- B. Major additions or modifications (as defined in this Section) to existing exterior lighting systems in public facility, commercial, industrial and multi-family housing projects with common areas.

- (.02) Exemption. The following luminaires and lighting systems are EXEMPT from these requirements:

- A. Interior lighting.
- B. Internally illuminated signs.
- C. Externally illuminated signs.
- D. Temporary lighting for theatrical, television, and performance areas.
- E. Lighting in swimming pools and other water features governed by Article 680 of the National Electrical Code.
- F. Building Code required exit path lighting.
- G. Lighting specifically for stairs and ramps.
- H. Temporary and seasonal lighting provided that individual lamps are 10 watts or less.
- I. Lighting required and/or regulated by the City (i.e. construction related activities), Federal Aviation Administration, U.S. Coast Guard or other Federal or State agency.
- J. Single-family residential lighting.
- K. Code Required Signs.
- L. American flag.
- M. Landscape lighting.
- N. Lights approved by the City through an Administrative Review Temporary Use Permit process.
- O. Public street lights.
- P. ATM security lighting.
- Q. Those "Exceptions" listed in the "Exterior Lighting Power Allowance" provisions of the *Oregon Energy Efficiency Specialty Code*. [Added by Ord. 688, 11/15/10]

Section 4.199.30. Lighting Overlay Zones.

- (.01) The designated Lighting Zone as indicated on the Lighting Overlay Zone Map for a commercial, industrial, multi-family or public facility parcel or project shall determine the limitations for lighting systems and fixtures as specified in this Ordinance.
- A. Property may contain more than one lighting zone depending on site conditions and natural resource characteristics.
- (.02) The Lighting Zones shall be:
- A. LZ 1. Developed areas in City and State parks, recreation areas, SROZ wetland and wildlife habitat areas; developed areas in natural settings; sensitive night environments; and rural areas. This zone is intended to be the default condition for rural areas within the City.
- B. LZ 2. Low-density suburban neighborhoods and suburban commercial districts, industrial parks and districts. This zone is intended to be the default condition for the majority of the City.
- C. LZ 3. Medium to high-density suburban neighborhoods and districts, major shopping and commercial districts as depicted on the Lighting Overlay Zone Map.
- D. LZ 4. Reserved for limited applications with special lighting requirements. This zone is appropriate for users who have unique site or operating circumstances that warrant additional light. This zone shall not be applied to residential or agricultural areas.

[Section 4.199.30(.02) amended by Ord. 688, 11/15/10]

- (.03) Modification of Lighting Zones.
- A. The City Council may modify the designated Lighting Zones of one or more parcels if the City Council finds that the original Lighting Zone was in error, a change in circumstances has occurred warranting the change since the designation was established or the purposes of this section are better served.
- B. The Development Review Board (DRB) may modify the designated Lighting Zones as part of the Stage II, Site Design Review Process if the DRB finds that the original Lighting Zone was in error, or a change in circumstances has occurred warranting the change since the designation was established or the purposes of this section are better served.
- C. This ordinance establishes a Lighting Overlay Zone Map. The Planning Division shall maintain the current Lighting Overlay Zone Map.

RESPONSE: Section 4.199.30(.02) establishes lighting zones. The subject site is within LZ 3, as identified on the Lighting Zone Map. This zone applies to medium and high density commercial districts. The subject site is within a developed commercial district and has been developed as a commercial use in the PDC, Planned Development Commercial.

Current operating hours are as follows:

Months	Monday to Thursday	Friday & Saturday	Sunday
Sept, Oct	11am to 9pm	10am to 11pm	11am to 9pm
Nov to May	12noon to 8pm	10am to 11pm	11am to 9pm
June to Aug	10am to 10pm	10am to 11pm	10am to 10pm

During school breaks in the spring and winter hours vary. Also during the graduation season the ride will operate all night but these special operating hours are limited to only a 2 week period. The hours of operation will be varied as business allows. When the economy changes so will our hours.

Section 4.199.40. Lighting Systems Standards for Approval.

(.01) Non-Residential Uses and Common Residential Areas.

- A. All outdoor lighting shall comply with either the Prescriptive Option or the Performance Option below.
- B. Prescriptive Option. If the lighting is to comply with this Prescriptive Option, the installed lighting shall meet all of the following requirements according to the designated Lighting Zone.
 1. The maximum luminaire lamp wattage and shielding shall comply with Table 7.
 2. Except for those exemptions listed in Section 4.199.20(.02), the exterior lighting for the site shall comply with the *Oregon Energy Efficiency Specialty Code, Exterior Lighting.*
 3. The maximum pole or mounting height shall be consistent with Table 8.
 4. Each luminaire shall be set back from all property lines at least 3 times the mounting height of the luminaire:
 - a. Exception 1: If the subject property abuts a property with the same base and lighting zone, no setback from the common lot lines is required.
 - b. Exception 2: If the subject property abuts a property which is zoned (base and lighting) other than the subject parcel, the luminaire shall be setback three times the mounting height of the luminaire, measured from the abutting parcel's setback line. (Any variance or waiver to the abutting property's setback shall not be considered in the distance calculation).

- c. Exception 3: If the luminaire is used for the purpose of street, parking lot or public utility easement illumination and is located less than 3 mounting heights from the property line, the luminaire shall include a house side shield to protect adjoining property.
 - d. Exception 4: If the subject property includes an exterior column, wall or abutment within 25 feet of the property line, a luminaire partly shielded or better and not exceeding 60 lamp watts may be mounted onto the exterior column, wall or abutment or under or within an overhang or canopy attached thereto.
 - e. Exception 5: Lighting adjacent to SROZ areas shall be set back 3 times the mounting height of the luminaire, or shall employ a house side shield to protect the natural resource area.
- C. Performance Option. If the lighting is to comply with the Performance Option, the proposed lighting design shall be submitted by the applicant for approval by the City meeting all of the following:
- 1. The weighted average percentage of direct uplight lumens shall be less than the allowed amount per Table 9.
 - 2. The maximum light level at any property line shall be less than the values in Table 9, as evidenced by a complete photometric analysis including horizontal illuminance of the site and vertical illuminance on the plane facing the site up to the mounting height of the luminaire mounted highest above grade. The Building Official or designee may accept a photometric test report, demonstration or sample, or other satisfactory confirmation that the luminaire meets the shielding requirements of Table 7. Luminaires shall not be mounted so as to permit aiming or use in any way other than the manner maintaining the shielding classification required herein:
 - a. Exception 1. If the property line abuts a public right-of-way, including a sidewalk or street, the analysis may be performed across the street at the adjacent property line to the right-of-way.
 - b. Exception 2. If, in the opinion of the Building Official or designee, compliance is impractical due to unique site circumstances such as lot size or shape, topography, or size or shape of building, which are circumstances not typical of the general conditions of the surrounding area. The Building Official may impose conditions of approval to avoid light trespass to the maximum extent possible and minimize any additional negative impacts resulting to abutting and adjacent parcels, as well as public rights-of-way, based on best lighting practices and available lighting technology.
 - 3. The maximum pole or mounting height shall comply with Table 8.

D. Curfew. All prescriptive or performance based exterior lighting systems shall be controlled by automatic device(s) or system(s) that:

1. Initiate operation at dusk and either extinguish lighting one hour after close or at the curfew times according to Table 10; or
2. Reduce lighting intensity one hour after close or at the curfew time to not more than 50% of the requirements set forth in the *Oregon Energy Efficiency Specialty Code* unless waived by the DRB due to special circumstances; and
3. Extinguish or reduce lighting consistent with 1. and 2. above on Holidays.

The following are exceptions to curfew:

- a. Exception 1: Building Code required lighting.
- b. Exception 2: Lighting for pedestrian ramps, steps and stairs.
- c. Exception 3: Businesses that operate continuously or periodically after curfew.

[Section 4.199.40 amended by Ord. 688, 11/15/10]

(.02) Special Permit for Specific Lighting Fixtures and Systems and When Exceeding Lighting Requirements.

- A. This section is intended to apply to situations where more than normal foot candles are required due to a unique circumstance or use or where it is absolutely essential to perform the proposed activities after dark. All special permits shall be reviewed by the DRB.
- B. Upon issuance of a special permit by the Development Review Board (DRB), lighting systems not complying with the technical requirements of this Ordinance may be installed, maintained, and replaced for lighting that exceeds the maximums permitted by this Ordinance. This section is intended to be applied to uses such as sports lighting systems including but not limited to, sport fields and stadiums, such as baseball and football field lighting, tennis court lighting, swimming pool area lighting and prisons; other very intense lighting defined as having a light source exceeding 200,000 lumens or an intensity in any direction of more than 2,000,000 candelas; building façade lighting of portions of buildings over two stories high; and public monuments.
- C. To obtain such a permit, applicants shall demonstrate that the proposed lighting installation:
 1. Is within Lighting Zone 3 or above.
 2. Has been designed to minimize obtrusive light and artificial sky glow, supported by a signed statement from a registered civil or electrical engineer describing the mitigation measures. Such statement shall be

accompanied by calculations indicating the light trespass levels (horizontal and vertical at ground level) at the property line.

3. Will not create excessive glare, sky glow, or light trespass beyond that which can be reasonably expected by application of best lighting practices, and available technology.
4. Provides appropriate lighting curfew hours based on the use and the surrounding areas.
- D. The DRB may impose conditions of approval to mitigate any negative impacts resulting to the abutting parcel, based on best lighting practices and available lighting technology.
- E. The City may charge a review fee and may, at the Building Official's option, employ the services of a qualified professional civil or electrical engineer to review such submittals and the cost thereof shall be an additional fee charged to the applicant.

Section 4.199.50. Submittal Requirements.

(.01) Applicants shall submit the following information as part of DRB review or administrative review of new commercial, industrial, multi-family or public facility projects:

- A. A statement regarding which of the lighting methods will be utilized, prescriptive or performance, and a map depicting the lighting zone(s) for the property.
- B. A site lighting plan that clearly indicates intended lighting by type and location. For adjustable luminaires, the aiming angles or coordinates shall be shown.
- C. For each luminaire type, drawings, cut sheets or other documents containing specifications for the intended lighting including but not limited to, luminaire description, mounting, mounting height, lamp type and manufacturer, lamp watts, ballast, optical system/distribution, and accessories such as shields.
- D. Calculations demonstrating compliance with *Oregon Energy Efficiency Specialty Code, Exterior Lighting*, as modified by Section 4.199.40(.01)(B.)(2.) [Amended by Ord. 688, 11/15/10]
- E. Lighting plans shall be coordinated with landscaping plans so that pole lights and trees are not placed in conflict with one another. The location of lights shall be shown on the landscape plan. Generally, pole lights should not be placed within one pole length of landscape and parking lot trees.
- F. Applicants shall identify the hours of lighting curfew.

(.02) In addition to the above submittal requirements, Applicants using the Prescriptive Method shall submit the following information as part of the permit set plan review:

A. A site lighting plan (items 1 A - F, above) which indicates for each luminaire the 3 mounting height line to demonstrate compliance with the setback requirements. For luminaires mounted within 3 mounting heights of the property line the compliance exception or special shielding requirements shall be clearly indicated.

(.03) In addition to the above submittal requirements, Applicants using the Performance Method shall submit the following information as part of the permit set plan review:

A. Site plan showing horizontal isocandle lines, or the output of a point-by-point computer calculation of the horizontal illumination of the site, showing property lines and light levels immediately off of the subject property.

B. For each side of the property, the output of a point-by-point vertical footcandle calculation showing illumination in the vertical plane at the property line from grade to at least 10 feet higher than the height of the tallest pole.

C. Lighting plans shall be prepared by a qualified licensed engineer.

(.04) In addition to the above applicable submittal requirements, Applicants for Special Permits shall submit the following to the DRB for review:

A. Tabulation of International Engineering Society of North America (IESNA) lighting recommendations for each task including area illuminated, recommended illumination level, actual maintained illumination level, and luminaires used specifically to achieve the indicated criteria.

B. Lighting plans shall be prepared by a qualified licensed engineer.

(.05) For all calculations, the following light loss factors shall be used unless an alternative is specifically approved by the City:

Metal halide	0.6
High pressure sodium	0.8
Compact fluorescent	0.7
Full size fluorescent	0.75
Incandescent	0.9
Halogen	0.95
Other	As approved

Section 4.199.60. Major Additions or Modifications to Pre-Existing Sites.

(01.) Major Additions. If a major addition occurs on a property, all of the luminaires on the site shall comply with the requirements of this Section. For purposes of this subsection, the following are considered to be major additions:

- A. Additions of 50 percent or more in terms of additional dwelling units, gross floor area, seating capacity, or parking spaces, either with a single addition or with cumulative additions after July 2, 2008.
- B. Modification or replacement of 50 percent or more of the outdoor lighting luminaries' within a 5-year timeframe existing as of July 2, 2008.

Table 7: Maximum Wattage And Required Shielding				
Lighting Zone	Fully Shielded	Shielded	Partly Shielded	Unshielded
LZ 1	70	20	13	Low voltage landscape lighting 50 watts or less
LZ 2	100	35	39	Low voltage landscape lighting 50 watts or less
LZ 3	250	100	70	Landscape and facade lighting 100 watts or less; ornamental lighting on private drives of 39 watts and less
LZ 4	450	150	150	Landscape and facade lighting 250 watts or less; ornamental lights on private drives and lanterns 70 watts or less; marquee lighting not employing medium based lamps

[Table 7 amended by Ord. 682, 9/9/10; Ord. 688, 11/15/10]

Table 8: Maximum Lighting Mounting Height In Feet			
Lighting Zone	Lighting for private drives, driveways, parking, bus stops and other transit facilities	Lighting for walkways, bikeways, plazas and other pedestrian areas	All other Lighting
LZ 0	20	8	4
LZ 1	25	12	4
LZ 2	40	18	8
LZ 3	40	18	16
LZ 4	Height limit to be determined by Special Use Permit Only		

Lighting mounted onto buildings or other structures shall not exceed a mounting height greater than 4 feet higher than the tallest part of the building or structure at the place where the lighting is installed, nor higher than 33.33 percent of the horizontal distance of the light from the nearest property line, whichever is less.

[Table amended by Ord. 682, 9/9/10]

Table 9: Performance Method			
Lighting Zone	Maximum percentage of direct lumens of upright	Maximum Light Level at Property Line	
		Horizontal plane at grade (foot candles - fc)	Vertical plane facing the site in question, from grade to mounting height of highest mounted luminaire (foot candles – fc)
LZ 0	0	0.01 fc	0.02 fc
LZ 1	1%	0.05 fc	0.1 fc
LZ 2	5%	0.2 fc	0.4 fc
LZ 3	10%	0.4 fc	0.8 fc
LZ 4	20%	0.8 fc	1.6 fc

Table 10: Curfew	
Lighting Zone	Curfew Time
LZ 0	8:00 PM (2000 hours)
LZ 1	
LZ 2	10:00 PM (2200 hours)
LZ 3	Midnight (2400 hours)
LZ 4	

[Tables, above, renumbered by Ord. 688, 11/15/10

RESPONSE: *This application involves a building addition and modifications of the parking area, which affects some of the existing lighting. There are 57 existing pole lights and 8 wall mounted lights.*

The proposed revisions affect 14 existing pole lights, 8 of which will be relocated in the same vicinity as they are currently. The net new count is 51 pole lights. No changes are proposed for wall mounted lights. This means that less than 50% of the lighting that existed July 2, 2008 is affected. Therefore this application does not represent a "Major Modification" of lighting.

The applicant is applying the Prescriptive Method.

4.300

4.301 UNDERGROUND UTILITIES

4.310 Exceptions.

Section 4.300 of this Code shall not apply to surface-mounted transformers, surface-mounted connection boxes, wireless communication facilities, and meter cabinets and other appurtenances which are reasonably necessary to be placed above ground, or to temporary utility service facilities during construction, or to high capacity electric and communication feeder lines, or to utility transmission lines operating at 50,000 volts or more.

4.320 Requirements

- (.01) The developer or subdivider shall be responsible for and make all necessary arrangements with the serving utility to provide the underground services (including cost of rearranging overhead facilities). All such underground facilities as described shall be constructed in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon relating to the installation and safety of underground lines, plant, system, equipment and apparatus.
- (.02) The location of the buried facilities shall conform to standards supplied to the subdivider by the City. The City also reserves the right to approve location of all surface-mounted transformers.
- (.03) Interior easements (back lot lines) will only be used for storm or sanitary sewers, and front easements will be used for other utilities unless different locations are approved by the City Engineer. Easements satisfactory to the serving utilities shall be provided by the developer and shall be set forth on the plat.

RESPONSE: The existing development is served by underground utilities, except surface-mounted transformer. The proposed modernization does not alter the demand for or installation of these utilities. Appropriate easements and transformers have already been provided.

Therefore these criteria will be met.

CONCLUSION Stage II: Based on the above findings the applicant has demonstrated compliance with the applicable code provisions for approval of Stage I & II Development Plans, including appropriate consideration of the criteria for approving Waivers from building height standard.

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 therefor.

- (.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.
 - B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;
 - C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;
 - 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;
 - 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;
 - F. Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;
 - 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.
 - 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;
 - 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;
 - J. Sustain the comfort, health, tranquility 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 project will adhere to all applicable provisions above. The proposed site and building modifications are designed with sensitivity to maintaining and enhancing a quality visual image consistent with the City's design criteria. The design of the new building and modernized façade is intended to enhance the visual profile of the facility from the street view.*

All of the proposed improvements are intended to enhance the attractiveness and enjoyment of the Fun Center for and by customers. In this context the added recreation entertainment functions will help to sustain the City's general appeal, and will likely continue to support and stimulate other business activity, by continuing to bring people to the Town Center. These proposed site and building improvements certainly would not be expected to deter any business investment in the City. The proposed modernization represents a continued investment on the part of the applicant into the overall vitality of the community.

While the proposed improvements will add demand for public services, all required services and facilities are available and adequate to serve the site and proposed uses.

The applicant has provided additional colored drawings and details showing the proposed materials and color scheme for the building expansion and façade upgrade.

The Building color scheme, will be neutral in application with the use of beige, warm greys and tonal brown hues. Therefore the proposed architectural and site design plans are consistent with the purposes of Site Design Review, as follows:

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.
 - 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.

- 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.
 - 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.
 - E. Utility Service. Any utility installations above ground shall be located so as to have a harmonious relation to neighboring properties and site. The proposed method of sanitary and storm sewage disposal from all buildings shall be indicated.
 - 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.
 - 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.
- (.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.
- (.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: There are no significant natural resources or wildlife habitat areas associated with this site. The site is generally flat and already improved. The construction of the building addition will require some demolition and excavation of existing parking and landscaped areas. However, the minor grading will not significant alter existing contours.

The proposed improvements will not result in any changes relative to access, but there will be adjustments to the existing parking and circulation. As discussed

relative to parking requirements, the applicant is requesting a waiver from the minimum required on-site parking, with provisions for auxiliary off-site parking during occasional high peak events. Therefore safe, convenient and functional vehicular and pedestrian circulation is maintained.

All utility installations, except a surface mounted transformer, are already underground. There are no proposed changes to the existing signage.

Section 4.430. Location, Design and Access Standards for mixed Solid Waste and Recycling Areas

(.01) The following locations, design and access standards for mixed solid waste and recycling storage areas shall be applicable to the requirements of Section 4.179 of the Wilsonville City Code.

(.02) Location Standards:

- A. To encourage its use, the storage area for source separated recyclables shall be co-located with the storage area for residual mixed solid waste.
- B. Indoor and outdoor storage areas shall comply with Uniform Building and Fire Code requirements.
- C. Storage area space requirements can be satisfied with a single location or multiple locations and can combine with both interior and exterior locations.
- D. Exterior storage areas can be located within interior side yard or rear yard areas. Minimum setback shall be three (3) feet. Exterior storage areas shall not be located within a required front yard setback, including double frontage lots.
- E. Exterior storage areas shall be located in central and visible locations on a site to enhance security for users.
- F. Exterior storage areas can be located in a parking area if the proposed use provides at least the minimum number of parking spaces required for the use after deducting the area used for storage. Storage areas shall be appropriately screened according to the provisions of Section 4.430 (.03), below.
- G. The storage area shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.

(.03) Design Standards.

- A. The dimensions of the storage area shall accommodate containers consistent with current methods of local collection.
- B. Storage containers shall meet Uniform Fire Code standards and be made of or covered with waterproof materials or situated in a covered area.
- C. Exterior storage areas shall be enclosed by a sight obscuring fence, wall or hedge at least six (6) feet in height. Gate openings for haulers shall be a minimum of ten (10) feet wide and shall be capable of being secured in a closed

or open position. In no case shall exterior storage areas be located in conflict with the vision clearance requirements of Section 4.177.

D. Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.

(.04) Access Standards.

A. Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day and to collect service personnel on the day and approximate time they are scheduled to provide collection service.

B. Storage areas shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of ten (10) feet horizontal clearance and eight feet of vertical clearance is required if the storage area is covered.

C. Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion. (Added by Ordinance #426, April 4, 1994.)

RESPONSE: The Fun Center has an existing trash storage enclosure located along the north side of the parking lot, with established service by Republic Services. The applicant is proposing to relocate the storage area, but will coordinate adjustments to schedule service with Republic Services as may be determined necessary.

The project will adhere to all applicable standards above, including but not limited to access to areas by employees and collection vehicles.

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 is 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: *The applicant has submitted the application with forms provided by the City, together with all applicable submittal criteria listed in (.01)A-F.*

All applicable procedures will be followed.

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.

- (.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.
- (.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.
- (.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: *The applicant will install landscaping, as approved, consistent with these criteria. All applicable procedures will be followed.*

Section 4.156.01. Sign Regulations Purpose and Objectives.

- (.01) Purpose. The general purpose of the sign regulations are to provide one of the principal means of implementing the Wilsonville Comprehensive Plan by fostering an aesthetically pleasing, functional, and economically vital community, as well as promoting public health, safety, and well-being. The sign regulations strive to accomplish the above general purpose by meeting the needs of sign owners while maintaining consistency with the development and design standards elsewhere in Chapter 4. This code regulates the design, variety, number, size, location, and type of signs, as well as the processes required to permit various types of signs. Sign regulations have one or more of the following specific objectives:
 - A. Well-designed and aesthetically pleasing signs sufficiently visible and comprehensible from streets and rights-of-way that abut a site as to aid in wayfinding, identification and provide other needed information.
 - B. Sign design and placement that is compatible with and complementary to the overall design and architecture of a site, along with adjoining properties, surrounding areas, and the zoning district.
 - C. A consistent and streamlined sign review process that maintains the quality of sign development and ensures due process.
 - D. Consistent and equitable application and enforcement of sign regulations.
 - E. All signs are designed, constructed, installed, and maintained so that public safety, particularly traffic safety, are not compromised.
 - F. Sign regulations are content neutral.

RESPONSE: *There is one existing free standing sign for the Fun Center, which is located out by the Freeway. There is also one building mounted sign located on the southeast corner of the Entertainment Building.*

Section 4.156.02. Sign Review Process and General Requirements.

- (.01) Permit Required. Unless exempt under Section 4.156.05, no sign, permanent or temporary, shall be displayed or installed in the City without first obtaining a sign permit.
- (.02) Sign Permits and Master Sign Plans. Many properties in the City have signs pre-approved through a Master Sign Plan. For the majority of applications where a Master Sign Plan has been approved the applicant need not consult the sign requirements for the zone, but rather the Master Sign Plan, copies of which are available from the Planning Division. Signs conforming to a Master Sign Plan require only a Class I Sign Permit.
- (.03) Classes of Sign Permits, Master Sign Plans, and Review Process. The City has three classes of sign permits for permanent signs: Class I, Class II, and Class III. In addition, non-residential developments with three or more tenants require a Master Sign Plan. Class I sign permits are reviewed through the Class I Administrative Review Process as outlined in Subsection 4.030(.01)(A.). Class II sign permits are reviewed through the Class II Administrative Review Process as outlined in Subsection 4.030 (.01)(B.). Class III Sign Permits and Master Sign Plans are reviewed by the Development Review Board (DRB) as outlined in Section 4.031.
- (.07) Master Sign Plans. A Master Sign Plan is required for non-residential developments with three (3) or more tenants. In creating a Master Sign Plan thought should be given to needs of initial tenants as well as the potential needs of future tenants.
- A. Master Sign Plan Submission Requirements: Applications for Master Sign Plans shall include ten (10) paper and electronic copies of all the submission requirements for Class II and III Sign Permits and the following in addition to all required fees:
1. A written explanation of the flexibility of the Master Sign Plan for different potential tenant space configurations over time;
 2. A written explanation of the extent to which different sign designs, including those incorporating logos, stylized letters, multiple lines of text, non-straight baselines, or different materials and illumination will be allowed and if allowed how the flexibility of the master sign plan will allow these different sign designs over time;
 3. A written explanation of how the sign plan provides for a consistent and compatible sign design throughout the subject development.
- B. Master Sign Plan Review Criteria: In addition to the review criteria for Class II and Class III Sign Permits, Master Sign Plans shall meet the following criteria:
1. The Master Sign Plan provides for consistent and compatible design of signs throughout the development; and
 2. The Master Sign Plan considers future needs, including potential different configurations of tenant spaces and different sign designs, if allowed.
- C. Modifications of a Master Sign Plan: Modifications of a Master Sign Plan, other than Minor and Major Adjustments, shall be reviewed the same as a new Master Sign Plan.

RESPONSE: *There is one existing free standing sign for the Fun Center, which is located out by the Freeway. There is also one building mounted sign located on the southeast corner of the Entertainment Building.*

These sign were approved with a Master Sign Plan in 2009 (DB09-0023), prior to the adoption of the current sign standards in 2012. The approved Master Sign Plan included a height waiver allowing for the freestanding sign at 29'10." The approved sign area is 75.5 square feet. Both of these dimensions exceed the current code standards.

With the modernized building façade, the applicant is proposing a revised Master Sign Plan to provide better design consistency. Therefore these provisions are applicable, and the applicant is proposing a Modified Master Sign Plan.

Section 4.156.03. Sign Measurement

(.01) Sign Area:

- A. Cabinet Signs and Similar: The area for signs enclosed by cabinet, frame, or other background (including lighted surface) not otherwise part of the architecture of a building or structure shall be the area of a shape drawn around the outer dimension of the cabinet, frame, or background.
1. If the cabinet, frame, or background is an irregular shape the signs perimeter shall be measured the same as an individual element sign under B. below.
 2. The sign area does not include:
 - a. Foundations, supports, and other essential structures that are not designed to serve as a backdrop or border to the sign;
 - a. Architectural elements of a freestanding or ground mounted sign designed to match or complement the architectural design of buildings on the site not and otherwise meeting the definition of a sign;
 - c. A pole or other structural support, unless such pole or structural support is internally illuminated or otherwise so designed to constitute a display device.

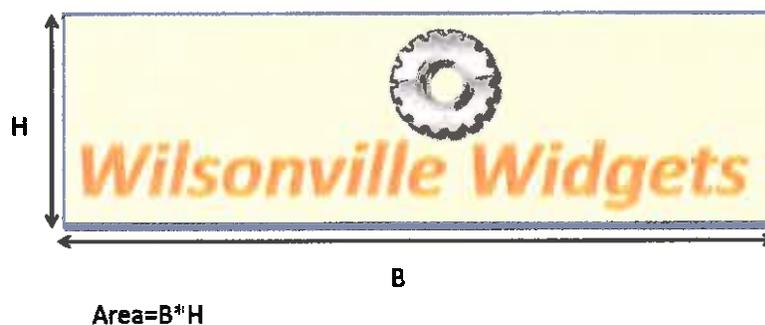


Figure S-1. Measurement of Cabinet or Similar Signs

- B. Individual Element Signs: The area for signs constructed of individual elements (letters, figures, etc.) attached to a building wall or similar surface or structure shall be the

summed area of up to three squares, rectangles, circles, or triangles drawn around all sign elements.

1. The descender on the lower case letters "q, y, p g, or j." shall not be included in sign area when the letter otherwise matches the font of other letters in the sign, the descender is no more than 1/2 the cap height of the font, and the descender is no wider than the main body of the letter.

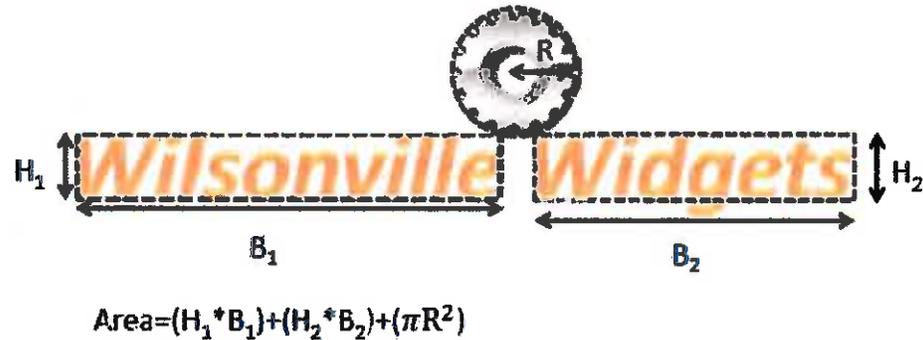


Figure S-2. Measurement of Individual Element Signs

- C. Round or Three-Dimensional Signs: The area of a round or three-dimensional sign shall be the maximum surface area visible from any one location on the ground measured the same as A. above except if the maximum surface area is an irregular shape the signs perimeter shall be measured the same as an individual element sign under B. above.
- D. Awning or Marquee Signs: The area of signs incorporated into awnings or marquees shall be the area of the entire panel containing the sign measured the same as A. above unless it is clear that part of the panel contains no sign-related display or decoration, other than the background color of the awning.
- E. Painted Wall Signs: The area of painted wall signs shall be determined as follows:
 1. If individual elements are painted without a background it shall be calculated in the manner indicated in B. above.
 2. If a background is painted it shall be calculated in the manner indicated in A. above.
- F. Temporary Signs: The area of temporary signs including banners, lawn signs, and rigid signs shall be calculated in the manner indicated in A. above.
- G. Unless otherwise specified, the sign area of a two-sided sign, with two matching sides, shall be considered to be the area of one side. For example, the sign area of a two-sided sign having thirty-two (32) square feet per sign face shall be considered to be thirty-two (32) square feet, unless this code specifies otherwise.

(.02) Sign Height above Ground.

- A. The height above ground of a freestanding or ground-mounted sign is measured from the average grade directly below the sign to the highest point of the sign or sign structure except as follows:
 1. A freestanding or ground mounted sign on a man-made base, including a graded earth mound, shall be measured from the grade of the nearest pavement or top of

any pavement curb to the highest point of the sign or sign structure. In all cases signs on a berm shall be allowed to be eight (8) feet in height from the top of the berm.

2. A freestanding or ground mounted sign placed below the elevation of the right-of-way it fronts shall be measured from the lowest point in the right-of-way along the frontage to the highest point of the sign.

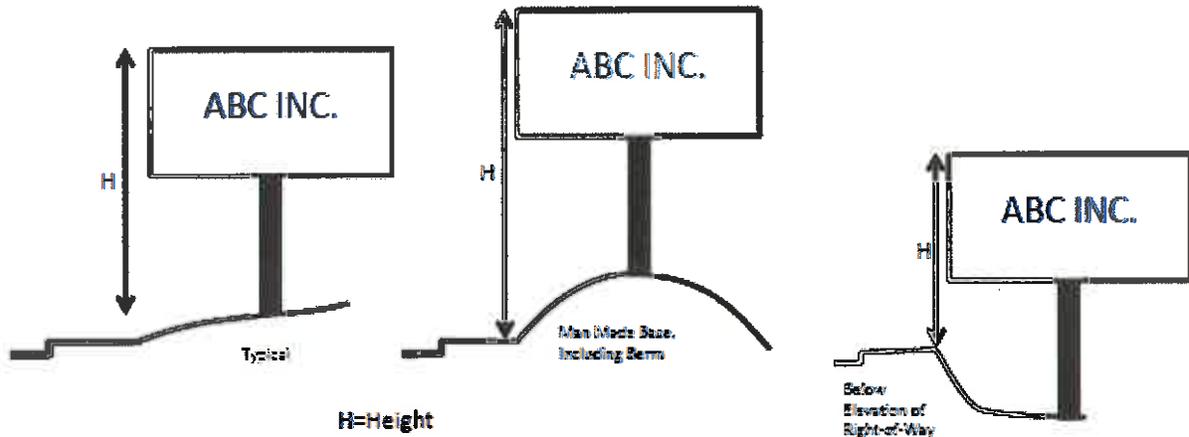


Figure S-3. How to Measure Height of a Freestanding or Ground Mounted Sign

(.03) Sign Height and Length.

- A. Height of a sign is the vertical distance between the lowest and highest points of the sign.
- B. Length of a sign is the horizontal distance between the furthest left and right points of the sign.

(.04) Final Determination of Sign Measurement. The Planning Director shall be responsible for determining the area, height above ground and height and length of a sign, subject to appeal as specified in Section 4.022. Applicants for sign plans and permits shall provide the dimensions needed to calculate the area, height above ground, height, and length.

RESPONSE: The applicant is proposing the following modifications to signage:

- New Logo Sign over new Entry Plaza at or below allowed square footage of 133.5 sft as shown below; and
- Existing Freestanding Sign to remain

Section 4.156.04. Non-Conforming Signs.

- (.01) Non-Conforming Signs. Non-conforming signs, which may be non-conforming structures or non-conforming uses, are subject to the standards for non-conforming uses and non-conforming structures delineated in Sections 4.189 through 4.190. Except, however, that a non-conforming sign that is damaged beyond fifty percent (50%) of its value, as determined by the City Building Official, may only be reconstructed if the reconstructed sign meets all applicable zoning, structural, and electrical standards applicable at the time of reconstruction. Nothing in this Section is intended to impair any previously approved sign permit that has been issued by the City of Wilsonville, subject to state or federal law, or to require the removal of any sign that was legally erected or installed prior to the effective date of these regulations. In the event that a previously erected or installed sign no longer meets applicable City zoning standards it may remain in place, subject to the standards for non-conforming uses or nonconforming structures noted above. However, a sign that is required to be moved solely because of a public taking may be replaced on the site, and maintain its non-conforming status, subject to a Class II Sign Permit, provided the replacement sign is found to not increase in non-conformity to current code standards other than required setbacks.

RESPONSE: *There are no existing "non-confirming signs" therefore this section is not applicable. The existing signs were approved with a Master Sign Plan (DB09-0023), prior to the adoption of the current sign standards in 2012.*

The approved Master Sign Plan included a height waiver allowing for the freestanding sign at 29'10" exceeding the then standard 27 feet. The approved sign area of 75.5 square feet, which was consistent with the applicable standards in 2009, but is not consistent with current 2012 standards.

The primary focus of the Modified Master Sign Plan is the building mounted signage. The applicant proposes to retain the prior approved free-standing sign, with change of face only. However, the wall mounted signage will be relocated consistent oriented with the new entry plaza, and will include a modernized logo and facility identification.

Section 4.156.06. Prohibited Signs

- (.01) Prohibited Signs. The following signs are prohibited and shall not be placed within the City:
- A. Search lights, strobe lights, and signs containing strobe lights or other flashing lights, unless specifically approved in a sign permit...

RESPONSE: *There are no existing or proposed signs that are prohibited under these regulations. Therefore this section is not applicable.*

Section 4.156.08. Sign Regulations in the PDC, PDI, and PF Zones.

- (.01) Freestanding and Ground Mounted Signs:

- A. One freestanding or ground mounted sign is allowed for the first two-hundred (200) linear feet of site frontage. One additional freestanding or ground mounted sign may be added for through and corner lots having at least two-hundred (200) feet of frontage on one street or right-of-way and one-hundred (100) feet on the other street or right-of-way.
- B. The allowed height above ground of a freestanding or ground mounted sign is twenty (20) feet except as noted in 1-2 below.
 - 1. The maximum allowed height above ground for signs along the frontage of Interstate 5, and parallel contiguous portions of streets, as identified in Figure S-4, associated with multiple tenants or businesses may be increased by three (3) feet for each tenant space of ten thousand (10,000) square feet or more of gross floor area up to a maximum of thirty-five (35) feet.
 - 2. The allowed height above ground for signs in the PDC-TC Zone, Old Town Overlay Zone, and PDI Zone is eight (8) feet, except those signs along the frontage of Interstate 5 and parallel contiguous portions of streets identified in Figure S-4.
- C. The maximum allowed area for each freestanding or ground-mounted sign is determined based on gross floor area and number of tenant spaces:
 - 1. For frontages along streets other than those indicated in 2 below sign area allowed is calculated as follows:
 - a. The sign area allowed for signs pertaining to a single tenant:

Gross Floor Area in a Single Building	Maximum Allowed Sign Area
Less than 11,000 sq. ft.	32 sq. ft.
11,000-25,999 sq. ft.	32 sq. ft. + 2 sq. ft. per 1000 sq. ft. of floor area greater than 10,000 rounded down to the nearest 1,000 sq. ft.
26,000 sq. ft. or more	64 sq. ft.

- 2. Signs fronting Interstate 5 and parallel contiguous street sections, as identified in Figure S-4.
 - a. For signs on properties or within developments with a single tenant or business the sign area allowed is sixty-four (64) square feet.
- D. Pole or sign support placement shall be installed in a full vertical position.
- E. Freestanding and ground mounted signs shall not extend into or above public rights-of-way, parking areas, or vehicle maneuvering areas.
- F. The location of free standing or ground mounted signs located adjacent to or near the Public Right-of-Way shall be in compliance with the City's Public Works Standards for sight distance clearance. Prior to construction, the location of the sign shall be approved by the City of Wilsonville Engineering Division.

- G. Freestanding and ground mounted signs shall be designed to match or complement the architectural design of buildings on the site.
- H. For freestanding and ground mounted signs greater than eight (8) feet in height, the width of the sign shall not exceed the height.
- I. Along street frontages in the PDC-TC Zone and Old Town Overlay Zone monument style signs are required.
- J. Freestanding and ground mounted signs shall be no further than fifteen (15) feet from the property line and no closer than two (2) feet from a sidewalk or other hard surface in the public right-of-way.
- K. Except for those signs fronting Interstate 5, freestanding and ground mounted signs shall include the address number of associated buildings unless otherwise approved in writing by the City and the Fire District.
- L. When a sign is designed based on the number of planned tenant spaces it shall remain a legal, conforming sign regardless of the change in the number of tenants or configuration of tenant spaces.

RESPONSE: *The building, as expanded contains 33,046 square feet. Therefore the allowed sign area for a freestanding sign is 64 square feet.*

However, the existing freestanding sign located out by the freeway was approved with height and area waiver (DB09-0023). The existing sign area is 75.5 square feet and with height of 29 feet, 10 inches.

The applicant is proposing to modernize this sign, with a change of face, but no change to the prior approved height or square footage, thereby maintaining compliance.

(.02) Signs on Buildings.

- A. Sign Eligible Facades: Building signs are allowed on a facade of a tenant space or single tenant building when one or more of the following criteria are met:
 - 1. The facade has one or more entrances open to the general public;
 - 2. The facade faces a lot line with frontage on a street or private drive with a cross section similar to a public street, and no other buildings on the same lot obstruct the view of the building facade from the street or private drive; or
 - 3. The facade is adjacent to the primary parking area for the building or tenant.
- B. Sign Area Allowed:
 - 1. The sign area allowed for all building signs on a sign eligible façade is shown in the table below:

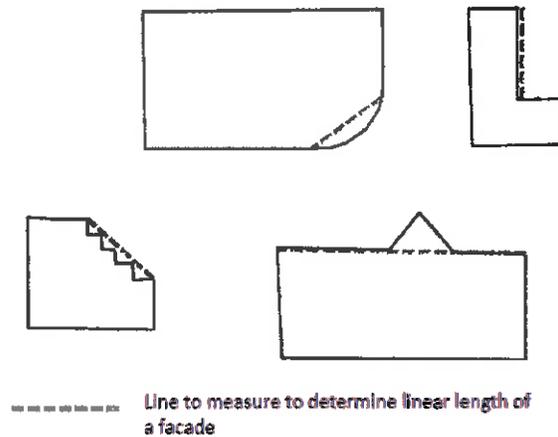
Linear Length of Façade (feet)	Sign Area Allowed*
Less than 16	Area equal to linear length
16 to 24	24 sq. ft.
Greater than 24 to 32	32 sq. ft.
Greater than 32 to 36	Area equal to linear length
Greater than 36 to 72	36 sq. ft.
Greater than 72	36 sq. ft. plus 12 sq. ft. for each 24 linear feet or portion thereof greater than 72 up to a maximum of 200 sq. ft.

*Except as noted in 2. through 5. below

2. The sign area allowed for facades with a primary public entrance or with a frontage along a public street dominated by windows or glazing may be increased by transferring to the façade up to one half (1/2) the sign area allowed for adjacent facades up to fifty (50) square feet. In no case shall the allowed sign area exceed an area equal to the linear length of the façade.
3. The sign area allowed is increased as follows for signs at separate building entrances:
 - a. For building entrances open to the general public located at least fifty (50) feet apart on the same facade, the sign area allowed is increased by fifty (50) percent up to fifty (50) square feet.
 - b. For building entrances located less than fifty (50) feet apart on the same facades, the sign area allowed is increased by twenty (20) percent up to twenty (20) square feet.
4. For businesses occupying multiple buildings in a campus setting, sign area shall be limited to that allowed for the largest building, which may then be distributed throughout the campus.
5. If a façade otherwise not sign eligible faces a lot line with frontage on Interstate 5, the applicant can transfer sign area allowed from one (1) of the locations described in a. and b. below. In no case shall the allowed sign area exceed an area equal to the allowed sign area for a sign eligible façade of the same linear length.
 - a. The freestanding sign along the Interstate 5 frontage. This generally involves placing building signs on the subject façade in lieu of installing a freestanding sign.
 - b. Adjacent façade up to fifty (50) square feet, when a majority of the adjacent façade from which the sign area is being transferred is visible from Interstate 5.
6. Calculating linear length of a façade for the purpose of determining maximum sign area allowed. For facades of a single tenant building the length the facade measured at the building line, except as noted in a. and b. below. For multi-tenant buildings the width of the façade of the tenant

space shall be measured from the centerline of the party walls or the outer extent of the exterior wall at the building line, as applicable, except as noted in a. and b. below. Applicants shall provide the dimensions needed to calculate the length. Each tenant space or single occupant building shall not be considered to have more than five (5) total façades.

- a. If a façade is curvilinear, stepped, or otherwise not a straight line, the façade shall be measured by drawing a straight line between the edges of the façade as shown in the figure below.
- b. For an "L" shaped tenant space or single tenant building the longest leg of the interior of the "L" shall be basis for measuring the length of the L-shaped facade. Sign area allowed based on the longest leg can be distributed between legs.



- C. The length of individual tenant signs shall not exceed seventy-five (75) percent of the length of the facade of the tenant space.
- D. The height of building signs shall be within a definable sign band, fascia, or architectural feature and allow a definable space between the sign and the top and bottom of the sign band, fascia, or architectural feature.
- E. Types of signs permitted on buildings include wall flat, fascia, projecting, blade, marquee and awning signs. Roof-top signs are prohibited.

RESPONSE: *The existing approved building sign contains 35.9 square feet.
The expanded building will have a front façade of 267 linear feet. (See Arch.)
Therefore the allowed sign area for building mounted signage is 133.5 square feet.*

$$267 \cdot 72 = 195 / 24 = 8.1 \times 12 = 9.5 \text{ sf}$$

$$36 + 97.5 = 133.5 \text{ sf}$$

The proposed building sign will contain no more than 133.5 square feet. Therefore the sign complies with current standards.

Section 4.156.09. Temporary Signs In All Zones.

The following temporary signs may be permitted in addition to the permanent signs allowed in different zones and exempt temporary signs unless specifically prohibited in a master sign plan or other sign approval:

RESPONSE: *No temporary signs proposed.*

Section 4.156.10. Signs on City and ODOT Right-Of-Way.

- (.01) Signs on City Property. For the purposes of this section, City property is defined as physical sites, City rights-of-way, and rights-of-way over which the City has jurisdiction. City property includes, but is not limited to, the following: City Hall, the Community Center, the Library, parks and open space, Transit and Fleet Building, SMART Central, and the City's reservoir, pump station, and treatment plant properties.

RESPONSE: *No signs proposed in R.O.W.*

TREE PRESERVATION AND PROTECTION

Section 4.600. Purpose and Declaration

- (.01) Rapid growth, the spread of development, need for water and increasing demands upon natural resources have the effect of encroaching upon, despoiling, or eliminating many of the trees, other forms of vegetation, and natural resources and processes associated therewith which, if preserved and maintained in an undisturbed and natural condition, constitute important physical, aesthetic, recreational and economic assets to existing and future residents of the City of Wilsonville.
- (.02) Specifically, the City Council finds that:
- A. Woodland growth protects public health through the absorption of air pollutants and contamination, through the reduction of excessive noise and mental and physical damage related to noise pollution, and through its cooling effect in the summer months, and insulating effects in winter;
 - B. Woodlands provide for public safety through the prevention of erosion, siltation, and flooding; and
 - C. Trees make a positive contribution to water quality and water supply by absorbing rainfall, controlling surface water run-off, and filtering and assisting in ground water recharge; and
 - D. Trees and woodland growth are an essential component of the general welfare of the City of Wilsonville by producing play areas for children and natural

beauty, recreation for all ages and an irreplaceable heritage for existing and future City residents.

- (.03) Therefore, the purposes of this subchapter are:
- A. To preserve Significant Resource Overlay Zone areas, recognizing that development can and will occur.
 - B. To provide for the protection, preservation, proper maintenance and use of trees and woodlands in order to protect natural habitat and prevent erosion.
 - C. To protect trees and other wooded areas for their economic contribution to local property values when preserved, and for their natural beauty and ecological or historical significance.
 - D. To protect water quality, control surface water run-off, and protect ground water recharge.
 - E. To reflect the public concern for these natural resources in the interest of health, safety and general welfare of Wilsonville residents.
 - F. To encourage replanting where trees are removed.

Section 4.600.20. Applicability of Subchapter

- (.01) The provisions of this subchapter apply to the United States and the State of Oregon, and to their agencies and subdivisions, including the City of Wilsonville, and to the employees and agents thereof.
- (.02) By this subchapter, the City of Wilsonville regulates forest practices on all lands located within its urban growth boundary, as provided by ORS 527.722.
- (.03) The provisions of this subchapter apply to all land within the City limits, including property designated as a Significant Resource Overlay Zone or other areas or trees designated as protected by the Comprehensive Plan, City zoning map, or any other law or ordinance; except that any tree activities in the Willamette River Greenway that are regulated by the provisions of WC 4.500 - 4.514 and requiring a conditional use permit shall be reviewed by the DRB under the application and review procedures set forth for Tree Removal Permits.

Section 4.600.30. Tree Removal Permit Required

- (.01) Requirement Established. No person shall remove any tree without first obtaining a Tree Removal Permit (TRP) as required by this subchapter.
- (.02) Tree Removal Permits will be reviewed according to the standards provided for in this subchapter, in addition to all other applicable requirements of Chapter 4.
- (.03) Although tree activities in the Willamette River Greenway are governed by WC 4.500 - 4.514, the application materials required to apply for a conditional use shall be the same as those required for a Type B or C permit under this subchapter, along with any additional materials that may be required by the Planning Department. An application for a Tree Removal Permit under this section shall be reviewed by the Development Review Board.

Section 4.600.50. Application For Tree Removal Permit

- (.01) **Application for Permit.** A person seeking to remove one or more trees shall apply to the Director for a Tree Removal Permit for a Type A, B, C, or D permit, depending on the applicable standards as provided in this subchapter.
- (A) An application for a tree removal permit that does not meet the requirements of Type A may be submitted as a Type B application.
- (.02) **Time of Application.** Application for a Tree Removal Permit shall be made before removing or transplanting trees, except in emergency situations as provided in WC 4.600.40 (1)(B) above. Where the site is proposed for development necessitating site plan or plat review, application for a Tree Removal Permit shall be made as part of the site development application as specified in this subchapter.
- (.03) **Fees.** A person applying for a Tree Removal Permit shall pay a non-refundable application fee; as established by resolution of the City Council.
- A. 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.

RESPONSE: ***This application includes a request for a Type C Tree Permit. The applicant has provided in Landscape Architect's Report, which includes an inventory and assessment of existing trees in the immediate vicinity of the proposed building and parking modifications. A total of 35 trees, over 6 inch caliper were inventoried and evaluated.***

The building and site improvements will require removal of 27 trees. With the new parking improvements 28 trees will be planted.

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.
- B. Preservation and Conservation. No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a design principle shall be equal in concern and importance to other design principles.
- C. Developmental 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.

- 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.
- 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.
- F. Compliance With Statutes and Ordinances. The proposed activity shall 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 to be removed, in accordance with WC 4.620.10.
- 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 existing or proposed buildings 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 et seq., or creates unsafe vision clearance as defined in this Code.
 - (a) As a condition of approval of Stage II development, filbert trees must be removed if they are no longer commercially grown or maintained.
 - 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.
- 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.

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.
 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.
- J. **Exemption.** Type D permit applications shall be exempt from review under standards D, E, H and I of this subsection.

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 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.
- (.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 setbacks required by existing zoning requirements.
 5. Grade Changes. Designation of grade changes 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 applicant has provided the required submittal information for the Type C Tree Permit. The trees to be removed are necessary to accommodate the proposed building expansion and related parking area modifications. Appropriate replacement trees will be planted consistent with these standards. Appropriate permit will be applied for.

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.

- (.02) Basis For Determining Replacement. 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. 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.
- (.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.
- (.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.
- (.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.
- (.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.

- A. The City Tree Fund shall be used to offer trees at low cost on a first-come, first-serve basis to any Type A Permit grantee who requests a tree and registers with the City Tree Fund.
- B. In addition, and as funds allow, the City Tree Fund shall provide educational materials to assist with tree planting, mitigation, and relocation.

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. Right-of-Ways and Easements. Street right-of-way and utility easements may be cordoned by placing stakes a minimum of fifty (50) feet apart and tying ribbon, plastic tape, rope, etc., from stake to stake along the outside perimeters of areas to be cleared.
 - 2. Any property area separate from the construction or land clearing area onto which no equipment will venture may also be cordoned off as described in paragraph (D) of this subsection, or by other reasonable means as approved by the reviewing authority.

RESPONSE: Appropriate tree protective fencing will be installed prior to site construction. The project will incorporate above provisions.

This application does not involve any designated SROZ area or preservation of any wooded area and is not related to site clearing or residential development. However, the building addition will result in removal of 27 existing trees and approximately 70 parking spaces but the resulting parking has a net increase of 6 spaces after converting some to compact and adding other parking, as identified on the revised site plan, this compliance report, and addressed in the Arborist's Report.

FINAL CONCLUSION: This report has provided findings demonstrating compliance with the Comprehensive Plan and applicable PDC zoning; Planned Development Permit standards, and Design Review standards. The proposed Findings demonstrate compliance with the following applicable standards and criteria:

- ***PDC - Stage I Master Plan - Two Phased Development Plan;***
- ***PDC - Stage II Development Plans (Phase 1);***
- ***Site Design Review; and***
- ***Type C Tree Permit***

This narrative specifically addresses compliance with the approval criteria for PD waiver from the minimum parking standard, allowing for temporary off-site auxiliary parking for high peak events.

Based on the findings and supporting plans and documents, the development is found to comply with all Planned Development and Site Design Review standards and criteria. Therefore the applicant respectfully requests approval of all requested land use actions.

Supplemental Compliance Narrative – Wilsonville Fun Center Architectural Character and Compatibility

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 therefor.
- (.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.
 - B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;
 - C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;
 - 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;
 - 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;

Architectural Context

The Wilsonville Fun Center is now proposing a major architectural expansion and modernization of their Entertainment Venue Building.

The expansion will include a 16 lane Brunswick bowling center and the modernization will include Architectural Façade updates and building color and textures design changes to help keep the facility current and relevant in today's changing environment. Finish materials will include use of insulated metal cladding (vertical and horizontal orientation) along with accents of

cultured stone veneer, flush metal panel, and the first of its in kind in Oregon a kinetic wall Wind Sculpture. The color scheme will be neutral in application with the use of beige, warm greys and tonal brown hues in the material types previously specified. A freshening of the existing building will include new paint at existing fractured face and fluted concrete block facades along with an updated paint finish to existing standing seam metal roofing. Additional coordinating accents of flush metal panel fascia and cultured stone veneers will also be applied to the existing building facade to create a cohesive contemporary look between the building addition and existing building exterior facades.

When discussing architecture, it is important to set the context within which the architecture will reside. Various developments throughout the Town Center, over the years, have produced a wide variety of architectural styles. Consequently, there is no specific architectural character established within the Town Center. This variety of design is consistent with the stated Design Review objective, which seek to avoid “Excessive uniformity” and Discourage monotonous, drab, dreary and inharmonious developments.”

It is important to recognize that “harmonious” design does not mean adherence to a uniform standard or style. Rather we suggest that harmony in design is a matter of blending variations in patterns to create a cohesive pallet, much like with music. We also suggest that architecture should reflect the function of a building, which the applicant believes is, at least as important, and maybe more important as matching architectural styles. In fact, Section 4.421(.01) specifically states, “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.”

The Fun Center is situated at the top west end of the Town Center, north of the Town Center Loop W. The Center is a multi-function entertainment venue, offering customers a variety of attractions for individual, family and group entertainment.

For the Fun Center the architectural character for this area is set by the surrounding developments, which consist of the following:

- North – Holland Group, Jory Trail Apartment Complex
- West – Les Schwab Tire Store and I-5 Freeway
- South – US Bank, Dental Office, Regal Theater
- Southeast - Capital Realty Building; and
- East – NAPA Auto Parts.

We emphasize that the Fun Center provides an entertainment function, which is distinctly different than the functions for the adjacent Les Schwab tire store or Napa Auto Parts store. And, while these two adjacent businesses are both auto service related, each is functionally different than the other, and their individual architecture reflects this difference. As an entertainment facility, the Fun Center also provides a distinctly different function than the general office buildings and theater located on the south side of the Loop Road. Similar to the Fun Center, the Regal Theater is also distinctly different than the office, service and retail uses in

the immediate surrounding neighborhood. We note that the different architecture of the theater, Les Schwab and the Fun Center appropriately reflect these functional differences.

The Fun Center is currently predominantly a painted cement block structure, with metal roof and trim. The current cement block design is similar to that of the Les Schwab building. But, the applicant does not believe this style appropriately reflects to updated image the Fun Center wishes to promote. Consequently, they are proposing a major façade upgrade.

Relationship to Surrounding Buildings

There are apartments to the north of the Fun Center. The boundary between existing parking lot and residential district is screened by a fence and landscaping. It is also noted that the apartments to the north are further buffered by garages and drive isles, providing significant physical separation from the Fun Center parking. The closest apartment building is setback at least 50 from the Fun Center's north property line, and the proposed building expansion will be setback 75 feet from the north line.

The Les Schwab facility to the west, is the closest building to the Fun Center, as the two facilities share a driveway access. As noted, the Schwab building is constructed of cement block with metal roof and trim, similar to the existing Fun Center building. This building style reflects the appropriate industrial and service commercial function of the tire center.

In contrast, the Napa auto parts store to the east, is a brick building, which reflects its more retail function. Similarly, the office buildings across the street are all brick structures, reflecting their general office, banking and dental service functions.

Again, in contrast to the office and retail businesses, the Regal Theater has a cement block façade with a glass architectural tower to promote its entertainment function.

Anticipating the Pending Updated Town Center Master Plan

The City is currently in the process of updating the Town Center Master Plan. Public input and Task Force work to date indicates that the community is interested in revitalizing and refreshing the image of the Town Center.

A Community Vision for Town Center

Town Center is a vibrant, walkable destination that inspires people to come together and socialize, shop, live, and work. Town Center is the heart of Wilsonville. It is home to active parks, civic spaces, and amenities that provide year-round, compelling experiences. Wilsonville residents and visitors come to Town Center for shopping, dining, culture, and entertainment.

While the updated Town Center Plan is just in Concept form, and not yet adopted, the applicant believes the proposed modern architecture moves the Fun Center towards the desired future for the Town Center by recreating a new fresh image, while also visually promoting the

entertainment function of the site. This new architectural image will establish a more distinctive visual separation of the Fun Center within its immediate neighborhood.

All of the proposed improvements are intended to enhance the attractiveness and enjoyment of the Fun Center for and by customers. In this context the added recreation entertainment functions will help to sustain the City's general appeal, and will likely continue to support and stimulate other business activity, by continuing to bring people to the Town Center.

CONCLUSION

Consistent with the Design Review Objectives, the proposed new architecture for the Fun Center employs originality, flexibility and innovation in architecture and graphic design.”

The proposed design maintains a high quality visual environment, while conserving the City's natural beauty, visual character and charm. The applicant believes the proposed architectural design is properly related to the entertainment function of the site and that of the surrounding developments in the Town Center. The applicant submits the proposed building design will protect and enhance the City's appeal, adding visual interest within the Town Center.

**Geotechnical Investigation
Proposed Building Addition
Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop West
Wilsonville, Oregon**

Prepared For

**Mr. Darren Harmon, General Manager
Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop West
Wilsonville, Oregon 97070**

**March 1, 2018
Project No. 3281.1.1**



March 1, 2018
Project No. 3281.1.1

Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop West
Wilsonville, Oregon 97070

Attention: Mr. Darren Harmon, General Manager
Subject: Geotechnical Investigation
Proposed Building Addition
Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop West
Wilsonville, Oregon

Dear Mr. Harmon:

As requested, Northwest Geotech, Inc., (NGI) has completed a geotechnical investigation for the subject project. Our investigation consisted of subsurface exploration, field infiltration testing, engineering analysis, and preparation of this report. This report summarizes our findings and presents geotechnical recommendations for design and construction of the proposed building and associated improvements.

SITE AND PROJECT DESCRIPTION

The subject site consists of an approximate 4.9 acre parcel located at 29111 SW Town Center Loop West in Wilsonville, Oregon as shown on the Location Map, Figure 1. The site consists of an existing commercial development which includes Bullwinkle's Restaurant and arcade, batting cages, a go-cart track, miniature golf course, swimming pool, picnic areas, and support facilities as well as paved parking. The approximate locations of the existing improvements are shown on the Site Plan, Figure 2. The site slopes gently down to the southwest with overall topographic relief of approximately 2 to 3 feet across the proposed building addition footprint.

Based on the information submitted to our office, we understand that the project will consist of constructing a new building addition of approximately 14,600 square feet in size. The building addition is planned to be situated to the east of the existing building as shown on the Site Plan. The new building addition is planned to be a single story pre-engineered structure constructed at or near existing parking lot grades. Associated improvements are anticipated to consist of concrete walks, paved parking, landscaping, and stormwater facilities.

SUBSURFACE EXPLORATION

The subsurface exploration consisted of drilling four borings at the site to a depths ranging from 16.5 to 26.5 feet using trailer mounted, continuous flight auger drilling equipment. The borings were logged by a geologist from our office who visually classified the subsurface soils in accordance with the Unified Soil Classification System (USCS). Bulk and relatively undisturbed samples of the subsurface soils were obtained at 2.5 to 5 foot depth intervals within the borings. Standard penetration tests (SPT) were also conducted at selected depth intervals within the

borings. The soil samples were returned to our laboratory for further examination. Detailed boring logs are presented in Appendix A.

FIELD INFILTRATION TESTING

A field infiltration test was conducted in a hand excavated pit at a depth of 3.5 feet to aid in the design of stormwater bio-swale facilities. Upon completion of the excavation a 6-inch diameter bevel ended PVC casing was installed and driven to practical refusal using a 20 pound sledge hammer. Potable water was introduced into the casing to pre-soak the soils overnight and the infiltration testing was conducted the following day. The infiltration testing was performed in general conformance with the City of Wilsonville Encased Falling Head Procedure. The infiltration test results are summarized in the table below.

Infiltration Test Results	
<u>Location</u>	<u>Measured Infiltration Rate (inches/hour)</u>
I-1	1.44

The infiltration value presented above is a measured value and does not include a safety factor.

SUBSURFACE CONDITIONS

The proposed building addition site is surfaced with asphaltic concrete pavement ranging from 2.5 to 5 inches in thickness underlain by 8 to 10 inches of crushed aggregate base. Below the pavement section, native soils were encountered consisting of predominantly stiff, sandy, clayey silt extending to depths of approximately 12.5 to 15 feet below existing site grades. Below this unit, medium dense to dense deposits of silty, sandy gravel were encountered extending to the maximum depth explored of 26.5 feet.

Groundwater was encountered at a depth of 21 feet in boring B-4. Groundwater was not detected in the remaining borings. Groundwater conditions are expected to fluctuate seasonally.

FINDINGS AND CONCLUSIONS

From a geotechnical engineering standpoint, the subject property is considered suitable for the proposed development provided the recommendations presented in the following sections of this report are incorporated into the design and construction of the project.

RECOMMENDATIONS

Site Preparation

Prior to grading, the areas of the site planned for redevelopment should be cleared of vegetation and surface or buried obstructions. Water wells to be removed (if any) should be capped below finished site grades and abandoned in accordance with local and state guidelines. Removal of pavement sections, topsoil, fill, or any soft, organic, or otherwise unsuitable soils will be required beneath the proposed building envelop and new pavement areas. It is anticipated that overall

stripping will be approximately 12 to 13 inches to remove the existing pavement sections. The stripping depths will need to be confirmed by the geotechnical engineer's representative prior to placement of building components, pavement sections, or structural fill.

Materials for Fill

The on-site soils are generally considered to be suitable for use as structural fill provided they are free of organic materials, debris, and rock fragments in excess of 6 inches in dimension. However, it is likely that the near surface fine-grained soils will have moisture contents well in excess of optimum moisture conditions, except perhaps during the driest portion of the year, and will require significant drying to achieve compaction.

Wet weather grading is not generally recommended at this site. Should grading activities proceed during the wet weather months, the use of imported granular fill such as clean sand, pit run gravel, or crushed aggregate (containing less than 5 percent material passing the No. 200 sieve) is recommended.

Representative samples of the materials to be used for fill will need to be tested in the laboratory by the geotechnical engineer's representative to determine the maximum density and optimum moisture content.

Structural Fill

All fill materials placed within structural areas including embankments and trench backfill should be compacted while at a moisture content near optimum and to a density that is not less than 92 percent of the maximum dry density as determined in accordance with ASTM D1557 (modified Proctor). For non-structural areas, the compacted dry density should not be less than 85 percent of the modified Proctor. Unless otherwise specified, the fill materials should be placed in layers that, when compacted, do not exceed 8 inches in thickness. Structural fill will need to be tested by the geotechnical engineer or his designated representative during construction.

Trench Backfill

We recommend the trench backfill consist of a clean crushed aggregate (or other suitable granular material) containing less than 5 percent fine materials passing the No. 200 sieve. Appropriate bedding materials should be placed beneath pipes to ensure no point or concentrated loading. All granular trench backfill above the pipe zone and within structural areas should be compacted by mechanical means to at least 90 percent of the maximum dry density determined in accordance with ASTM D1557 (modified Proctor). The trench backfill will need to be tested by the geotechnical engineer or his designated representative.

Cut/Fill Slopes

Temporary cut slopes in excess of 4 feet in height and exposing the fine-grained on-site soils should be constructed no steeper than 1 horizontal to 1 vertical to a maximum height of 8 feet. If temporary cut slopes in excess of 8 feet in height are required or when groundwater seepage is encountered, this office should be consulted.

Permanent cut and fill slopes should be constructed no steeper than 2 horizontal to 1 vertical. Permanent slopes should be vegetated as soon as practical to minimize erosion.

Protection of Exposed Ground

Excavation and construction operations will expose the near-surface moisture sensitive soils to inclement weather conditions. The exposed soils will likely rapidly deteriorate due to precipitation and/or the action of repetitive heavy construction equipment. Accordingly, walls and floors of excavations should be protected from the elements and from the action of repetitive construction traffic.

There is the likely potential that tire mounted earthwork equipment could induce excess pore water pressures in the near surface soils that could result in severe pumping (and disturbance) of the grade. This condition may be present irrespective of whether the project is completed in dry or wet weather months. NGI has provided wet weather geotextile and aggregate thickness recommendations for construction access and staging areas and these sections should be considered minimum sections to be used in conjunction with track-mounted equipment.

Wet Weather Grading/Erosion Control

Wet weather grading of the near surface, moisture-sensitive soils is not generally recommended. If wet weather grading is unavoidable, due to construction schedules, stabilization of the subgrade soils with a geotextile and aggregate (or by other means) will likely become necessary. Also, construction traffic should be directed over access roads and staging areas constructed of a minimum of 14 inches of crushed aggregate placed over a geotextile such as Mirafi 500X (or equivalent). In addition, the use of lightweight track-mounted equipment is recommended to minimize disturbance of the subgrade. Erosion control measures will need to be undertaken to meet City of Wilsonville and project requirements.

Excavations

Based on the subsurface exploration, it is anticipated that excavations can be accomplished using conventional heavy earthmoving equipment. Temporary excavations in excess of 5 feet in depth will require shoring or sloping of the sidewalls to provide for worker safety. At the time of the subsurface exploration in February 2018, groundwater was encountered at a depth of 21 feet below the existing ground surface in boring B-4 and is expected to fluctuate seasonally. Excavations below the water table or where significant groundwater seepage is encountered will need to be dewatered during construction.

Building Foundations

Building loads may be supported on individual and/or continuous spread footings bearing on undisturbed native soils or compacted structural fill. Foundations may be designed for an allowable dead plus live load bearing capacity of 2,000 pounds per square foot with an increase of one-third allowed for short term wind or seismic loads.

Footings should be embedded a minimum of 18 inches below the lowest adjacent finished grade. Continuous and/or individual spread footings should be a minimum of 18 inches in the least dimension. If footing excavations are left open during wet weather periods or if seepage occurs, a 2 to 3 inch thick layer of clean crushed aggregate should be placed and seated by mechanical means to help avoid deterioration of the bearing soils.

Lateral loads can be resisted by passive pressures acting against footings and by frictional resistance between foundation elements and supporting soils. A passive resistance of 200 pounds per square foot per foot of embedment depth and a friction factor of 0.30 may be used for design. The friction factor can be increased to 0.35 if crushed aggregate is used to support footings.

Settlement is anticipated to be within typical construction tolerances of one inch of total settlement and one-quarter to one-half inch of differential settlement. Where unusual loading patterns result in large differential loads, combined footings, eccentrically loaded footings, or other special foundation requirements, this office should be consulted. Foundations should be reinforced in accordance with structural considerations.

Observation of the completed foundation excavations by the geotechnical engineer's representative will be required prior to placement of aggregate/fill or foundation components to verify foundation bearing conditions.

Retaining Walls

Retaining walls should be designed to withstand lateral earth pressures and any adjacent surcharge loads. Walls free to deflect and retaining level backfill composed of free-draining sand or gravel (containing less than 5 percent material passing the No. 200 sieve) may be designed for an equivalent fluid active pressure of 35 pounds per cubic foot. The on-site soils are not generally recommended for wall backfill. Restrained walls (such as loading dock walls) should be designed for an equivalent fluid at-rest pressure of 55 pounds per cubic foot. Additional surcharge pressures from adjacent loading conditions should be added to these values. The above design considerations assume that walls will be appropriately drained to prevent buildup of hydrostatic pressures. Wall foundations should be designed in accordance with the recommendations presented in the building foundations section of this report.

Floor Slabs and Other Concrete Slabs-on-Grade

Floor slabs or other concrete slabs-on-grade should be at least 3.5 inches in thickness and underlain by a minimum of 6 inches of clean, free-draining, crushed rock compacted to a minimum of 95 percent of the maximum dry density as determined in accordance with ASTM D1557 (modified Proctor). Interior floor slabs should also be underlain by a suitable moisture barrier covered with a protective layer of clean sand. Slab thickness and reinforcing should be determined in accordance with structural considerations.

Seismic Considerations

Based on the subsurface exploration and the 2012 IBC as modified by the 2014 OSSC and applicable provisions of ASCE 7-10, the following seismic design parameters are recommended for the project.

Mapped Spectral Acceleration for Short Periods: $S_s = 0.93$

Mapped Spectral Acceleration for a 1-Second Period: $S_1 = 0.41$

Site Class: D

Site Coefficients: $F_a = 1.13$ and $F_v = 1.59$

Design Spectral Response Acceleration at Short Periods: $S_{DS} = 0.70$

Design Spectral Response Acceleration at 1-Second Period: $S_{D1} = 0.43$

- 5 -

The potential for seismic induced soil liquefaction is considered to be low due the relative lack of shallow groundwater and the relatively well indurated nature of the silty, sandy gravel deposits encountered below the water table. The risk of seismic induced slope instability that could affect the site is low in our opinion due to the relatively flat topography in the vicinity of the site. The nearest mapped fault is the Canby-Molalla fault located approximately 4 miles northwest of the site. Generally the risk of surface displacement is considered to be low if the site is more than 1000 feet from a mapped fault trace.

Temporary Construction Drainage

Surface water should be diverted from excavations by means of temporary drainage facilities. Excavations should be de-watered as necessary by pumping or other suitable methods. Ponding of surface water in structural areas should also be prevented to the extent practical utilizing temporary drainage facilities.

Permanent Site Drainage

Surface water should be diverted from foundations by grading the ground surface a minimum of 2 percent away from walls and carrying the runoff from roofs to a suitable gravity outlet.

Permanent subsurface drainage of the building perimeter is recommended to prevent potential subsection of foundations and slabs to hydrostatic pressures and to help keep the moisture content of subgrade materials from extreme seasonal variations. Construction of a continuous subdrain system which surrounds the building perimeter and is sloped (minimum 0.5 percent) to a suitable gravity outlet is recommended. A suitable subdrain system would consist of a 4-inch diameter, perforated PVC pipe (typical) embedded below and adjacent the bottom of footings and backfilled with approved drain rock. The type of PVC pipe to be utilized may depend on building agency requirements and should be verified prior to construction. In addition, to prolong the life of the subdrain system, NGI recommends lining the trench excavation with a geotextile filter such as Mirafi 140N or equivalent. The subdrain excavation should be constructed in a manner to prevent undermining of any foundation or slab component or disturbance to supporting soils.

In the event that the subdrains are tied into the rain (roof) drain system, an approved backflow device will be required. If backflow devices are not allowed, these systems should be run independently.

Stormwater Infiltration

The field infiltration test was conducted at a depth of 3.5 feet in pit I-1. The test resulted in a measured infiltration rate of 1.44 inches per hour. The measured infiltration rate along with a safety factor should be utilized for sizing the systems. We recommend applying a minimum safety factor of 2.0 to account for loss of efficiency over time due to siltation and biologic growth.

Private Parking and Drive Improvements

Should asphaltic concrete pavements be utilized for private parking and drive improvements, we recommend a pavement section of 2.5 inches of asphaltic concrete and 10 inches of crushed aggregate base. This pavement section is anticipated to accommodate traffic consisting of cars and light trucks as well as an occasional truck such as moving trucks, garbage trucks and emergency vehicles.

The aggregate base should be compacted to a minimum of 95 percent of ASTM D1557 and asphaltic concrete pavements should be compacted to a minimum of 91 percent of the theoretical maximum density per ASTM D2041 (Rice Gravity).

Portland cement concrete driveways should be constructed with a minimum thickness of 3.5 inches of concrete overlying a minimum of 6 inches of compacted crushed aggregate.

Prior to placement of base course, the ground surface should be prepared in accordance with the recommendations presented in the previous sections of this report.

ADDITIONAL SERVICES

Design Review

This geotechnical report pertains to a specific site and development. It is not applicable to adjacent sites nor is it valid for types of developments other than that to which it refers. Any variation from the site or development necessitates a geotechnical review in order to determine the validity of the design concepts evolved herein.

Additionally, a geotechnical review of final plans and specifications is necessary to determine whether our recommendations have been properly interpreted and incorporated in the design and construction documents.

Construction Monitoring

Because of the judgmental character of soil and foundation engineering, as well as the potential for adverse circumstances arising from construction activity, observations during site preparation, excavation, and construction will need to be carried out by the soils engineer or his representative. These observations then may serve as a basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein to the benefit of the project. Moreover, field engineering observations become increasingly important should earthwork proceed during adverse weather conditions.

LIMITATIONS

Within the limitations of scope, schedule, and budget, our services have been completed in accordance with the General Conditions with our Client and accepted geotechnical practices in this area at the time this report was prepared. One copy of our General Conditions is included in Appendix B of this report. This report was prepared for the exclusive use of NGI's client for the specific project and NGI does not authorize the segmented use of the advice herein nor the reliance upon the report by third parties without written authorization of NGI. The boring logs and related information depict generalized subsurface conditions only at these specific locations and at the particular time the subsurface exploration was completed. Soil and groundwater

conditions at other locations may differ from the conditions at these boring locations. Also, the passage of time may result in a change in the soil and groundwater conditions at the site. This report pertains to the subject site only, and is not applicable to adjacent sites nor is it valid for types of development other than that to which it refers. Unless explicitly addressed in this report, slope stability analyses and seismic site hazard analyses have not been included. If you would like NGI to complete these services, please contact our office.

This opportunity to be of service is sincerely appreciated. If you should have any questions, please contact our office.

Respectfully submitted,

NORTHWEST GEOTECH, INC.



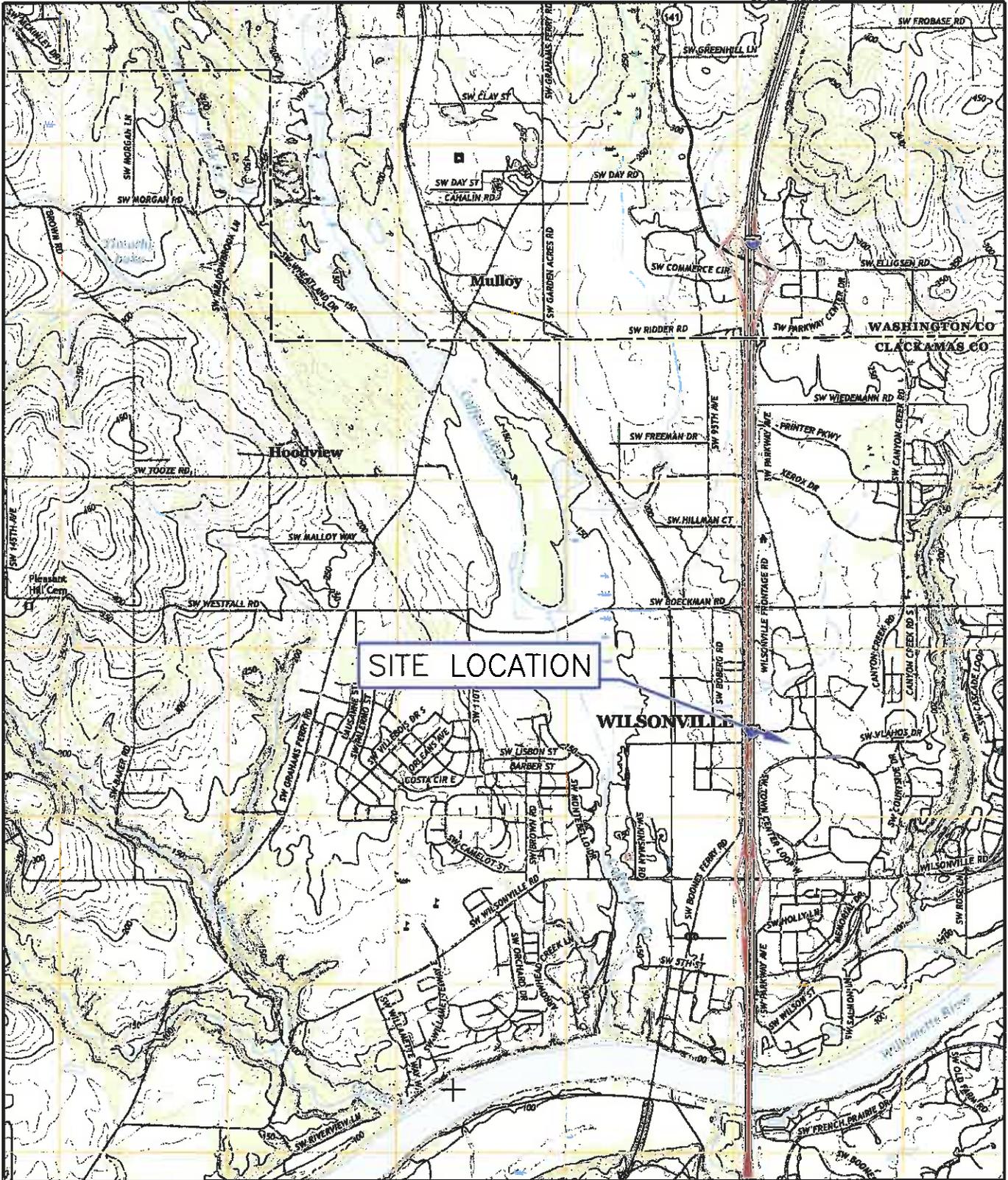
EXPIRATION DATE: 12/15/19

Wayne R. Olsen, P.E., G.E.
Project Engineer

A handwritten signature in blue ink, appearing to read "T. Ginsbach".

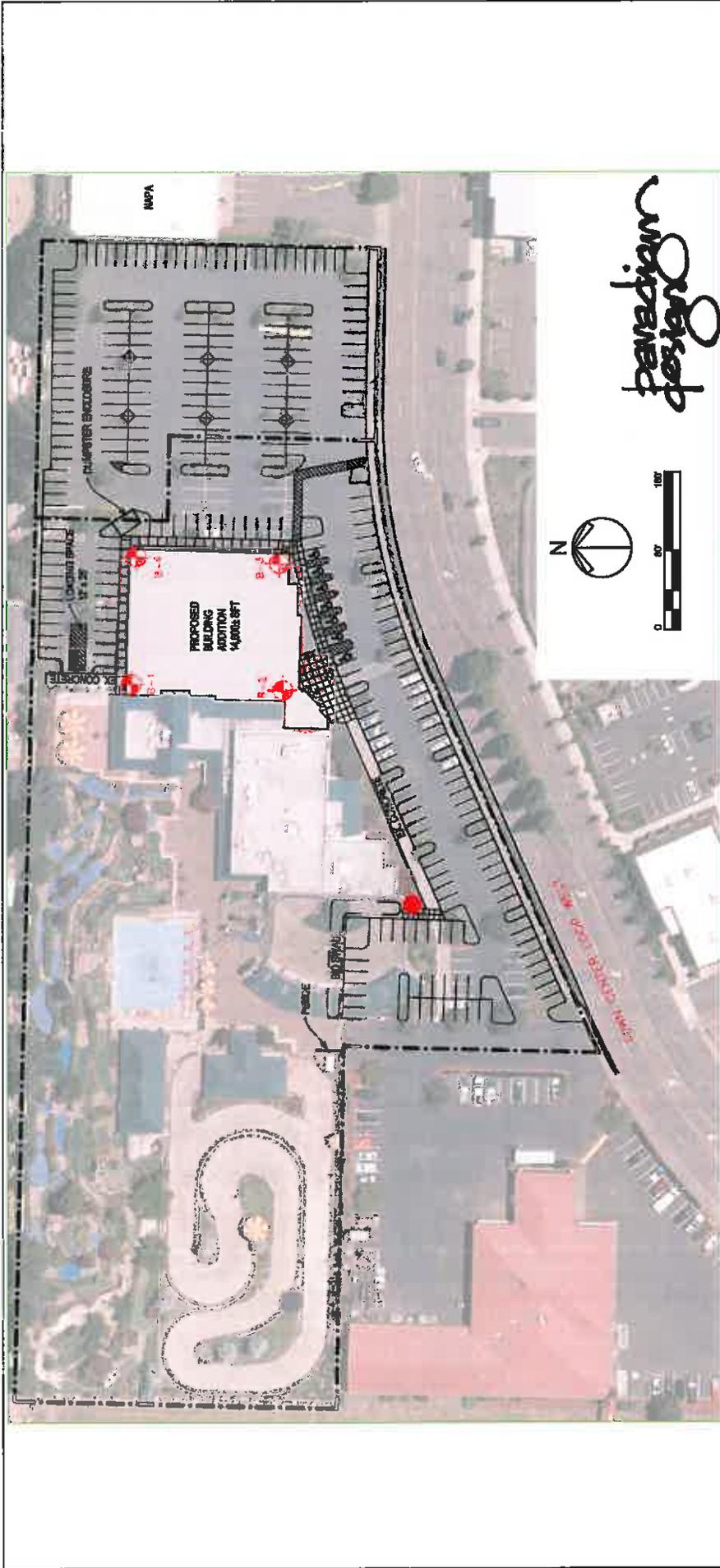
Thomas S. Ginsbach, P.E., G.E.
President

Copies: (3) Addressee



LOCATION MAP

PROJECT NO. 3281.1.1	WILSONVILLE FAMILY FUN CENTER ADDITION 29111 TOWN CENTER LOOP WEST WILSONVILLE, OREGON	FIGURE NO. 1
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SITE PLAN	
WILSONVILLE FAMILY FUN CENTER ADDITION 28111 TOWN CENTER LOOP WEST WILSONVILLE, OREGON	
PROJECT NO. 3281.1.1	FIGURE NO. 2
 Northwest Geotech, Inc.	

- LEGEND**
-  INDICATES APPROXIMATE LOCATION OF EXPLORATORY BORING
 -  INDICATES APPROXIMATE LOCATION OF INFILTRATION TEST BORING



APPENDIX A

DRILLING COMPANY: GREG VANDEHAY SOIL SAMPLING		RIG: SIMCO 2400		DATE: 2/1/2018		
BORING DIAMETER: 4 INCHES		DRIVE WEIGHT: 140 LBS		DROP: 30 INCHES		
ELEVATION:						
LENGTH (FEET)	SAMPLE NUMBER	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-1
0						5 INCHES OF ASPHALTIC CONCRETE OVERLYING 8 INCHES OF CRUSHED AGGREGATE BASE
10		10			ML	BROWN, WET, STIFF, SANDY, CLAYEY SILT
5		13				
10		10				
15		17				BECOMES VERY STIFF, GRAVELLY
15		26			GM	BROWN, WET, MEDIUM DENSE, SILTY, SANDY GRAVEL
20						TOTAL DEPTH: 16.5 FEET NO GROUNDWATER ENCOUNTERED
25						
30						

 - SHELBY SAMPLER
 - SPT SAMPLER

BORING LOG

PROJECT NO. 3281.1.1

WILSONVILLE FAMILY FUN CENTER ADDITION
29111 TOWN CENTER LOOP WEST
WILSONVILLE, OREGON

FIGURE NO. A-1

DRILLING COMPANY: GREG VANDEHAY SOIL SAMPLING		RIG: SIMCO 2400		DATE: 2/1/2018		
BORING DIAMETER: 4 INCHES		DRIVE WEIGHT: 140 LBS		DROP: 30 INCHES		
ELEVATION:						
LENGTH (FEET)	SAMPLE NUMBER	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-2
0						5 INCHES OF ASPHALTIC CONCRETE OVERLYING 8 INCHES OF CRUSHED AGGREGATE BASE
5		11			ML	BROWN, WET, STIFF, SANDY, CLAYEY SILT
10		10				BECOMES VERY WET
15		6				
15		24			GM	BROWN, WET, MEDIUM DENSE, SILTY, SANDY GRAVEL
20		38				BECOMES DENSE
25						TOTAL DEPTH: 16.5 FEET NO GROUNDWATER ENCOUNTERED
30						<div style="display: flex; justify-content: center; gap: 20px;"> <div style="text-align: center;">  - SHELBY SAMPLER </div> <div style="text-align: center;">  - SPT SAMPLER </div> </div>

BORING LOG

PROJECT NO. 3281.1.1

WILSONVILLE FAMILY FUN CENTER ADDITION
29111 TOWN CENTER LOOP WEST
WILSONVILLE, OREGON

FIGURE NO. A-2

DRILLING COMPANY: GREG VANDEHAY SOIL SAMPLING		RIG: SIMCO 2400		DATE: 2/1/2018		
BORING DIAMETER: 4 INCHES		DRIVE WEIGHT: 140 LBS		DROP: 30 INCHES		
ELEVATION:						
LENGTH (FEET)	SAMPLE NUMBER	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-3
0						3 INCHES OF ASPHALTIC CONCRETE OVERLYING 10 INCHES OF CRUSHED AGGREGATE BASE
5		11			ML	BROWN, WET, STIFF, SANDY, CLAYEY SILT
10		8				BECOMES VERY WET
15		32			GM	BROWN, WET, DENSE, SILTY, SANDY GRAVEL
20		23				TOTAL DEPTH: 16.5 FEET NO GROUNDWATER ENCOUNTERED
25						
30						

BORING LOG

PROJECT NO. 3281.1.1

WILSONVILLE FAMILY FUN CENTER ADDITION
29111 TOWN CENTER LOOP WEST
WILSONVILLE, OREGON

FIGURE NO. A-3

DRILLING COMPANY: GREG VANDEHAY SOIL SAMPLING		RIG: SIMCO 2400		DATE: 2/1/2018		
BORING DIAMETER: 4 INCHES		DRIVE WEIGHT: 140 LBS		DROP: 30 INCHES		
ELEVATION:						
LENGTH (FEET)	SAMPLE NUMBER	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-4
0						2.5 INCHES OF ASPHALTIC CONCRETE OVERLYING 9.5 INCHES OF CRUSHED AGGREGATE BASE
5		8 10 9 5 8			ML	BROWN, WET, STIFF, SANDY, CLAYEY SILT
15		28			GM	BROWN, WET, MEDIUM DENSE, SILTY, SANDY GRAVEL
20		28		⚡		BECOMES SATURATED
25		14				
30						TOTAL DEPTH: 26.5 FEET GROUNDWATER ENCOUNTERED AT ±21 FEET ☐ - SPT SAMPLER

BORING LOG

PROJECT NO. 3281.1.1

WILSONVILLE FAMILY FUNN CENTER ADDITION
29111 TOWN CENTER LOOP WEST
WILSONVILLE, OREGON

FIGURE NO. A-4

APPENDIX B

GENERAL CONDITIONS
GEOTECHNICAL ENGINEERING SERVICES

1. PARTIES AND SCOPE OF WORK: Northwest Geotech, Inc., (NGI) shall include said company, its engineers, employees, insurers, or authorized representatives. "Work" means the service(s) performed by NGI for Client or at Client's direction. This "Agreement" consists of NGI's proposal, NGI's Schedule of Fees and Services, Client's written acceptance, NGI's signed acceptance, and these General Conditions. "Client" refers to the individual or business entity executing this Agreement. The individual executing this Agreement represents and warrants that he/she is the duly authorized agent of the Client. Client may choose representatives for the purpose of ordering and directing the Work and in such case the term "Client" also includes the principal for whom the Work is being performed and the Client's representatives. Prices quoted and charged by NGI for its Work are predicated upon the conditions and the allocations of risks and obligations expressed in this Agreement. Unless this Agreement specifically provides that NGI is to perform its Work pursuant to specified Federal, State, or local regulations, Client assumes sole responsibility for determining whether the quantity and the nature of the Work ordered by Client is adequate and sufficient for Client's intended purpose. Client shall communicate this Agreement including these General Conditions to each and every third party to whom Client transmits any part of NGI's Work or to whom Client sells, transfers, or assigns an interest in the site or project. NGI shall have no duty or obligation to any third party greater than that set forth in this Agreement. Executing this Agreement or ordering Work from NGI shall constitute acceptance of the terms of these General Conditions. NGI shall be under no obligation to inform other parties of its activities or discoveries, but shall not be negligent if it does so.

2. PAYMENT FOR SERVICES: Invoices will be submitted monthly for services and Client agrees that the invoice amount is due when received unless otherwise agreed. A service charge of one and one-half percent (1-½%) per month (but not exceeding the maximum allowable by law) will be added to any account not paid within 30 days after billing. In the event that any portion of the account remains unpaid 30 days after billing, NGI may immediately discontinue services on any and all projects for Client and/or demand prepayment of fees at NGI's option. Client shall pay all costs incurred by NGI in collecting any delinquent amount, including staff time, court costs and attorney fees at trial and appeal. In the event that NGI obtains a judgment against Client and must execute upon that judgment, Client agrees to pay all attorney fees and costs associated with the execution. If Client objects to all or any portion of any invoice, Client shall notify NGI in writing of the same within ten (10) days from the date of receipt of said invoice and shall pay that portion of the invoice not in dispute, and the parties shall immediately make every effort to settle the disputed portion of the invoice. Failure to make payment within sixty (60) days of invoice shall constitute a release of NGI from any and all claims which Client may have, either in tort or contract, and whether known or unknown at the time. These General Conditions are notice that a construction lien may be claimed for all material, labor and services furnished.

3. SITE CONDITIONS: Client will grant or obtain free access to the site for all personnel and equipment required for NGI to perform the Work. NGI shall take reasonable measures and precautions to minimize damage to each site and any improvements located thereon as the result of its Work and the use of its equipment; however, NGI has not included in its fee the cost of restoration of damage which may occur. If Client or the possessor of any interest in any site desires or requires NGI to restore site to its former conditions, upon written request, NGI will perform such additional work as is necessary and Client agrees to pay to NGI the cost thereof. While NGI will take reasonable precautions to minimize damage to site, Client is responsible for identifying underground structures and agrees to defend, indemnify and hold NGI harmless from all loss, liability, costs (including attorney fees at trial and on appeal), and damage resulting from underground structures not properly located and marked, and from all third party suits for trespass.

4. DISCLOSURE: Client agrees to provide NGI all information in its possession that may be pertinent to the scope of Work, including any information concerning actual or possible presence of hazardous materials. Client agrees that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a re-negotiation of the scope of Work or termination of services. Client agrees to compensate NGI for all

costs incident to the discovery of unanticipated hazardous materials. NGI will immediately inform Client of the detection of unanticipated hazardous materials. Client will defend, indemnify, and hold NGI harmless from any claim, liability, costs (including attorney fees at trial and on appeal), or injury, including delay of the project associated with the discovery of unanticipated hazardous materials or any disclosure of these conditions as required by governing law or regulation. All hazardous materials, including samples taken for testing will remain the property and responsibility of Client.

5. ENVIRONMENTAL INDEMNITY: To the fullest extent permitted by law Client agrees to defend, indemnify, and hold harmless NGI from any loss, costs, damage, expense (including attorney fees and costs at trial and appeal), or any theory of liability arising out of or in connection with NGI's exacerbation of existing environmental pollution or contamination or any newly caused pollution or contamination.

6. THIRD PARTY INDEMNITY: To the fullest extent permitted by law Client agrees to defend, indemnify and hold NGI harmless from any claims, demands, suits, charges, expense (including attorney fees and costs at trial and appeal), and/or allegations of responsibility by any and all third parties including but not limited to contractors, subcontractors, agents, employees, assignees, transferees, successors, invitees, neighbors, and the public relating to conditions on or about the project, except to the extent that a claim is the result of negligence of NGI. Client shall notify any third party who may perform work on the project or to whom Client sells, transfers, or assigns an interest in the site or project of the standard of care being undertaken by NGI pursuant hereto and of the limitations of liability contained herein. Client shall require as a condition to the performance of any such third party a like indemnity and limitation of liability on their part against NGI.

7. CONTRACTOR'S RESPONSIBILITY: Our duties do not include supervising the Client's contractors or overseeing, or providing the means and methods of their work. NGI shall have no authority to control any contractor or other entity regarding their work or their safety practices. The purpose of NGI's Work shall be to provide our Client with a greater degree of confidence that the work will meet specifications, not to control or guarantee the work of the contractor. NGI has no duty to inspect or correct health and safety deficiencies of the Client, contractors, or other entities except for NGI personnel. We will not be responsible for the failure of the Client's contractors to perform in accordance with their undertakings and the providing of our services shall not relieve others of their responsibilities to the Client or to others. NGI reserves the right to report to the Client any unsafe condition observed at the project without altering the foregoing.

8. FEE SCHEDULE: Where NGI's services are quoted or estimated on the basis of the current fee schedule, should the project extend beyond the end of the calendar year, the fee schedule then in use shall apply unless otherwise negotiated in advance.

9. LIMITATIONS OF PROCEDURES: Information obtained from inspections, analysis and testing of sample materials shall be accurately reported in reports. However, variations between inspected or tested discrete locations may occur and the risk of such occurrence is understood and accepted by Client. If conditions different than are indicated in our report come to your attention after you receive the report, it is recommended that you contact NGI immediately to authorize appropriate further investigation and to inform NGI completely on what you have discovered. If NGI completes borings or test pits in the performance of its Work there is the possibility that settlement of the backfill will occur. Client agrees to accept all responsibility for conditions related to backfill settlement. Unless explicitly addressed in NGI's proposals or reports our services do not include seismic or slope stability evaluation.

10. SCHEDULES AND DELAYS: All promises of services time are approximations by NGI and are subject to the Client and contractor's schedules, weather conditions, traffic conditions, disputes with workmen or parties, accidents, strikes, natural disasters or other causes. In no event shall NGI be responsible for any damage or expense due to delays from any cause, other than to the extent the damage or expense is caused by NGI's own negligence after having been warned in writing by the Client of the damage or expense which may result from the delay.

**GENERAL CONDITIONS
GEOTECHNICAL ENGINEERING SERVICES**

11. USE OF CONSULTING ADVICE: NGI's reports, notes, calculations, and other documents are instruments of our service to the Client and are only applicable for immediate use on this project. Such documents remain the property of NGI. We agree to provide our reports for the Client's use only for the purposes disclosed to us. The Client agrees not to transfer our reports to others or to use them for a purpose for which they were not prepared without our prior written approval. On the Client's written request, NGI may provide endorsements to others of our reports or letters of reliance, but only if those others agree in writing to be bound by the conditions of our Agreement including these General Conditions in full and only if we are paid an additional fee which will be quoted upon request. Client may not assign this Agreement or any portion thereof to any other person or entity without the express written consent of NGI.

12. SAMPLES: All samples of soil and rock may be disposed after 30 days from the date of submission of our report unless otherwise directed by the Client. On request, we will deliver samples to the Client. Shipping charges shall be collect on delivery, or we will store samples for an agreed charge.

13. CONTINUITY OF SERVICES: It is customary for the consultant that provides construction recommendations to be retained to provide observation and confirmation of design parameters during construction. To the fullest extent permitted by law if NGI is not retained to confirm that the construction is in substantial compliance with our conclusions and recommendations, the Client agrees to defend, indemnify, and hold NGI harmless from all claims, losses, and expenses, including attorney fees and costs at trial and on appeal, arising out of NGI's Work including any interpretations, clarifications, substitutions, or modifications of NGI's Work provided by the Client or others.

14. TERMINATION AND SURVIVAL: This Agreement may be terminated by either party on written notice. In the event of termination, NGI shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses, and for the completion of such services as are necessary to place NGI's files in order and/or protect its professional reputation. The Payment for Services, Environmental Indemnity, Third Party Indemnity, Limitations of Procedures, Use of Consulting Advice, Continuity of Services, Mutual Waiver, Witness Fees, State Law/Venue, Standard of Care, and Limitation of Liability provisions of this Agreement shall survive any termination or completion of this Agreement.

15. WITNESS FEES: NGI's employees shall not be retained as expert witnesses except by separate written agreement. Client agrees to pay NGI's legal expenses, administrative costs, staff time, and fees pursuant to NGI's current fee schedule for NGI to respond to any subpoena.

16. STATE LAW/VENUE: This Agreement shall be interpreted and construed in accordance with the laws of the State of Oregon. Exclusive of lien claims, any action or proceeding brought to enforce or otherwise arising out of or relating to this Agreement shall be brought in the Circuit Court of Clackamas County, Oregon.

17. STANDARD OF CARE: NGI will perform the contracted services in a manner consistent with the skill and care ordinarily exercised under similar circumstances by members of our profession practicing in the same locality, at the same time, and performing similar services. No warranty, expressed or implied, is made or intended in our proposals, reports or contracts. No action or claim, whether in tort, contract, or otherwise, may be brought against NGI, arising from or related to NGI's Work, more than two years after the cessation of NGI's Work hereunder. NGI will not be liable to Client unless Client has notified us in writing of the discovery of the claimed negligent act, error, or omission within 30 days of the date of its discovery and unless Client has given us an opportunity to investigate and to recommend ways of mitigating Client's damages.

18. PROVISIONS SEVERABLE: Any provision or part of the Agreement held to be void or unenforceable under any laws or regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Client and NGI, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

19. MUTUAL WAIVER: To the fullest extent permitted by law, Client and NGI waive against each other any and all claims for or entitlement to special, incidental, indirect, consequential, delay, punitive, or similar losses or damages arising out of, resulting from, or in any way related to the project.

20. ENTIRE AGREEMENT: This Agreement comprises the final and complete understanding between Client and NGI. It supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written, relating to the subject matter of this Agreement. Execution of this Agreement signifies that each party has read the document thoroughly, has had any questions explained by independent counsel, and is satisfied. Any additional provisions contained in any Client purchase order, acknowledgment or other form previously or subsequently submitted by Client shall not operate to modify this Agreement. Amendments to these General Conditions shall not be binding unless made in writing and signed by both Client and NGI. This Agreement may be executed in several counterparts, each of which shall be deemed an original having identical legal effect.

21. LIMITATION OF LIABILITY: In recognition of the fees charged by NGI, the relative risks and benefits of this project to both Client and NGI, Client, all parties claiming through Client, and all parties claiming to have in any way relied on NGI's Work, agree that to the fullest extent permitted by law, NGI's total liability arising out of or in any way related to NGI's Work, the project or this Agreement, from any cause or causes, including but not limited to NGI's employees or agents negligent acts, errors, omissions, design defect, breach of contract or any other theory of liability shall be limited to One Hundred Thousand Dollars (\$100,000.00) or NGI's fees, whichever is more.

Scott Hush General Partner
CLIENT: Mr. Darren Harmon, General Manager
Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop
Wilsonville, Oregon 97070

CLIENT SIGNATURE: *Scott Hush*

DATE: 1-8-18

PROJECT: Geotechnical Services
Proposed Building Addition
Wilsonville Family Fun Center & Bullwinkle's Restaurant
29111 Town Center Loop
Wilsonville, Oregon 97070



301.2.03 Stormwater Site Assessment

As part of the applicant’s development permit application submittal a Stormwater Site Assessment will be completed. The assessment will include the completed checklist, site assessment maps, preliminary site plan, proposed impervious surface area, preliminary stormwater facility sizing documentation, and supporting materials as required.

The following Table 3.1 and sections describe the process for completing the Stormwater Site Assessment and Planning checklist and associated mapping and supporting materials for submittal according to these standards.

TABLE 3.1 SITE ASSESSMENT AND PLANNING CHECKLIST		
	Information Needed	Provide information as required; Attach supporting materials as needed
1 Site Information		
X	Applicant Contact Information	Applicant name Business name Contact address, phone number, and e-mail
X	Project Location	Site Address Site Description Major Drainage Basin Vicinity Map of the site (including location of property in relation to adjacent properties, roads, and pedestrian/bike facilities)
X	Project Type	Identify types of development planned for the site such as commercial, industrial, single-family residential, multi-family residential, or other (describe)
X	Size of site	Size of site (acres) and number of existing/ proposed tax lots
2 Site Assessment (attach engineered scale Site Assessment Map and documentation)		
X	Topography Evaluate site and map slopes: Flat (0-10%), Moderate (10-20%), Steep (20%+)	Attach aerial based mapping with 2-foot intervals for slopes 0-20% slope, 10-foot intervals for steeper. Shade or mark areas of flat, moderate and steep slopes. If required, attach geologist/geotechnical report. Slope information may be available from the City.
X	Soils and Groundwater Research and map site soil hydrologic group, depth to groundwater	Natural Resources Conservation Service (NRCS) Hydrologic Soil Type (show on map if more than one type present): Attach seasonal groundwater depth evaluation if available or required (site has floodplain and/or wetland). Groundwater depth information is available from the City.
X	Infiltration Assessment Determine soil capacity for onsite infiltration	If an infiltration test is performed attach the documentation. Report the test type (Basic/Professional) performed and results. See Appendix B for the approved infiltration testing methods. See Geotech Report Test Type: _____ (inches/hour): _____

TABLE 3.1 SITE ASSESSMENT AND PLANNING CHECKLIST

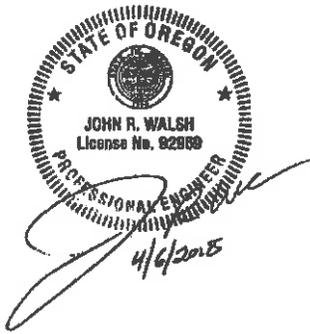
TABLE 3.1 SITE ASSESSMENT AND PLANNING CHECKLIST		
	Information Needed	Provide information as required; Attach supporting materials as needed
X	Hydrology - Conditions and Natural Features Map site floodplains, wetlands, streams, and location of outfalls	Clearly label on map all streams, rivers and wetlands, FEMA floodplains, and existing drainage systems (pipes, ditches, outfalls). Check here if present on site: Sensitive Area(s) ____. Floodplain _____.
X	Downstream Conveyance	Prepare and attach Preliminary Drainage Report with analysis of upstream drainage area and downstream conveyance capacity, as required by Section 301.3.02 . Check here if analysis indicates adequate downstream capacity is NOT available: <input checked="" type="checkbox"/>
X	Existing Vegetation Map trees and vegetation	Using aerial photos or survey, map all trees and vegetation. Note all existing trees 6-inch caliper and greater (DBH) on map. Delineate and identify other areas and types of existing vegetation.
X	Natural Resource Areas and Setbacks Assess and map buffers	Identify the Significant Resource Overlay Zone and other natural resource areas.
X	Land Use and Zoning	Existing Land Use Zoning designation(s):
X	Access and Parking	Delineate proposed access points for all transportation modes on map. Indicate amount and area of required parking onsite if applicable, attach documentation as needed:
X	Utilities to Site and Surrounding Area	Map existing utilities including stormwater management facilities, storm conveyance, sewer, water, wells, drywells, on-site septic systems, electricity, phone/cable, gas, and any public storm system/facility downstream.
3 Site Planning Design Objectives (attach engineered scale Preliminary Site Plan)		
X	1. Preserve Existing Natural Resources	Required: Show the Significant Resource Overlay Zone and other natural resource areas on the site plan. Show any proposed areas of encroachment and associated mitigation areas.
X	2. Minimize Site Disturbance	Required: Delineate protection areas on site plan for areas to remain undisturbed during construction.
X	3. Minimize Soil Compaction	Required: Delineate and note temporary fencing on site plan for proposed infiltration facilities, vegetated stormwater management facilities, and re-vegetation areas.
X	4. Minimize Imperviousness	Required: Complete and attach <i>Impervious Area Threshold Determination Form</i> . Delineate impervious reduction methods on site plan.
4 Proposed Stormwater Management Strategy		
X	Proposed Stormwater Management Strategy	<input checked="" type="checkbox"/> LID facilities to the MEP <input type="checkbox"/> All onsite infiltration including retention of the 10-year storm event. <input type="checkbox"/> LID facilities and infiltration are limited by the following conditions (include a

TABLE 3.1 SITE ASSESSMENT AND PLANNING CHECKLIST

TABLE 3.1 SITE ASSESSMENT AND PLANNING CHECKLIST		
	Information Needed	Provide Information as required; Attach supporting materials as needed
X		geotechnical analysis of the site and report): <input type="checkbox"/> Stormwater management facility to be located on fill <input type="checkbox"/> Steep slopes <input type="checkbox"/> High Groundwater <input type="checkbox"/> Contaminated Soils <input type="checkbox"/> Conflict with required Source Controls (Section 301.12.00)
X	Check Minimum Facility Size Required	A. Calculate surface area of onsite LID facility, as determined by BMP Sizing Tool or Engineered Method: _____ SF; or B. Calculate MEP surface area of onsite LID facility for sites with limiting conditions: total new/redeveloped impervious area (SF) x 0.10 = _____ SF C. Required surface area of onsite LID facility: smaller of [A] or [B] _____ SF D. Proposed LID facility surface area: must be equal to or larger than [C] _____ SF
5 Facility Selection/Sizing		
X	Proposed Facility Type(s)	Check all that apply, attach output from BMP Sizing Tool application, and show proposed facilities on Preliminary Site Plan. LID facilities: <input checked="" type="checkbox"/> Infiltration Stormwater Planter <input type="checkbox"/> Filtration Stormwater Planter <input checked="" type="checkbox"/> Infiltration Rain Garden <input type="checkbox"/> Filtration Rain Garden <input type="checkbox"/> Vegetated Filter Strip <input type="checkbox"/> Vegetated Swale <input type="checkbox"/> Detention Pond Other Stormwater Management Facilities as approved: <input type="checkbox"/> Infiltration Trench <input type="checkbox"/> Manufactured Treatment Technology <input type="checkbox"/> Underground Detention Tank Other: _____

Storm Water Calculations for

**Applicant: Darren Harmon, General Manager
Wilsonville Family Fun Center Expansion & Remodel
29111 SW Town Center Loop W
Wilsonville, OR 97070
(503) 685-5000**



Planning DB No. _____

Paradigm Job No. 1706078

April 5, 2018

Design Parameters

BMP Design:

- BMP Sizing Tool provided by the City of Wilsonville

Storm Sewer Design:

- Storm sewer design is for a 25 year design storm using the Rational method for analysis
- Minimum pipe velocity of 2.5 feet/sec

**PARADIGM DESIGN, INC.
550 3 Mile N.W., Suite B
Grand Rapids, MI 49544
PH: (616) 785-5656
Fax: (616) 785-5657**

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**Storm Water Narrative For
Wilsonville Family Fun Center – Wilsonville, OR
Project #1706078**

Project Description:

The owner proposes to construct an addition on to an existing family entertainment center located at 29111 SW Town Center Loop W. The subject property is Tax Lots 100 and 109, Map T3S R1W 14D and includes 5.95 acres. A vicinity map is contained in Appendix A. The site now includes an existing 17,371 square foot building, paved parking lot and outdoor entertainment facilities such as a batting cage, zip line, bumper boats, miniature golf course, Autotopia Raceway and a climbing wall. The applicant is proposing a major remodel and building expansion, with the addition of a 16-lane bowling alley along with various site improvements to stay current with customer interests and changes in the industry. These improvements are Phase 2 of implementation of the facilities Master plan.

The property is zoned PDC, Planned Development Commercial Town Center and is within the Wilsonville Road Interchange Area Management Plan (IAMP) Overlay Zone. The proposed building expansion and site improvements are in accordance with the zoning requirements.

The applicant is seeking a storm water management plan permit. Excluding building permit and soil erosion control, no other permits are required for construction of the project.

The proposed land use will stay the same after the building addition and parking lot improvements. In addition to the 16-lane bowling alley addition, the only other improvements are related to meeting zoning requirements and storm water management requirements as referenced in "2015, Stormwater & Surface Water Design & Construction Standards Section 3 - Public Works Standards". To that end, the amount of impervious surface will not be increased and the landscaping will be done in accordance with requirements of the zoning code. This project is challenged with trying to meet storm water requirements listed above, but it should be recognized that it is an existing site that was developed before these standards were in effect.

Existing Conditions

The project site ranges in elevation from 172 to 218 with a mean elevation of 180. The site generally drains from northeast to southwest and runoff from the building, parking and outdoor entertainment areas are collected in an underground storm water piping system and conveyed to piping in the storm sewer system in Town Center Loop. The use of the property has been previously described, but consists of paved parking areas and outdoor entertainment facilities and is almost entirely made up of impervious surfaces.

The adjacent properties include I-5 to the West, Les Schwab Tire Center south and west, NAPA Auto Parts store to the east and to the north is an apartment complex with a significant amount of impervious area such as parking lots and buildings. The adjacent commercial developments are almost entirely impervious area. Across the street and to the south is a commercial area with mostly impervious parking lots and buildings. There is no offsite drainage that is conveyed onto the property. There are no natural features, including channels, ravines, gullies, wetlands, creeks, steep slopes, or other sensitive areas on or adjacent to the project site.

In accordance with the NRCS soil survey, the entire site consists of silt loams and per the geotechnical study correspond to the ML category per the unified soil classification system

(USCS). Reference Geotechnical Report completed by Northwest Geotech, Inc. dated March 1, 2018. The soils report indicates that the subsurface conditions include stiff, sandy, clayey silt to depths of approximately 12.5 to 15 feet below the existing ground surface. Below this unit there is medium dense to dense deposits of silty, sandy gravel to the maximum depth explored of 26.5 feet. An infiltration test was performed with a result of 1.44 inches/hour. Reference data is contained in Appendix C.

There are two points of discharge from the site to the public storm sewer system. The first discharge point is located in the south west corner of the parcel and conveys flow into the Town Center West Loop West street drainage system and accepts a majority of water from the site. Another point of discharge is the storm sewer located on the far west end of the site adjacent to I-5 at the south side of the parcel. This appears to drain the areas located on the west side of the building. These discharge points are illustrated on the Area Map contained in the appendix.

The site drains to a regional detention basin according to City Staff. The immediate area is known as Town Center and all storm water flows from this area discharge to the above referenced basin.

Developed Conditions

The owner plans to build a 15,575 square foot addition on to the existing building to accommodate the 16-lane bowling alley. The addition will be built on the east side of the existing building and will displace existing parking. The batting cages will be removed on the west side of the building to make room for additional parking and a rain garden, an LID BMP. The development will not increase the impervious area of the site, and as a result there will not be an increase in storm water volume. The rate of storm water should be attenuated due to the additional storm water BMP's. In addition, the BMP's will significantly increase storm water quality. New storm sewer will be added to convey runoff from the north side of the building to the south side where it will connect to the existing storm sewer system.

The City of Wilsonville's BMP sizing tool was utilized to determine the required amount of BMP LID Facilities that were required incorporating LID to the maximum extent practicable (MEP). The project has a total new or redeveloped impervious area of 67,779 square feet. Deductions were evaluated from the Impervious Threshold Determination Form, however, the project does not qualify for deductions, so the redeveloped impervious area is 67,779 square feet. Inputting this area, utilizing an infiltration range of 0.5 to 0.99 (1/2 of the actual 1.44 infiltration rate determined in the field), the minimum area of BMP was determined to be 12,220 square feet using the WES SMP Sizing Tool. In accordance with section 3 of the Public Works Standards, specifically table 3.11 of section 301.4.05, facility sizing requirements can be adjusted by 25% by increasing growing media depth by 12 inches. We are electing to do that in order to minimize the area of the BMP. This results in a required BMP area of 9,150 square feet ($12,220 * 0.75 = 9,150$). Our plans currently provide for 6,505 square feet of BMP facilities. Calculations documenting these areas are contained in Appendix B.

We recognize that that amount of BMP does not meet the requirements of section 301.4.00, however, in accordance with section 301.4.04.a.01, when site constraints limit the surface area available for storm water management facilities, MEP is defined as installing LID facilities with a surface area of at least 10% of the total new plus replaced impervious area. Per these criteria, the required BMP area is 6,778 square feet. We have made every effort to incorporate LID

BMP's into the site improvements, however, the reviewing agency needs to consider that this is an existing facility and operating business with site constraints that make it impractical to completely meet this requirement. First, the requirement to provide LID BMP's for replaced disturbed area creates results with diminishing returns; that is to say, removing existing impervious surface in order to install a BMP requires additional area of the replaced area. This amounts to a penalty in some respects. In addition, the drainage patterns on the site are already established and it is not practical to try to divert runoff waters into BMP's when they don't naturally drain to that area. Once again, additional pavement would have to be removed to force a different drainage pattern which would lead to more required BMP area.

The following describes the selected BMP's. Storm water planters will be constructed in the east parking lot area where new islands are being constructed. Existing islands that do not need to be reconstructed are being converted to storm water planters as well. Openings in the planters will allow approximately 1,900 square feet of pavement to drain into this particular BMP. An overflow weir will be installed at each island as well. Rain gardens will be installed on the west side of the project north of the proposed parking lot and covered patio as well as in the middle of the go cart track. These will first overflow into the existing storm system and then flow overland in the event of a large rain event (See BMP Map for routes). Roof drains from the go kart track will be directed into the rain garden east of the track. The City suggested using the parkway for a BMP, but it is not feasible to get storm water to this area without total reconstruction.

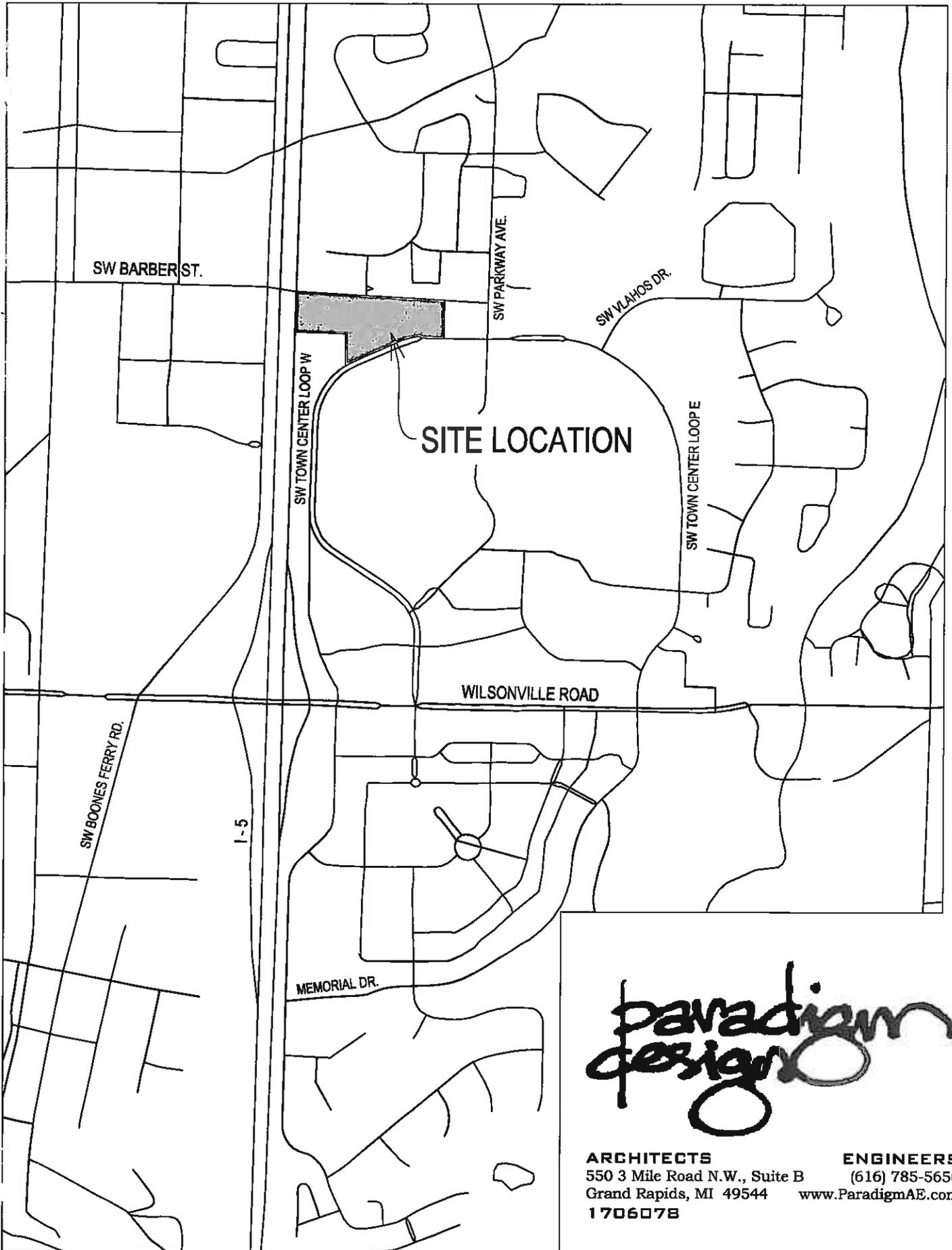
In conclusion, we feel we have met the intent of the Design Criteria because: 1) we have not increased the amount of impervious surface; 2) we have added numerous LID BMP's where practical and the overall runoff rate, volume and water quality will be significantly improved. Based on these factors, we would ask that the storm water management plan as proposed be approved.

Storm Sewer Design:

The storm sewer piping was analyzed and sized using the Rational Method for the 25-year storm event. The rainfall intensity was derived from Table 3.2 of the Wilsonville public works standards. A copy of the Storm Sewer Computation Sheet and the Weighted "C" Coefficient is contained in Appendix B. A hydraulic grade line analysis was not performed because we are limited by the slope and capacity of the existing system. The existing storm sewer system on the Wilsonville Family Fun Center site and the existing storm sewer in Town Center Loop does not have adequate hydraulic capacity. Based on this, we have identified emergency overflow routes for storms that exceed the hydraulic capacity of the pipes. In addition, any parking lot ponding or overland flow will be reduced from existing conditions due the addition of the LID BMP's.

Appendix A – Exhibits

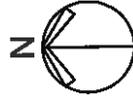
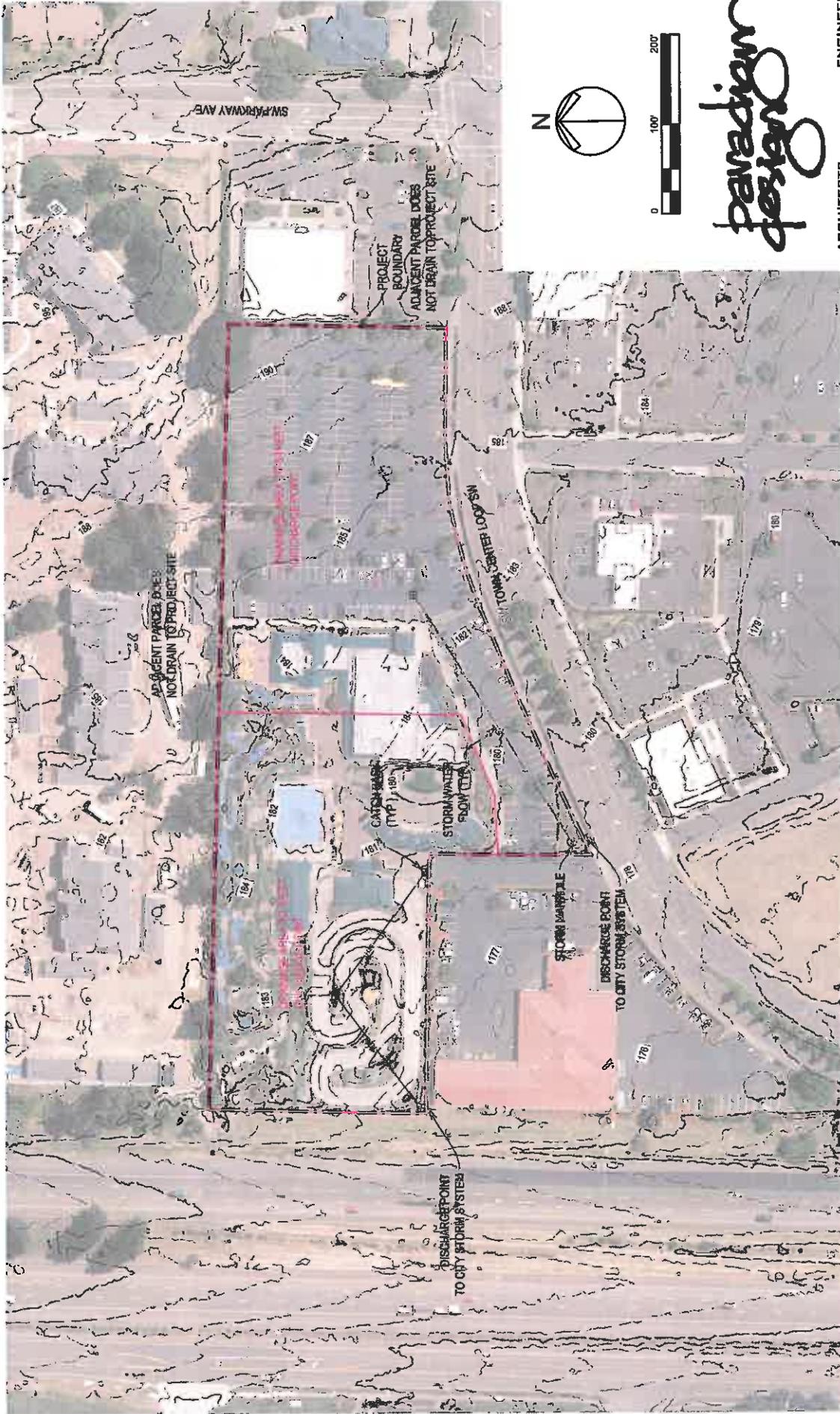
Vicinity Map
Basin Map
BMP Map



*paradigm
design*

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BASIN MAP

Appendix B – Storm Water Calculations

Impervious Area Threshold Determination Form
BMP Sizing Tool Printouts
Storm Sewer Computation Sheet
Weighted “C” Calculation Table
Proposed Storm Sewer Drainage Area Map
Weir Calculation

IMPERVIOUS AREA THRESHOLD DETERMINATION FORM

1. TOTAL NEW AND REPLACED IMPERVIOUS AREA, SF: Box 1

2. APPLY IMPERVIOUS REDUCTION METHODS:

2a. Pervious Pavement, SF: Box 2a

2b. Green Roof, SF: Box 2b

2c. Tree Credit - Applies to NON single family residential developments only. NOTE: Maximum total tree credit allowed is 10% of the Impervious Area in BOX 1:

New Trees

To receive credit, trees must be planted in excess of Planning Division (landscaping) requirements. New evergreen trees must be at least 6 feet tall at the time of planting and new deciduous trees must be at least 2-inch caliper (diameter at 4 feet high). Trees must be planted within 25-feet of ground-level impervious surfaces. New trees cannot be credited against rooftop surfaces or pervious pavement. New trees must be selected from tree species included in Appendix A unless otherwise approved.

Number of new trees meeting criteria x 100 sf each, SF: Box 2c

2d. Existing Tree Canopy

To receive credit, existing tree canopy must be preserved during and after construction (recorded on property deed). Existing trees cannot be credited against rooftop surfaces or pervious pavement. Minimum tree size to receive credit is 6-inch caliper. No credit will be given for existing trees located in vegetative buffers or other requirements of the Planning Division. Tree canopy is measured as the area under the tree drip-line and that is within 25 feet of ground-level impervious surfaces.

SF of existing tree canopy that meets criteria: Box 2d

2e. Total Tree Credit (Box 2c + 2d), OR 10% of Box 1, whichever is SMALLER: Box 2e

3. TOTAL IMPERVIOUS AREA REDUCTION,
(Sum of Boxes 2a, 2b, and 2e), SF Box 3

4. PROPOSED IMPERVIOUS AREA,
(Box 1 minus Box 3), SF (compare to thresholds): Box 4

Impervious Area Threshold Determination Form

DRAWING NUMBER: ST-6000

DRAWN BY: SR

SCALE: N.T.S.

FILE NAME: ST-6000.DWG

APPROVED BY: NK

DATE: 10/10/14

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Total Disturbed Area	67,779	Grass	Conventional Concrete	B	Total Disturbed Area

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Total Disturbed Area	Flow Control and Treatment	Rain Garden - Infiltration	B3	12,200.2	0.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	1,900	Grass	Conventional Concrete	B	West Island Planters

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
West Island Planters	FlowControlAndTreatment	Stormwater Planter - Infiltration	B3	285.0	290.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	1,560	Grass	Conventional Concrete	B	East Island Planters

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
East Island Planters	Flow Control and Treatment	Stormwater Planter - Infiltration	B3	234.0	236.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	1,990	Grass	Conventional Concrete	B	North Planter

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
North Planter	Flow Control and Treatment	Stormwater Planter - Infiltration	B3	298.5	299.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
New/Improved Impervious Area	8,840	Grass	Conventional Concrete	B	Batting Cage Rain Garden

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Batting Cage Rain Garden	Flow Control and Treatment	Rain Garden - Infiltration	B3	1,591.2	1,592.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	1,025	Grass	Conventional Concrete	B	Go-Kart Rain Garden North

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Go-Kart Rain Garden North	FlowControlAndTreatment	Rain Garden - Infiltration	B3	184.5	187.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	3,620	Grass	Conventional Concrete	B	Go-Kart Rain Garden Center

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Go-Kart Rain Garden Center	Flow Control and Treatment	Rain Garden - Infiltration	B3	651.6	653.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	7,195	Grass	Conventional Concrete	B	Go-Kart Rain Garden West

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Go-Kart Rain Garden West	FlowControlAndTreatment	Rain Garden - Infiltration	B3	1,295.1	1,296.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA	5,250	Grass	Conventional Concrete	B	Patio Rain Garden

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Patio Rain Garden	FlowControlAndTreatment	Rain Garden - Infiltration	B3	945.0	962.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.



Weir Flow Discharge Calculation

Rectangular Contracted Weir (Curb Cut at Stormwater Planters)

$$\text{Equation: } Q = .75 \cdot C \cdot H^{2.5} + C \cdot L \cdot H^{1.5}$$

Length (L): 1.5
Height (H): 0.58
Discharge Factor (C) = 2.5

$$Q = 2.39 \quad \text{cfs}$$

2.9 cfs far exceeds flow that would be generated by 100-yr storm going to the largest of the Stormwater Planters

Appendix C – Reference Information

**NRCS Soil Survey Data
Geotechnical Report**

Required BMP Area

Discharge Management Area	BMP	Minimum Size from Sizing Tool	25% Allowed Reduction for Increased Planting material	Total BMP Required
50,130	Rain Garden	9,024	2,256	6,768
13,600	Stm Planter	2,040	510	1,530
4,049	Porous Asphalt	41	-	41
			Total	8,339

Provided BMP Area

Rain Garden		BMP Area Provided		
	RG1	1,508		
	RG2	266		
	RG3	840		
	RG4	2,713		
	RG5	214		
	RG6	319		
	RG7	977		
		<hr/> 6,837		
Stm Planter	ST1	299		
	ST2	237		
	ST3	239		
	ST4	243		
	ST5	273		
	ST6	240		
		<hr/> 1,531		
	Total Provided	8,368	>/=	8,339

WES BMP Sizing Report

Project Information

Project Name	Wilsonville Family Fun Center
Project Type	Addition
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Rain Garden	50,130	Grass	Conventional Concrete	B	Rain Garden
Storm Water Planters	13,600	Grass	Conventional Concrete	B	Storm Water Planter
Porous Pavement	4,049	Grass	Porous Asphalt	B	Porous Asphalt

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Rain Garden	Flow Control and Treatment	Rain Garden - Infiltration	B3	9,023.4	6,756.0	0.0
Porous Asphalt	Flow Control and Treatment	Rain Garden - Infiltration	A1	40.5	0.0	0.0
Storm Water Planter	Flow Control and Treatment	Stormwater Planter - Infiltration	B3	2,040.0	1,530.0	0.0

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.



**Sue Mathis
Landscape Design**

Wilsonville Family Fun Center Tree Survey

This Tree report pertains to the Wilsonville Fun Center in Wilsonville, Oregon. The owner is planning to build an addition to the existing building which will encroach into the existing parking lot. The tree survey was done on 2-10-18. As required by City Code, all trees in the work area have been inventoried and shown on the tree survey map. Please see the attached Tree Survey Map and Tree Survey Table for details. Twenty seven (27) trees will be removed to accommodate the new building addition and revised parking lot configuration. Careful consideration was given during the design to protect as many existing trees as possible. This design limits tree removal to the minimum that is feasible for the construction to go forward.

The trees are larger than 6-inches DBH, and Type C permit requirements are in effect. The removals will be mitigated by planting replacement trees (*Acer rubrum* 'Scarsen', *Magnolia soulangiana* 'Black Tulip', and *Pyrus calleryana* 'Glen's Form') with at least 2-inch caliper. The replacement trees will be staked, fertilized, mulched, and guaranteed for 2 years as required by City Code. The new trees will be planted per landscape construction documents to be approved by the city of Wilsonville. If the specified trees are not readily available then a comparable species will be chosen.

WC 4.620.10 requires protection of trees not to be removed in a construction zone. With a few exceptions the trees in the vicinity are protected by curbed planters surrounded by pavement. Tree #49, 50, 51 and 54 are at risk because they are close to the demo area. I am assigning 6 ft. root protection zones (RPZs) to these trees and they will be cordoned off with separate tree protection fences. RPZs and the associated tree protection fences are described in detail below.

- Fencing shall be steel mesh secured to metal posts in the ground.
- Fencing should be inspected and approved by a qualified arborist prior to construction and may not be opened or removed unless directed by the arborist.
- A "qualified arborist" can include the City Forester or any ISA Certified Arborist or ASCA Registered Consulting Arborist with possession of this tree protection plan.

Without supervision by a qualified arborist a root protection zone may be entered only for a task like surveying, measuring or sampling. Upon completion of the task the fence must be closed. An arborist must approve all other construction activities. Without authorization, none of the following is allowed within a root protection zone:

1. New buildings

2. Grade change or cut and fill, during or after construction
3. New impervious surfaces
4. Utility or drainage field placement
5. Staging or storage of materials and equipment during construction
6. Vehicle maneuvering during construction

The goal of this tree removal and preservation plan is to meet the requirements of the Wilsonville Tree Preservation and Protection Code, and to observe all laws, rules, and regulations. I recommend a preconstruction meeting with the owner, contractors, and a qualified arborist. All trees to be removed should be verified and marked and all tree protection measures should be inspected and approved before any clearing or grading work begins. It is the owner's responsibility to implement this tree plan fully, and to monitor the construction process to its conclusion. Deviations can result in tree damage, liability, and violations of the City Code.

References

Matheny, N. P., & Clark, J. R. (1998). *Trees and Development, A Technical Guide to Preservation of Trees During Land Development*. Urbana, Illinois: International Society of Arboriculture Books.

Council of Tree and Landscape Appraisers, Gooding, R.F. et al. *Guide for Plant Appraisal*, 9th Edition. Urbana, Illinois: International Society of Arboriculture Books.

Assumptions and Limiting Conditions

Sue Mathis Landscape Design, 16340 Lower Harbor Rd. Ste. 1-337, Brookings, OR 97415
Cell (661) 256-4261, Email: sue.mathis.landscape@gmail.com

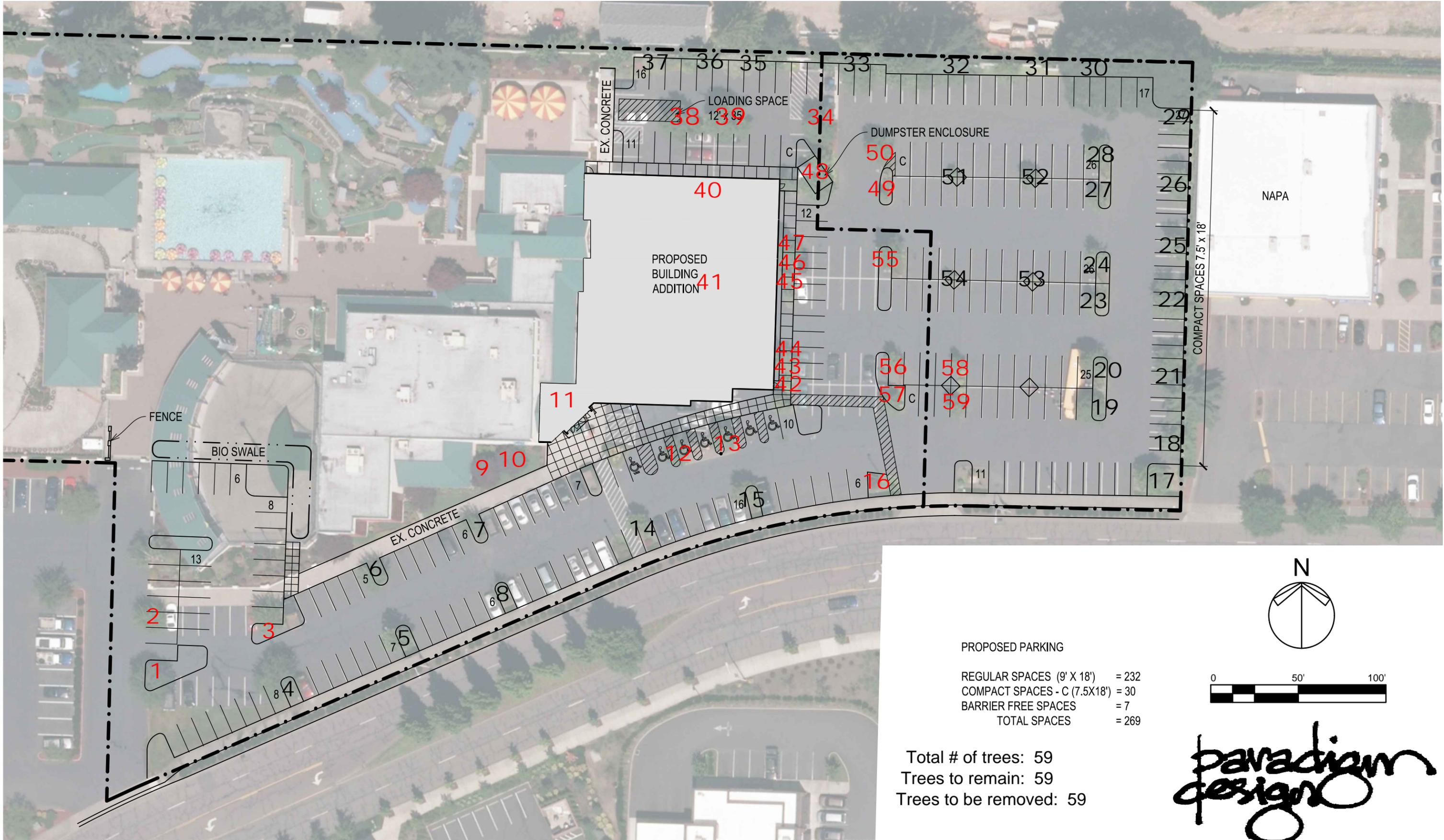
1. Any legal description provided to the consultant is assumed to be correct. Titles and ownerships to property are assumed to be good and marketable. No responsibility is assumed for legal matters.
2. Care has been taken to obtain all information from reliable sources. All data have been verified insofar as feasible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including additional fees.
4. This report and any values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
5. Sketches, drawings and photographs in this report are intended as visual aids and are probably not to scale. The reproduction of information generated by other consultants is for coordination and ease of reference. Inclusion of such information does not constitute a representation by the

Landscape Architect, or by Sue Mathis Landscape Design., as to the sufficiency or accuracy of the information.

6. Unless expressed otherwise, information in this report covers only items that were examined, and reflects the condition of those items at the time of inspection. The inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, probing, or coring, unless otherwise stated.
7. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
8. This report is the completed work product. Any additional work, including production of a site plan, addenda and revisions, construction of tree protection measures, tree work, or inspection of tree protection measures, for example, must be contracted separately.
9. Loss or alteration of any part of the report invalidates the entire report. Ownership of any documents produced passes to the Client only when all fees have been paid.

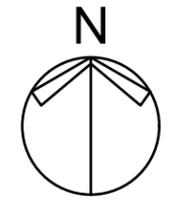
Susan M Mathis
Registered Landscape Architect #683

TREE SURVEY MAP



PROPOSED PARKING	
REGULAR SPACES (9' X 18')	= 232
COMPACT SPACES - C (7.5X18')	= 30
BARRIER FREE SPACES	= 7
TOTAL SPACES	= 269

Total # of trees: 59
 Trees to remain: 59
 Trees to be removed: 59



FUTURE SITE PLAN 2 - REMOVE HALF BATTING CAGES

7-13-18

ARCHITECTS 550 3 Mile Road N.W., Suite B Grand Rapids, MI 49544 1706078 11/13/2017
ENGINEERS (616) 785-5656 www.ParadigmAE.com

DENOTES EXISTING TREE REFERENCED BY NUMBER, (59 TOTAL) **TREES TO BE REVIVED SHOWN IN RED**

Wilsonville Family Fun Ceter

Tree Survey Table

4/5/2018

Tree No.	Botanical Name	Common Name	DBH (in.)	Crown (ft.)	Remarks	Action	Maintenance	RPZ (ft.)
1	Acer rubrum	Red Maple	9.75	25	ivy growing on trunk	To be removed	remove ivy	9
2	Acer rubrum	Red Maple	8.5	25	none	To be removed	none	8
3	Acer rubrum	Red Maple	8.5	16	Tree in good health	To be removed		8
4	Acer platanoides	Crimson King Maple	2.5	12	Tree in good health	Protect in place		2
5	Acer platanoides	Crimson King Maple	2	21	Tree in good health	Protect in place		2
6	Acer platanoides	Crimson King Maple	2.25	14	Tree in good health	Protect in place	remove stake	2
7	Acer platanoides	Crimson King Maple	2.5	17	Tree in good health	Protect in place		2
8	Acer platanoides	Crimson King Maple	1.75	12	Tree in good health	Protect in place		1
9	Acer rubrum	Red Maple	5	28	Tree in good health	To be removed		5
10	Acer rubrum	Red Maple	5.25	18	Tree in good health	To be removed		5
11	Acer rubrum	Red Maple	4.25	13	Tree in good health	To be removed		4
12	Acer rubrum	Red Maple	9	30	Tree in good health	To be removed		9
13	Acer rubrum	Red Maple	10.25	34	Tree in good health	To be removed		10
14	Acer rubrum	Red Maple	8.25	32	Tree in good health	Protect in place		8
15	Acer rubrum	Red Maple	8.25	28	Tree in good health	Protect in place		8
16	Acer rubrum	Red Maple	4	16	Dead tree removed	March 2018	remove stump	4
17	Acer rubrum	Red Maple	10.75	20	Tree in good health	Protect in place		10
18	Acer rubrum	Red Maple	8.5	21	Tree in good health	Protect in place		8
19	Acer rubrum	Red Maple	11.5	32	Tree in good health	To be removed		11
20	Acer rubrum	Red Maple	10.5	32	Tree in good health	To be removed		10
21	Acer rubrum	Red Maple	10	35	Tree in good health	Protect in place		10
22	Acer rubrum	Red Maple	11	38	ivy growing on trunk	Protect in place	remove ivy	11
23	Acer rubrum	Red Maple	7.75	26	lichen on branches	To be removed		7.5
24	Acer rubrum	Red Maple	8	26	lichen on branches	To be removed		8
25	Acer rubrum	Red Maple	9.5	40	ivy growing on trunk	Protect in place	remove ivy	9
26	Acer rubrum	Red Maple	9	40	ivy growing on trunk	Protect in place	remove ivy	9
27	Acer rubrum	Red Maple	7.75	26	suckers growing from base	To be removed	remove suckers	7
28	Acer rubrum	Red Maple	9.75	26	ivy growing on trunk	To be removed	remove ivy	9
29	Acer rubrum	Red Maple	9	40	Tree in good health	Protect in place		9
30	Acer rubrum	Red Maple	3.25	30	Tree in good health	Protect in place		3
31	Acer rubrum	Red Maple	3.25	18	ivy growing on trunk	Protect in place	remove ivy	3

Wilsonville Family Fun Ceter

Tree Survey Table

4/5/2018

Tree No.	Botanical Name	Common Name	DBH (in.)	Crown (ft.)	Remarks	Action	Maintenance	RPZ (ft.)
32	Acer rubrum	Red Maple	7	30	Tree in good health	Protect in place		7
33	Acer rubrum	Red Maple	10.5	35	ivy growing on trunk	Protect in place	remove ivy	10
34	Acer rubrum	Red Maple	11.25	26	ivy growing on trunk	To be removed	remove ivy	11
35	Acer rubrum	Red Maple	7.5	24	multi -trunk	Protect in place		7
36	Thuja plicata	Western Red Cedar	10	20	Healthy	To be removed		7
37	Acer rubrum	Red Maple	7	24	multi -trunk	Protect in place		10
38	Acer rubrum	Red Maple	12	24	multi -trunk	To be removed		12
39	Acer rubrum	Red Maple	13.75	26	multi -trunk	To be removed		13
40	Acer platanoides	Crimson King Maple	3.5	12	Tree in good health	To be removed		3
41	Acer platanoides	Crimson King Maple	1.5	10	Tree in good health	To be removed		1
42	Acer rubrum	Red Maple	6.75	22	Tree in good health	To be removed		6
43	Acer rubrum	Red Maple	2	12	Tree in good health	To be removed		2
44	Acer rubrum	Red Maple	8.75	28	Tree in good health	To be removed		8
45	Acer rubrum	Red Maple	3.5	13	Moss on trunk, in poor health	To be removed		3
46	Acer rubrum	Red Maple	3.5	16	Tree in good health	To be removed		3
47	Acer rubrum	Red Maple	10.75	28	Shallow roots damaging curb &	To be removed		10
48	Acer rubrum	Red Maple	3.5	12	Tree in good health	To be removed		3
49	Acer rubrum	Red Maple	4	14	Tree in good health	Protect in place		4
50	Acer rubrum	Red Maple	11	26	Tree in good health	Protect in place		11
51	Acer rubrum	Red Maple	3.25	16	Tree in good health	Protect in place		3
52	Acer rubrum	Red Maple	6.5	18	Tree in good health	Protect in place		6
53	Acer rubrum	Red Maple	3.75	16	Tree in good health	Protect in place		3
54	Acer rubrum	Red Maple	5.5	18	Tree in good health	Protect in place		5
55	Acer rubrum	Red Maple	1.25	11	Tree in good health	To be removed		1
56	Acer rubrum	Red Maple	6.25	18	Tree in good health	To be removed		6
57	Acer rubrum	Red Maple	9.25	24	Tree in good health	To be removed		9
58	Acer rubrum	Red Maple	5.75	17	Tree in good health	To be removed		5
59	Acer rubrum	Red Maple	7	18	Tree in good health	To be removed		7

Note: There were no Oregon White Oak or native Yew trees in the area to be disturbed on the site.

Total trees removed: 28

"AA" QSQ-4ME-U with Backlight shield

OSQ Series

OSQ™ LED Area/Flood Luminaire – Large

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. The 'T' input power designator is a suitable upgrade for HID applications up to 750 Watts, and the 'U' input power designator is a suitable upgrade for HID applications up to 1000 Watts.

Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary

NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty*: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

* See <http://lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed	
Backlight Shield OSQ-BLSLF - Front facing optics OSQ-BLSLR - Rotated optics	Hand-Held Remote XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:

Example: Mount: OSQ-AA5V → Luminaire: OSQ-A-NM-2ME-T-40K-UL-SV

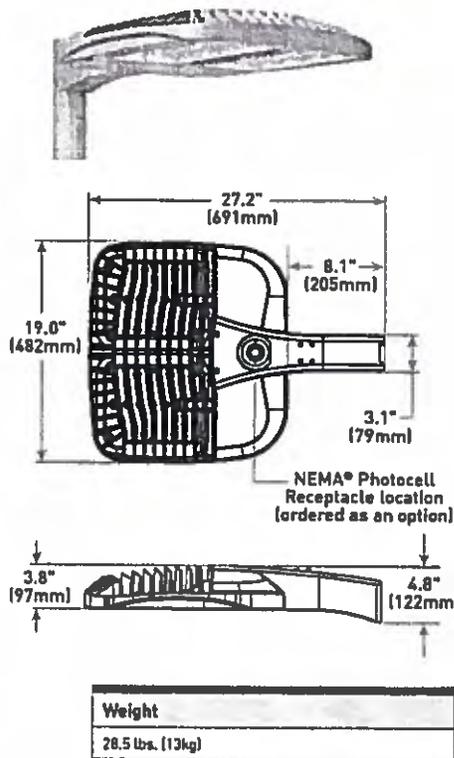
Mount (Luminaire must be ordered separately)*			
OSQ-			
OSQ-AA Adjustable Arm	OSQ-DA Direct Arm	Color Options:	SV Silver BK Black BZ Bronze WH White

* Reference EPA and pole configuration suitability data beginning on page 7

Luminaire (Mount must be ordered separately)									
OSQ	A	NM							
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options	
OSQ	A	NM No Mount	Asymmetric 2ME* 4ME* Type II Type IV Medium Medium 3ME* Type III Medium Symmetric BME 25D Type V 25° Medium Flood 55H 40D Type V 40° Short Flood WSN 60D Wide 60° Sign Flood 15D 15° Flood	T 166W U 215W	30K 3000K 40K 4000K 57K 5700K	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze SV Silver WH White	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified input power designator F Fuse - When code dictates fusing, use time delay fuse - Available for U.S. applications only ML Multi-Level - Refer to ML spec sheet for details - Available with UL voltage only - Intended for downlight applications at 0° tilt PML Programmable Multi-Level, up to 40° Mounting Height - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt	PML2 Programmable Multi-Level, 10-30° Mounting Height - Refer to PML2 spec sheet for details - Intended for downlight applications at 0° tilt Q1/Q2/Q3/Q4/Q5/Q6/Q7/Q8/Q9 Field Adjustable Output - Must select Q9, Q8, Q5, Q4, Q3, Q2, or Q1 for T input power designator - Must select Q9, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values R NEMA® Photocell Receptacle - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shunting cap by others RL Rotate Left - LED and optic are rotated to the left RR Rotate Right - LED and optic are rotated to the right

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

DA Mount



US: lighting.cree.com



T (800) 236-6800 F (262) 504-5415



Rev. Date: V14 01/29/2018

Canada: www.cree.com/canada



T (800) 473-1234 F (800) 890-7507

"BB" QSQ-4ME-U

OSQ Series

OSQ™ LED Area/Flood Luminaire – Large

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. The 'T' input power designator is a suitable upgrade for HID applications up to 750 Watts, and the 'U' input power designator is a suitable upgrade for HID applications up to 1000 Watts.

Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary

NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty¹: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

¹ See <http://lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed	
Backlight Shield OSQ-BLSLF - Front facing optics OSQ-BLSLR - Rotated optics	Hand-Held Remote XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:

Example: Mount: OSQ-AASV • Luminaire: OSQ-A-NM-2ME-T-40K-UL-SV

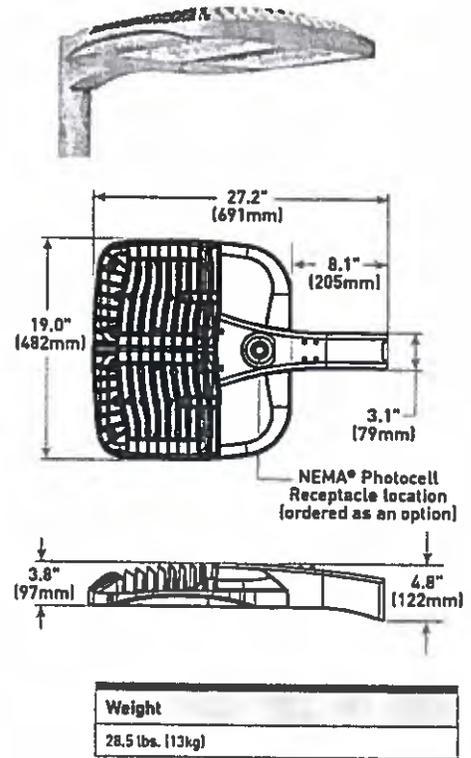
Mount (Luminaire must be ordered separately)*		
OSQ-		
OSQ-AA Adjustable Arm OSQ-DA Direct Arm	Color Options:	SV Silver BK Black BZ Bronze WH White

* Reference EPA and pole configuration suitability data beginning on page 7

Luminaire (Mount must be ordered separately)									
OSQ	A	NM							
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options	
OSQ	A	NM No Mount	Asymmetric 2ME* 4ME* Type II Type IV Medium Medium 3ME* Type III Medium Symmetric 5ME 25D Type V 25° Medium Flood 5SH 40D Type V 40° Short Flood WSN 40D Wide 60° Sign Flood 15D 15° Flood	T 166W U 215W 30K 3000K 40K 4000K 57K 5700K	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze SV Silver WH White	DIM 0-10V Dimming - Control by others - Refer to Dimming Spec Sheet for details - Can't exceed wattage of specified input power designator F Fuse - When code dictates fusing, use time delay fuse - Available for U.S. applications only ML Multi-Level - Refer to ML Spec Sheet for details - Available with UL voltage only - Intended for downlight applications at 0° tilt PML Programmable Multi-Level, up to 40° Mounting Height - Refer to PML Spec Sheet for details - Intended for downlight applications at 0° tilt	PML2 Programmable Multi-Level, 18-30° Mounting Height - Refer to PML2 Spec Sheet for details - Intended for downlight applications at 0° tilt 09/08/07/06/05/04/03/02/01 Field Adjustable Output - Must select O9, O6, O5, O4, O3, O2, or O1 for T input power designator - Must select O9, O8, O7, O6, O5, O4, O3, O2, or O1 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values R NEMA® Photocell Receptacle - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shorting cap by others RL Rotate Left - LED and optic are rotated to the left RR Rotate Right - LED and optic are rotated to the right	

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

DA Mount



Rev. Date: V14 01/29/2018



US: lighting.cree.com

T (800) 236-6800 F (262) 504-5415

Canada: www.cree.com/canada

T (800) 473-1234 F (800) 890-7507

CC QSQ-SME-U

OSQ Series

OSQ™ LED Area/Flood Luminaire – Large

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. The 'T' input power designator is a suitable upgrade for HID applications up to 750 Watts, and the 'U' input power designator is a suitable upgrade for HID applications up to 1000 Watts.

Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary

NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty*: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

* See <http://lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed	
Backlight Shield OSQ-BLSLF - Front facing optics OSQ-BLSLR - Rotated optics	Hand-Held Remote XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:

Example: Mount: OSQ-AASV + Luminaire: OSQ-A-NM-2ME-T-40K-UL-SV

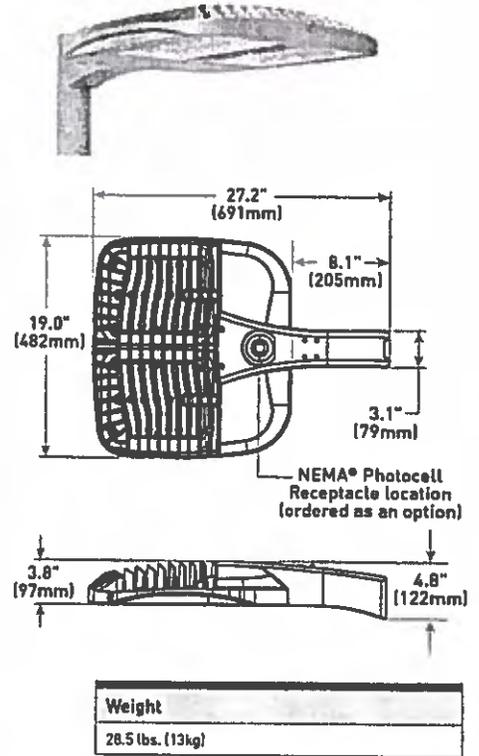
Mount (Luminaire must be ordered separately)*			
OSQ-			
OSQ-AA Adjustable Arm	OSQ-BA Direct Arm	Color Options:	SV Silver BK Black BZ Bronze WH White

* Reference EPA and pole configuration suitability data beginning on page 7

Luminaire (Mount must be ordered separately)									
OSQ	A	NM							
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options	
OSQ	A	NM No Mount	Asymmetric 2ME* 4ME* Type II Type IV Medium Medium 3ME* Type III Medium Symmetric SME 2SD Type V 2S* Medium Flood 5SH 40D Type V 40* Short Flood WSN 48D Wide Flood Sign 60* Flood 15D 15* Flood	T 166W U 215W	30K 3000K 40K 4000K 57K 5700K	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze SV Silver WH White	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified input power designator F Fuse - When code dictates fusing, use time delay fuse - Available for U.S. applications only ML Multi-Level - Refer to ML spec sheet for details - Available with UL voltage only - Intended for downlight applications at 0° tilt PML Programmable Multi-Level, up to 40° Mounting Height - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt	PML2 Programmable Multi-Level, 10-30° Mounting Height - Refer to PML2 spec sheet for details - Intended for downlight applications at 0° tilt D9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1 Field Adjustable Output - Must select Q9, Q6, Q5, Q4, Q3, Q2, or Q1 for T input power designator - Must select Q9, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values R NEMA® Photocell Receptacle - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shoring cap by others RL Rotate Left - LED and optic are rotated to the left RR Rotate Right - LED and optic are rotated to the right

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

DA Mount



US: lighting.cree.com



T (800) 236-6800 F (262) 504-5415



Rev. Date: V14 01/29/2018

Canada: www.cree.com/canada

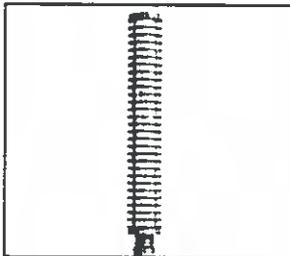


T (800) 473-1234 F (800) 890-7507

"00" CCCL 12 4 4L35 40

Corral® Column LED

selux



Project: _____

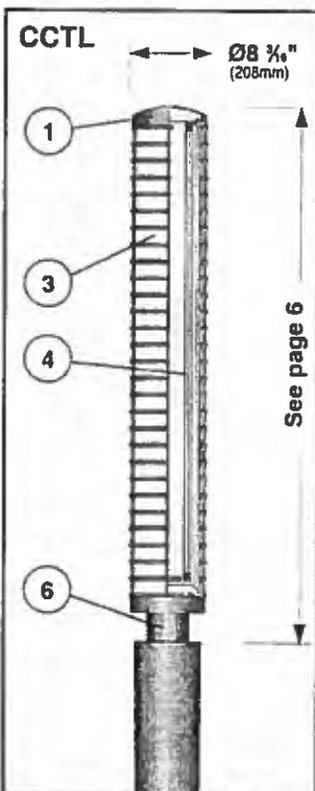
Type: _____ Qty: _____

Series	Nominal Overall Height	Nominal Height of Lit Section	Light Engine	CCT	Finish	Voltage
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Options

Series	Nominal Overall Height	Nominal Height of Lit Section	Light Engine	CCT	Finish	Voltage	Options
CCTL Corral® Column LED Round Tapered Pole	12 12'	2 2'	1L35	27 2700 K	WH White	120	DM Dimming (0-10V)
	14 14'	3 3'	2L35	30 3000 K	BK Black	208	HL50 ² Hi-Lo Switching *See p. 9 for details
	16 16'	4 4'	3L35	35 3500 K	BZ Bronze	240	REC ³ GFCI Receptacle w/ in-use cover
			4L35	40 4000 K	SV Silver	277	REC ² GFCI Receptacle w/ in-use lockable cover
CCCL Corral® Column LED Round 8" Straight Pole	10 10'			Consult factory for other CCTs	SP Specify Premium Color	347 ¹	MS Motion Sensor w/ Optional Photocell (Meets Title 24 requirements) *See page 2 for details
	12 12'					480 ¹	
	14 14'						
	16 16'						

¹ Requires step down transformer. ² 120V, 240V, and 277V only. ³ 120V only



- Luminaire Cover** - Die-cast, aluminum cover, with smooth crisp form to reflect and complement the column design. Removes by loosening three stainless steel set screws for easy access to lamp chamber.
- Gasketing** - (not shown) Continuous gaskets provide weather-proofing, dust, and insect control at all fixture connections.
- Shielding** - White, translucent, UV stabilized acrylic, minimum wall thickness 0.118" (3mm) inside of die cast aluminum "Corral" rings.
- LED Light Engine** - High efficiency LED light engine equipped with brand-name LEDs, available in 2700K, 3000K, 3500K, or 4000K CCT tolerance within a 3-step MacAdams ellipse.
- Drivers** - (not shown) Electronic universal 120-277V, PFC > 0.95
- Column Fitter** - (not shown) Die-cast aluminum fitter, with built-in gasketing ridges, for smooth transition to column.

- Pole Fitter** - Self-leveling, die-cast aluminum, fitter base secured to pole with two, stainless steel, Allen head set screws, 3 1/4" (89mm) O.D. poles.
- Surge Protector** - (not shown) Designed to protect luminaire from electrical surge (10kA).
- Base Cover** - (not shown, CCTL Only) Standard two-piece base cover is made from die-cast 356 alloy aluminum which is heat treated to produce a T6 temper.
- Hi-Lo Switching** - (not shown) For details, please see page 6.
- Thermal Foldback** - (not shown) Integrated Thermal Foldback circuit will reduce the drive current if the ambient temperature exceeds the maximum rated ambient temperature. This ensures maximum light output in various operating conditions while assuring long-term lumen maintenance.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thorough-

ly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultraviolet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide.

5 Year Limited LED Luminaire Warranty - Selux offers a 5 Year Limited Warranty to the original purchaser that the Corral Column LED luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers the LED driver and LED array when installed and operated according to Selux instructions. For Corral Column LED luminaire suitable for ambient temperature of 45°C (113°F). For details, see "Selux Terms and Condition of Sale."

Listings and Ratings: Tested to INRTL Wet Location and IESNA LM-79-08 standards. LED tested to LM-80 standards. Luminaire and LED tested at 25°C (77°F) ambient temperature.

Selux Corp. © 2017
TEL (845) 834-1400
FAX (845) 834-1401
www.selux.us
CORCL-1217-01 (ss-v1.8)

Union Made Affiliated
with IBEW Local 563

NRTL Listed for Wet Locations (i.e. UL, CSA)

IK10

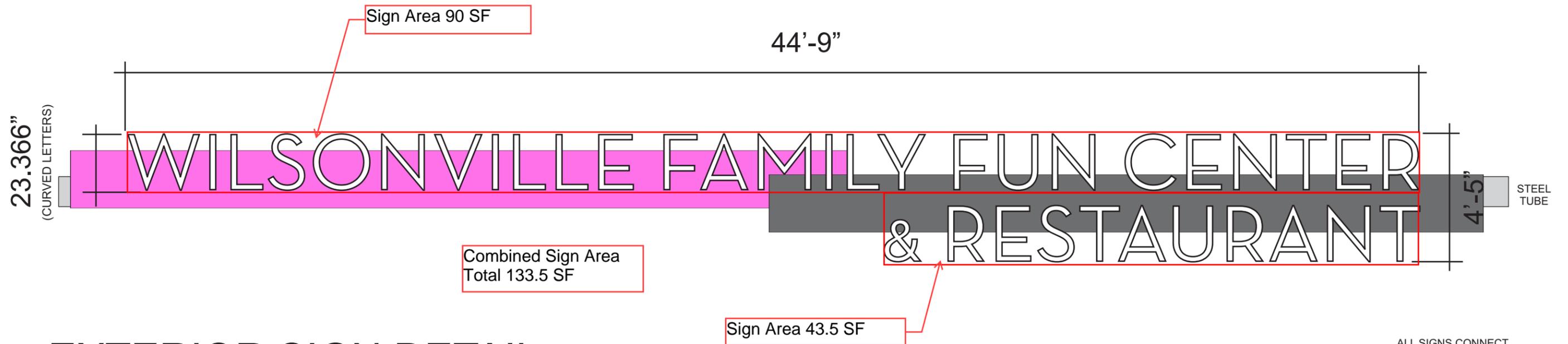
In a continuing effort to offer the best product possible, we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product. Specification sheets found at www.selux.us are the most recent versions and supersede all other printed or electronic versions.

Corral® Column LED



Photometry

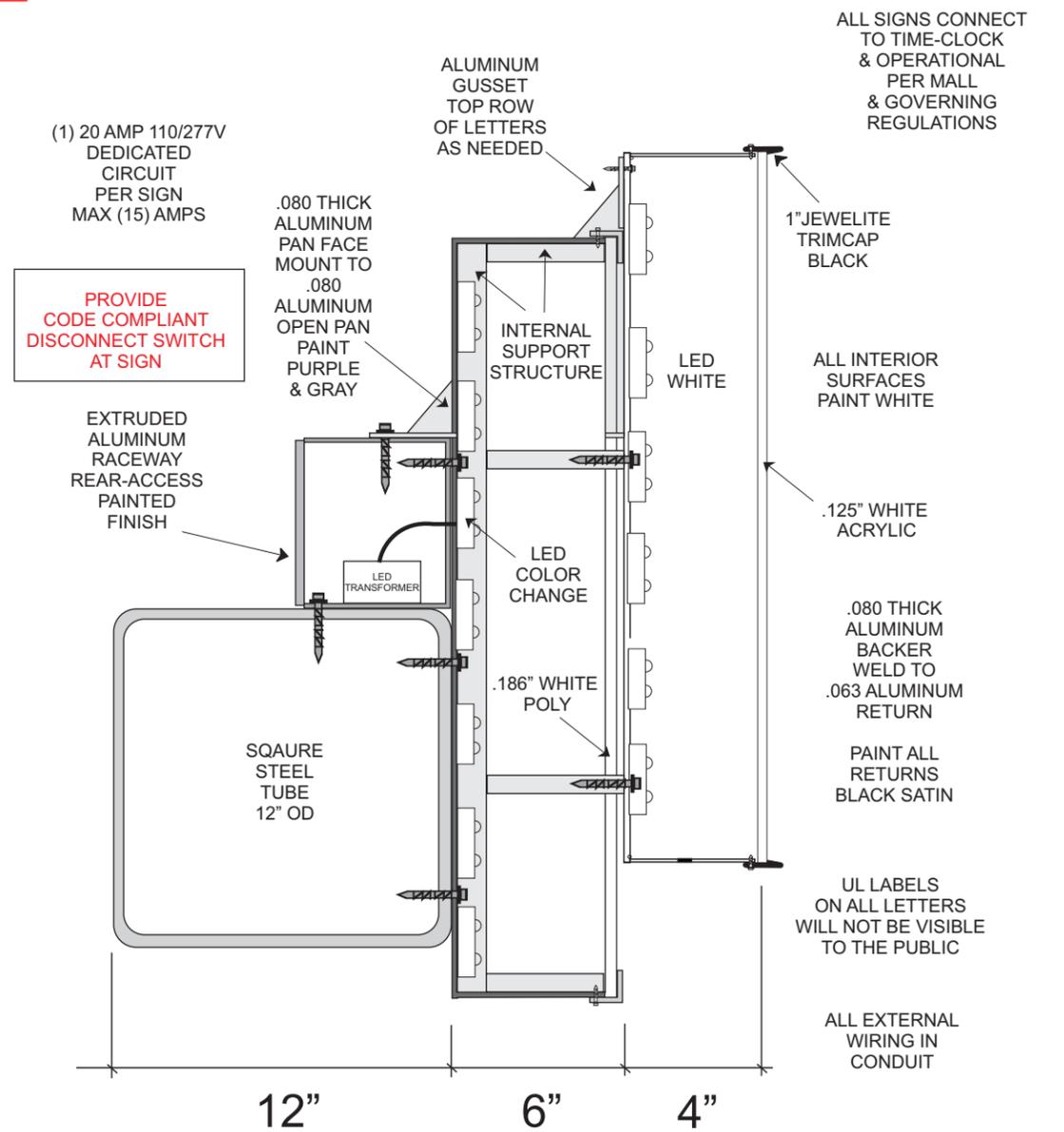
Corral Column LED Lumen Matrix								
Model#	Watts	Base Scale Factor	Delivered Lumens	CCCL Toolbox Scale Factor	Lumens/Watt	Light Engine Multiplier	CCT Multiplier	
Single Light Engine (1B30)								
CCCL-X-2-1B30-27-XX-UNV	13.27	0.252	757	0.4421	57.1	0.252	2700K (Multiplier = 0.884)	
CCCL-X-3-1B30-27-XX-UNV	19.91	0.252	1136	0.6632	57.1			
CCCL-X-4-1B30-27-XX-UNV	26.54	0.252	1515	0.8842	57.1			
Double Light Engine (2B30)								
CCCL-X-2-2B30-27-XX-UNV	26.91	0.500	1503	0.4425	55.9	0.500		
CCCL-X-3-2B30-27-XX-UNV	40.36	0.500	2255	0.6632	55.9			
CCCL-X-4-2B30-27-XX-UNV	53.81	0.500	3006	0.8842	55.9			
Triple Light Engine (3B30)								
CCCL-X-2-3B30-27-XX-UNV	39.50	0.737	2214	0.4421	56.0	0.737		
CCCL-X-3-3B30-27-XX-UNV	59.24	0.737	3320	0.6632	56.0			
CCCL-X-4-3B30-27-XX-UNV	78.99	0.737	4427	0.8842	56.0			
Quad Light Engine (4B30)								
CCCL-X-2-4B30-27-XX-UNV	53.39	0.884	3004	0.4421	56.3	0.884		
CCCL-X-3-4B30-27-XX-UNV	80.08	0.884	4505	0.6632	56.3			
CCCL-X-4-4B30-27-XX-UNV	106.77	0.884	6007	0.8842	56.3			
Single Light Engine (1B30)								
CCCL-X-2-1B30-30-XX-UNV	13.27	0.252	807	0.4709	60.8	0.252	3000K (Multiplier = 0.942)	
CCCL-X-3-1B30-30-XX-UNV	19.91	0.252	1210	0.7064	60.8			
CCCL-X-4-1B30-30-XX-UNV	26.54	0.252	1613	0.9418	60.8			
Double Light Engine (2B30)								
CCCL-X-2-2B30-30-XX-UNV	26.91	0.500	1601	0.4709	59.5	0.500		
CCCL-X-3-2B30-30-XX-UNV	40.36	0.500	2402	0.7064	59.5			
CCCL-X-4-2B30-30-XX-UNV	53.81	0.500	3202	0.9418	59.5			
Triple Light Engine (3B30)								
CCCL-X-2-3B30-30-XX-UNV	39.50	0.737	2358	0.4709	59.7	0.737		
CCCL-X-3-3B30-30-XX-UNV	59.25	0.737	3537	0.7064	59.7			
CCCL-X-4-3B30-30-XX-UNV	79.00	0.737	4716	0.9418	59.7			
Quad Light Engine (4B30)								
CCCL-X-2-4B30-30-XX-UNV	53.40	0.942	3199	0.4709	59.9	0.942		
CCCL-X-3-4B30-30-XX-UNV	80.10	0.942	4799	0.7064	59.9			
CCCL-X-4-4B30-30-XX-UNV	106.80	0.942	6399	0.9418	59.9			
Single Light Engine (1B30)								
CCCL-X-2-1B30-35-XX-UNV	13.27	0.252	865	0.5052	65.2	0.252	3500K (Multiplier = 1.010)	
CCCL-X-3-1B30-35-XX-UNV	19.91	0.252	1298	0.7578	65.2			
CCCL-X-4-1B30-35-XX-UNV	26.54	0.252	1731	1.0104	65.2			
Double Light Engine (2B30)								
CCCL-X-2-2B30-35-XX-UNV	26.91	0.500	1718	0.5052	63.8	0.500		
CCCL-X-3-2B30-35-XX-UNV	40.36	0.500	2576	0.7578	63.8			
CCCL-X-4-2B30-35-XX-UNV	53.81	0.500	3435	1.0104	63.8			
Triple Light Engine (3B30)								
CCCL-X-2-3B30-35-XX-UNV	39.50	0.737	2529	0.5052	64.0	0.737		
CCCL-X-3-3B30-35-XX-UNV	59.25	0.737	3794	0.7578	64.0			
CCCL-X-4-3B30-35-XX-UNV	79.00	0.737	5059	1.0104	64.0			
Quad Light Engine (4B30)								
CCCL-X-2-4B30-35-XX-UNV	53.40	1.010	3432	0.5052	64.3	1.010		
CCCL-X-3-4B30-35-XX-UNV	80.10	1.010	5148	0.7578	64.3			
CCCL-X-4-4B30-35-XX-UNV	106.80	1.010	6864	1.0104	64.3			
Single Light Engine (1B30)								
CCCL-X-2-1B30-40-XX-UNV	13.27	0.252	857	0.2521	64.5	0.252	4000K (Multiplier = 1.000)	
CCCL-X-3-1B30-40-XX-UNV	19.91	0.252	1285	0.2521	64.5			
CCCL-X-4-1B30-40-XX-UNV	26.54	1.000	1713	0.2521	64.5			
Double Light Engine (2B30)								
CCCL-X-2-2B30-40-XX-UNV	26.91	0.500	1700	0.5004	63.2	0.500		
CCCL-X-3-2B30-40-XX-UNV	40.36	0.500	2550	0.5004	63.2			
CCCL-X-4-2B30-40-XX-UNV	53.81	1.000	3400	0.5004	63.2			
Triple Light Engine (3B30)								
CCCL-X-2-3B30-40-XX-UNV	39.50	0.737	2504	0.7370	63.4	0.737		
CCCL-X-3-3B30-40-XX-UNV	59.24	0.737	3755	0.7370	63.4			
CCCL-X-4-3B30-40-XX-UNV	78.99	1.000	5007	0.7370	63.4			
Quad Light Engine (4B30)								
CCCL-X-2-4B30-40-XX-UNV	53.39	0.500	3397	0.5000	63.6	1.000		
CCCL-X-3-4B30-40-XX-UNV	80.08	0.750	5096	0.7500	63.6			
CCCL-X-4-4B30-40-XX-UNV	106.77	1.000	6794	1.0000	63.6			



EXTERIOR SIGN DETAIL



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MEMORANDUM

DATE: May 17, 2018
TO: Steve Adams, P.E., City of Wilsonville
FROM: Scott Mansur, P.E., PTOE *Sm*
 Jordin Kelly, EIT



SUBJECT: Wilsonville Family Fun Center Expansion Transportation Study

This memorandum documents trip generation estimates for the proposed expansion to the Family Fun Center located at 29111 Town Center Loop West in Wilsonville, Oregon. The development would consist of 14,000 square feet of new building area to be added to the main campus (including a modified dining space, a new entrance to the park, and 16 lanes of bowling) as well as the removal of 8 existing batting cages.

The purpose of this memorandum is to determine the number of trips the proposed expansion will generate during the PM peak hour and evaluate site access, internal circulation, bicycle and pedestrian needs, and parking. The following sections include the project trip generation, site plan review, and summary of findings.

Project Trip Generation

Trip generation is the method used to estimate the number of vehicles that are added to the roadway network by the proposed project during a specified period (i.e., PM peak hour). Table 1 documents the trip generation estimates for the proposed expansion during the PM peak period using the trip rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*¹ for a Bowling Alley (ITE Land Use Code 437) and Batting Cages (ITE Land Use Code 433). As shown, the estimated number of new PM peak hour trips from the proposed Family Fun Center expansion is 3 trips (4 in, -1 out).

Table 1: Trip Generation Summary

Land Use (ITE Code)	PM Peak Hour Trip Rate	Size	PM Peak Hour Trips		
			In	Out	Total
<i>Proposed</i>					
Bowling Alley (437)	1.30 trips/lane	16 Lanes	14	7	21
<i>Removal</i>					
Batting Cages (433)	2.22 trips/cage	8 Cages	10	8	18
Net New Trips (Expansion – Removal)			4	-1	3

¹ *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.



Project Trips through I-5 Interchange Area

Since the Family Fun Center is a regional use, it is expected that the majority of PM peak trips for the proposed expansion would come from I-5. Therefore, 75% of the project traffic (approximately 2 PM peak hour trips) is estimated to travel through the I-5/SW Wilsonville Road interchange area. No trips are expected to pass through the I-5/SW Elligsen Road interchange.

Site Plan Review

The applicant's preliminary site plan was provided with the Traffic Study Request letter and is attached to the appendix. It was reviewed to evaluate site access, internal circulation, bicycle and pedestrian needs, and parking.

Site Access

The proposed expansion would utilize the existing driveways along Town Center Loop West. The expansion will use land that is currently used for the Wilsonville Family Fun Center's parking lot. The existing access points will not be modified as part of this project, and should therefore have adequate sight distance.

Internal Circulation

Based on the site plan, the expanded Family Fun Center's internal roadway network appears to provide adequate turning radii to allow safe entrance, exit and parking maneuvers.

Bicycle and Pedestrian Facilities

The site currently has sidewalks along Town Center Loop West, and walkways at the perimeter of the building. The existing pedestrian facilities are sufficient for the site, and the new expansion will maintain the sidewalk perimeter at the building. The site currently has a bike rack at the entrance located at the southeast corner of the building. This bike rack may need to be relocated or reoriented for the proposed expansion.

Parking

Brunswick Bowling Products submitted a letter documenting their preliminary parking evaluation,² which indicated that 3-4 parking stalls per bowling lane would be sufficient for this use based on their prior experience. Brunswick stated that their analysis indicated that 258 parking stalls would be required for the entire Family Fun Center facility, including the expansion.

There are 236 non-restricted parking spaces and 8 handicap parking spaces shown in the proposed site plan, resulting in a total of 244 parking stalls. This falls short of the Brunswick's preliminary parking evaluation of 258 parking stalls, although the proposed removal of the batting cages and the associated parking stalls may not have been included in Brunswick's evaluation.

The difference in trips for the additional bowling alley and removal of the batting cages is minimal so only a slight increase in parking demand is expected. Since the batting cages will be replaced with more parking and preliminary summer observations indicate there are no peak parking issues, a formal peak parking survey is not necessary.

² *Bowling Center Parking Count*, Brunswick Bowling Products, December 1, 2017.



Summary

Key findings for the proposed 14,000-square foot expansion in Wilsonville, Oregon are as follows:

- The estimated number of new PM peak hour trips from the proposed Family Fun Center expansion is 3 trips (4 in, -1 out).
- It is expected that 75% of the project traffic (or 2 PM peak hour trips) would travel through the I-5/SW Wilsonville Road interchange area.
- The proposed site plan provides adequate site access and internal circulation and the existing site driveways are assumed to maintain the existing sight distance.
- The difference in trips for the additional bowling alley and removal of the batting cages is minimal so only a slight increase in parking demand is expected. Since the batting cages will be replaced with more parking and preliminary summer observations indicate there are no peak parking issues, a formal peak parking survey is not necessary.

Please let us know if you have any questions.



**REPUBLIC
SERVICES**

10294 NW River Road, Wilsonville, OR 97070
O: 503 470 0626 F: 503 982 9307 republicservices.com

May 16, 2018

Scott Huisch
Wilsonville Family Fun Center
29111 Town Center Loop
Wilsonville OR 97070

Re: Wilsonville Family Fun Center
Waste & Recycling Enclosure

Dear Scott;

Thank you, for sending us the site plans for this development in Wilsonville.

My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Wilsonville. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location.

My drivers should be able to safely service the enclosure as designed. Thank you for moving the opening out to 25'. I appreciate the added space in front.

Thanks Scott for your help and concerns for our services prior to this project being developed.

Sincerely,

Frank J. Lonergan
Operations Manager
Republic Services Inc.

Date: May 7, 2018
Subject: Bowling Center Parking Count

To Whom it may concern,

Brunswick has been in the bowling industry for 126 years. We are currently seeing an increase in development of new Bowling Entertainment Centers (BEC) throughout the US that has not been seen since the mid '70s. For the past four years we have built approximately 40 new centers each year. We have also helped many existing traditional bowling centers remodel to embrace the new bowling entertainment business model.

This new BEC concept has helped transition from a **league** based business, of the past, to an entertainment based business. This includes additions of upper scale style restaurants similar to TGI Friday's, Yard House, Buffalo Wild Wings, etc... with patios in lieu of a snack bar. The addition of other amenities such as a redemption arcades, laser tag and bocce. This has opened the door and broaden the demographics of these facilities to service all ages and groups.

As a result of this shift from league to entertainment bowling and the addition of other amenities to the facility; this has impacted the occupancy load of the bowling lanes. This reduction has also impacted parking space count of these facilities. We see approximately 3-4 parking spaces per bowling lane, for the bowling portion of the building.

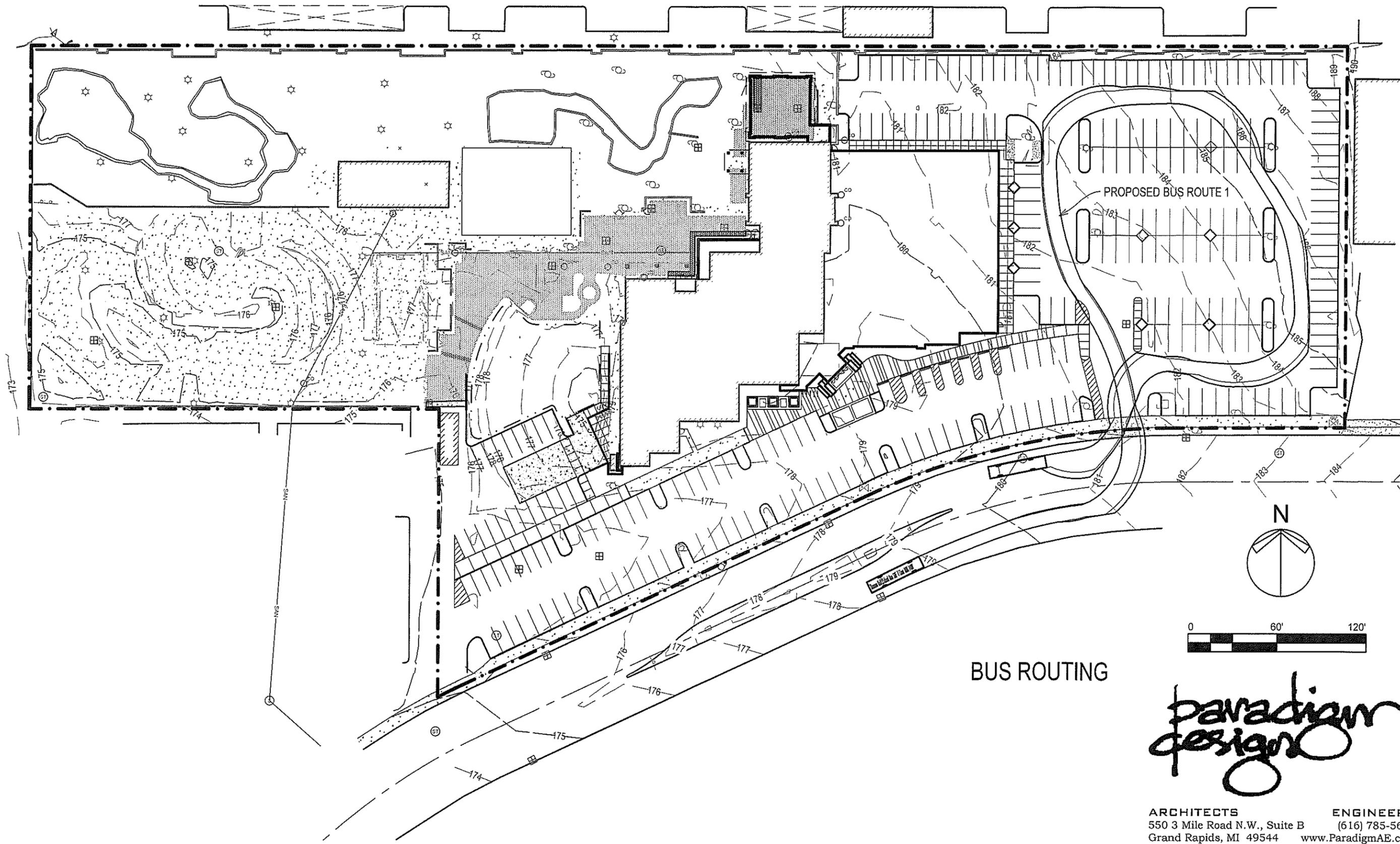
Based upon our experience with this type of mix use entertainment facility, we calculate the number of parking spaces required for this center to be at 277.

We hope you will take this into consideration when determining the required parking requirements for the potential Family Fun Center project.

Sincerely,



Shawn P. Butler
Director of Design and Construction
Brunswick Bowling Products



BUS ROUTING



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Portland, Oregon 97204-3635

ROAD EASEMENT AND MAINTENANCE AGREEMENT

THIS ROAD EASEMENT AND MAINTENANCE AGREEMENT ("Agreement") is made and entered into effective December 5th 1990, by WILSONVILLE PARK (OREG.) LTD., an Oregon limited partnership ("Partnership") and LES SCHWAB TIRE CENTERS OF PORTLAND, INC., an Oregon corporation ("Les Schwab").

RECITALS

A. Partnership owns the "Wilsonville Park Limited" parcels as designated on the map marked Exhibit A, attached hereto and by reference incorporated herein ("Partnership Property"). The Partnership Property is one of two parcels created from the property legally described in Exhibit B, attached hereto and by reference incorporated herein ("Entire Site"). The Partnership Property is legally described in Exhibit C, attached hereto and by reference incorporated herein.

B. Les Schwab owns the property described as the "Les Schwab Tires" parcel on Exhibit A ("Les Schwab Property"). The Les Schwab Property constitutes the balance of the Entire Site. The Les Schwab Property is described on Exhibit D, attached hereto and by reference incorporated herein.

C. Les Schwab and Partnership intend to create a 38 foot wide reciprocal easement for ingress and egress. The 38 foot easement is as shown on Exhibit A. The easement shall cover a 19 foot wide area on the Partnership Property and a 19 foot wide area on the Les Schwab Property.

D. That portion of the easement lying within the Partnership Property is hereinafter referred to as the "Partnership Easement Area" and that portion of the easement lying within the Les Schwab Property is hereinafter referred to as the "Les Schwab Easement Area." The Partnership Easement Area and the Les Schwab Easement Area are hereinafter collectively referred to as the "Easement Area." The Easement Area is described on Exhibit E, attached hereto and by reference incorporated herein.

E. The parties, by this instrument, intend to provide for the grant of reciprocal easements for the joint use of the Easement Area for ingress and egress and for the joint maintenance thereof.

91 00871

Recorded By
First American Title Insurance Company of Oregon
48598

NOW, THEREFORE, based upon the foregoing Recitals, and the mutual covenants hereinafter set forth, the parties agree as follows:

AGREEMENT

1. **Les Schwab Grant of Easement.** Les Schwab hereby grants to Partnership for its use and for the use of its partners, lessees, mortgagees, invitees, guests, customers, agents, employees and other users of the Partnership Property a perpetual, nonexclusive easement over the Les Schwab Easement Area for the passage of motor vehicles and pedestrian traffic.

2. **Partnership Grant of Easement.** Partnership hereby grants to Les Schwab for its use and for the use of its partners, lessees, mortgagees, invitees, guests, customers, agents, employees and other users of the Les Schwab Property a perpetual, nonexclusive easement over the Partnership Easement Area for the passage of motor vehicles and pedestrian traffic.

3. **Scope of Easement.** Each of the parties agree, with respect to the Easement Area, as follows:

(a) No party shall place any buildings or other permanent structures thereon, prevent the other party's reasonable access or otherwise take any action or fail to take any action which would unreasonably interfere with the other party's rights hereunder.

(b) There shall be no change in the manner in which the real property taxes are paid on the Easement Area. Those parties who are paying real property taxes on the Easement Area shall continue to do so and such obligation shall continue with such parties' successors and assigns.

(c) Neither party shall have the right to park, load or unload any vehicle in the Easement Area other than under emergency conditions.

(d) The Easement Area shall not be used in any manner which results in a violation of any covenants, conditions, restrictions, or laws affecting the Easement Area.

(e) Use of the Easement Area shall be on a regular, continuous, non-exclusive, non-priority basis. Neither party's rights hereunder shall lapse in the event of that party's failure to use the Easement Area on a continuous basis.

4. **Initial Construction of Road.** The parties agree that there shall be a road constructed on the Easement Area to service the Entire Site. Fifty (50%) percent of the cost of constructing the road shall be paid by Partnership and the remaining fifty (50%) percent of the cost of constructing the road shall be paid by Les Schwab. Unless otherwise agreed by the parties, the road should

Page 2 - Road Easement and Maintenance Agreement

NONREC\ACAGG.2FO - November 29, 1990

2

generally meet the standards of the City of Wilsonville for a city street. The work shall be contracted out by and performed under the supervision of Les Schwab. The work shall be performed in a good and workmanlike fashion and in compliance with the requirements of all applicable laws. Upon completion of the work, Partnership shall reimburse Les Schwab for fifty (50%) percent of the actual costs thereof. Partnership shall have the right to approve the plans, specifications and costs for the road prior to construction thereof by Les Schwab. Partnership shall be entitled to make recommendations to Les Schwab to minimize the cost of construction of the road and to ensure that it meets the needs of Partnership. Once Partnership has approved the plans, Les Schwab shall proceed to construct the road. Les Schwab agrees to construct the road concurrently with the development and improvement of the Les Schwab Property.

5. Maintenance.

(a) The cost of periodic maintenance and necessary repairs to the Easement Area shall be paid fifty (50%) percent by Partnership and fifty (50%) percent by Les Schwab. Such maintenance and repair shall be performed by Les Schwab on a prompt, diligent and regular basis in accordance with generally accepted street and road maintenance standards then existing under the laws of Wilsonville, Oregon, including but not limited to prompt patching or filling of damage to the pavement and resurfacing as necessary. Required maintenance shall include the removal of snow, ice and debris as soon as practicable after their occurrence. Les Schwab shall obtain Partnership's prior approval before undertaking work which will result in costs in excess of One Thousand and No/100 Dollars (\$1,000.00) per calendar year, which approval shall not be unreasonably withheld. If Les Schwab fails to perform any necessary maintenance and repairs as required, Partnership, upon fifteen (15) prior written notice to Les Schwab, may cause such work to be done with the right of reimbursement for all sums necessarily and properly expended to remedy such failure. If such maintenance and repairs cannot be cured within the fifteen (15) day notice period, Les Schwab may proceed with such repairs provided that they are conducted within the fifteen (15) day period and Les Schwab continuously and diligently pursues such repairs and maintenance to completion within a reasonable period of time.

(b) Partnership shall pay bills from Les Schwab for cost of maintenance and repair within 30 days after receipt. Upon request, Les Schwab shall provide reasonably satisfactory evidence of all expenditures covered by all bills to Partnership. Each bill shall set forth the total cost and Partnership percentage of the cost determined in the manner set forth herein. If either party fails to pay a bill as and when due, the billing party shall have a lien against the property owned by the other party to secure the unpaid obligation. Unpaid bills shall bear interest from the date due until paid at a rate of interest equal to the then prevailing prime rate of interest published by any one of the five largest commercial banks doing business in the city of Portland (selected

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by the billing party) plus two percentage points. The "prima rate" shall mean a bank's published base lending rate for short-term, unsecured commercial loans to creditworthy borrowers and not necessarily the lowest rate extended to any particular customer. The billing owner shall be entitled to record a notice of lien in the real estate records of Clackamas County, Oregon, and to foreclose the lien against the property of the delinquent party in any manner permitted by law. In the event of any foreclosure proceeding or in the event of any other legal proceeding to enforce payment of a delinquent party's obligations under this Agreement, the prevailing party shall be entitled to recover its reasonable attorney fees, costs and expenses at both the trial and appellate level and in any arbitration or bankruptcy proceedings.

(c) Each owner agrees, upon the request of any other owner, to provide an estoppel letter to any prospective mortgagee or purchaser of an owner so that such mortgagee or purchaser will be aware of any unpaid maintenance or repair expenses by that particular owner. In the event an estoppel letter is not provided by an owner within ten (10) business days following receipt of a request for such a letter by the other owner, then such prospective mortgagee or purchaser shall be entitled to purchase such property free and clear of any unpaid maintenance and repair expenses which accrued prior to the date of recording of the prospective mortgage, deed or contract. If the prospective mortgagee or purchaser purchases the real property free and clear of unpaid maintenance or repair expenses, as provided above, then such unpaid maintenance and repair expenses shall be borne by the owner who failed to act with respect to the giving of the estoppel letter. In other words, if there were unpaid maintenance and repair expenses, and Partnership did not take action to notify the prospective mortgagee or purchaser of the Les Schwab Property, then Partnership would bear the entire cost of the unpaid maintenance and repair expenses. If more than one owner fails to act (assuming a later division of the property), then each nonacting owner shall pay their proportionate share of the unpaid maintenance and repair expenses.

6. Indemnity and Liability Insurance. Partnership shall indemnify and hold harmless Les Schwab from and against any and all claims arising from or in connection with use of the Easement Area by Partnership or its successors, assigns, lessees, mortgagees, invitees, guests, customers, agents and employees together with all costs, expenses and liabilities incurred in connection with each such claim or action or proceeding brought thereon, including, without limitation, all attorney fees and expenses. Les Schwab shall indemnify and hold harmless Partnership from and against any and all claims arising from or in connection with use of the Easement Area by Les Schwab and its successors, assigns, lessees, mortgagees, invitees, guests, customers, agents and employees, together with all costs, expenses and liabilities incurred in connection with each such claim or action or proceeding brought thereon, including, without limitation, all attorney fees and expenses. In case any action or proceeding is brought against a party and such claim is a claim from which the other party is

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obligated to indemnify the party pursuant to this subparagraph, the party, upon notice from the party subject to the claim, shall resist and defend such action or proceeding (by counsel reasonably satisfactory to the party subject to the claim).

7. **Breach of Obligation.** Neither party shall be considered in default under this Agreement for a failure to perform its obligations under this Agreement unless such failure continues more than fifteen (15) days after written notice to the party of such failure. To the extent the failure is of the type which cannot be cured within the fifteen days, the party shall not be considered in default if the failure is not cured within the fifteen days after such notice provided that the party commences to cure such failure within the fifteen day notice period and diligently and continuously completes the cure of such failure within a reasonable period of time. In the event either party shall be in default of its obligations under this Agreement, the other party shall be entitled to require performance of the obligations by suit for specific performance or, where appropriate, through injunctive relief. Such remedy shall be in addition to any other remedies afforded under Oregon law and those rights of cure and reimbursement specifically granted under this Agreement.

8. **Covenant Running with the Land.** The parties hereby agree that this Agreement, and all covenants contained herein, touch and concern the land, run with the land and bind and benefit the affected parcels, including any division or partition thereof. The parties agree that this Agreement shall be binding upon their transferees, successors, heirs and assigns and all covenants contained herein shall similarly be binding upon them. The foregoing notwithstanding, it is the stated intention of the parties that the obligations of Partnership set forth in this Agreement only apply to the real property which is adjacent to and contiguous with the Easement Area. If Partnership subdivides or partitions the Partnership Property, then only those remaining subdivided lots or partitioned parcels which are adjacent to and contiguous with the Easement Area shall be subject to the obligations set forth in this Agreement. It is the intent of the parties that the covenants and agreements set forth herein constitute personal covenants of the parties hereto only so long as they own any of the real property affected hereby. Once a party sells the property affected hereby, then such party's personal obligation shall cease and shall be deemed assumed by the then current owner of the real property. It is not the intent of the parties that a party remain personally liable under this Agreement following the sale or transfer of the property to a third party; provided, however, that a party shall remain liable for any obligation which accrued hereunder up to the date of such sale or other transfer.

9. **Attorney Fees.** In the event legal action is commenced in connection with this Agreement, the prevailing party in such action shall be entitled to recover its reasonable attorney fees and costs incurred in the trial court and any appeal therefrom. The term "action" shall be deemed to include action commenced in

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the Bankruptcy Courts of the United States and any other court of general or limited jurisdiction. The reference to "costs" includes, but is not limited to, deposition costs (discovery and otherwise), witness fees (expert and otherwise), out-of-pocket costs, title search and report expenses, survey costs, surety bonds and any other reasonable expenses.

WILSONVILLE PARK (OREG.), LTD., an Oregon limited partnership

By: Jack E. Kohl, Jr.
Jack E. Kohl, Jr., General Partner

By: Sky-Land, Inc., General Partner

By: Donald F. Mala
Donald F. Mala, President

By: Philip W. Lepp
Philip W. Lepp, General Partner

LES SCHWAB TIRE CENTERS OF PORTLAND, INC., an Oregon corporation

By: [Signature]
Title: [Signature]

STATE OF OREGON)
County of MULTNOMAH) ss.

This foregoing instrument was acknowledged before me this 4th day of December, 1990, by Jack E. Kohl, Jr., General Partner, of WILSONVILLE PARK (OREG.), LTD., an Oregon limited partnership, on behalf of the partnership.

[Signature]
Notary Public for Oregon
My Commission expires: 1-11-94

MORICA R. LECHE
NOTARY PUBLIC - OREGON
My Commission Expires 1-11-94

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STATE OF OREGON }
county of Multnomah } SS.

This foregoing instrument was acknowledged before me this 3rd day of December, 1990, by Donald F. Mala, President of Sky-Land, Inc., General Partner, of WILSONVILLE PARK (OREG.), LTD., an Oregon limited partnership, on behalf of the Partnership.

.....
TERRY SUTTON
NOTARY PUBLIC - OREGON
My Commission Expires.....
STATE OF OREGON.....

Terry Sutton
Notary Public for Oregon
My Commission expires: 3-4-94

STATE OF OREGON }
county of Multnomah } SS.

This foregoing instrument was acknowledged before me this 14th day of December, 1990, by Philip W. Lapp, General Partner, of WILSONVILLE PARK (OREG.), LTD., an Oregon limited partnership, on behalf of the partnership.

.....
TERRY SUTTON
NOTARY PUBLIC - OREGON
My Commission Expires.....

Terry Sutton
Notary Public for Oregon
My Commission expires: 3-4-94

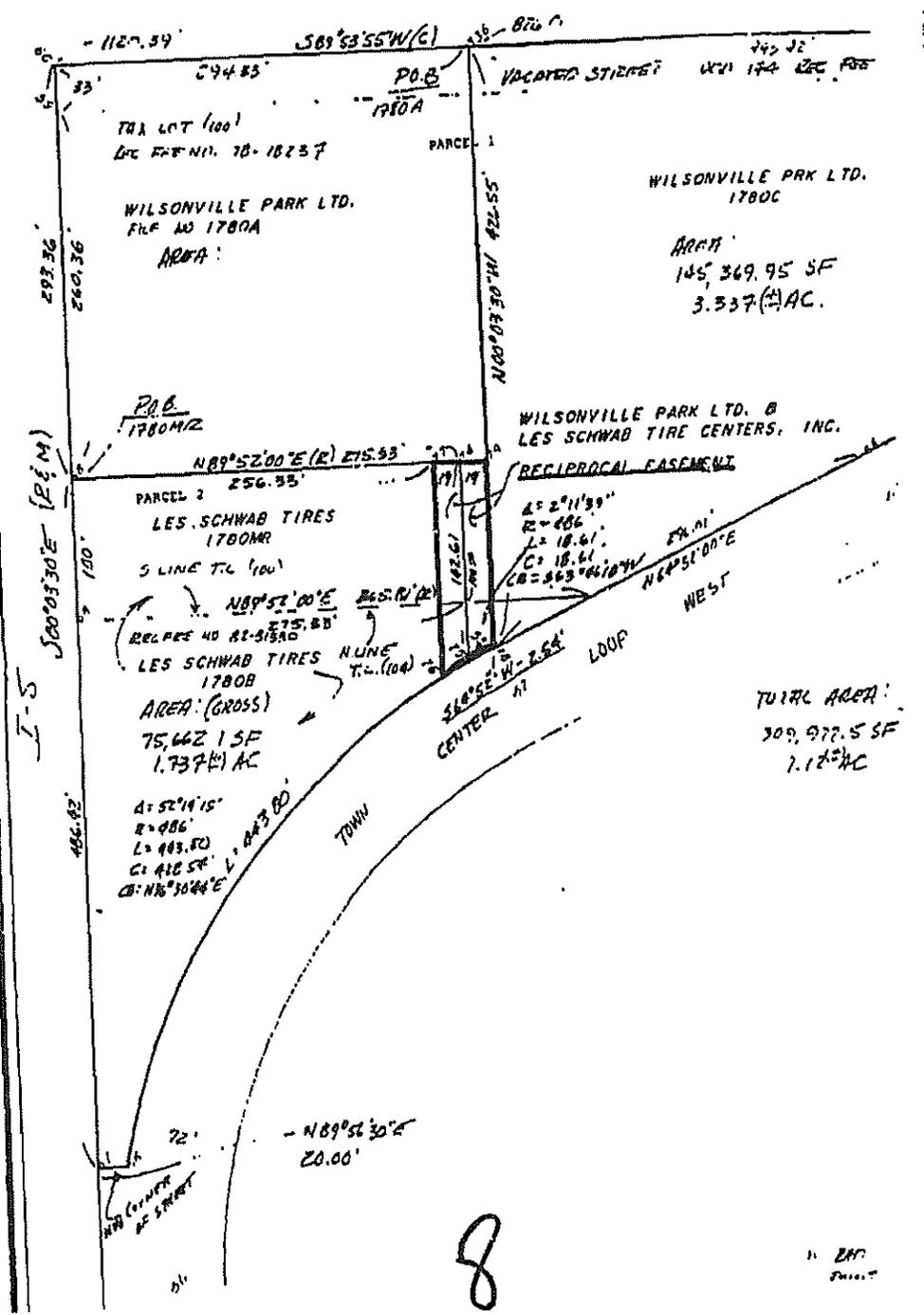
STATE OF OREGON }
county of Crook } SS.

This foregoing instrument was acknowledged before me this 5th day of December, 1990, by Tom Freedman SE Exec Vice President of LES SCHWAB TIRE CENTERS OF PORTLAND, INC., an Oregon corporation, on behalf of the corporation.



Sara Dix
Notary Public for Oregon
My Commission expires: 1/31/92

7



Westlake Consultants Inc.

7145 S.W. Varns Rd.
Tigard, Oregon 97223



503-684-0652

Wilsonville Park(Oreg.) Ltd.

Parcel III
Job No. 394-01-87
August 7, 1987

EXHIBIT B

LEGAL DESCRIPTION

A tract of land situated in the S.E. 1/4 of Section 14, T3S, R1W, W.M., City of Wilsonville, Clackamas County, Oregon, and being more particularly described as follows:

Beginning at a point on the north line of the S.E. 1/4 of said Section 14 that is South 89°52'57" West, 236.00 feet from the East 1/4 of said Section 14;

thence, South 0°03'01" West, 255.46 feet to a point on the north right of way line of Town Center Loop West (72 feet in width), said point being 36.00 feet from centerline when measured at right angles;

thence, along said north right of way line South 89°49'25" West, 116.30 feet;

thence, continuing along said north right of way line, along a 486.00 foot radius curve to the left, through a central angle of 3°34'49" (chord bears south 88°02'00" West, 30.36 feet) a distance of 30.37 feet;

thence, North 0°03'01" East, 256.56 feet to a point on the north line of the S.E. 1/4 of said Section 14;

thence, along said centerline, North 89°52'57" East, 146.64 feet to the Point of Beginning.

Contains 37,482 square feet.

9

ENGINEERING / SURVEYING / PLANNING

Westlake Consultants Inc.

7145 S.W. Varns Rd.
Tigard, Oregon 97223



503-684-0652

WILSONVILLE PARK, LTD.

Parcel IV
Job No. 394-01-87
August 7, 1987

EXHIBIT B

LEGAL DESCRIPTION

A tract of land situated in the S.E. 1/4, Section 14, T3S, R1W, W.M., City of Wilsonville, Clackamas County, Oregon, being more particularly described as follows:

Beginning at a point on the north line of the S.E. 1/4 of said Section 14, that is South 89°52'57" West, 382.64 feet from the east 1/4 corner of said Section 14;

thence, continuing along the north line of the S.E. 1/4 of said Section 14, South 89°52'57" West, 737.90 feet to a point on the east right of way line of Interstate 5;

thence, along said east right of way line, South 0°05'00" East, 779.78 feet;

thence, North 89°55'00" East, 20.0 feet to a point on the westerly right of way line of Town Center Loop West (72 feet in width);

thence, along said westerly right of way line, along a 486.0 foot radius curve to the right, through a central angle of 54°32'17" (chord bears North 37°35'14" East, 445.34 feet) a distance of 462.61 feet;

thence, North 64°51'22" East, 298.55 feet;

thence, along a 486.0 foot radius curve to the right, through a central angle of 21°23'14" (chord bears North 75°32'59" East, 180.36 feet) a distance of 181.41 feet;

thence, North 0°03'01" East, 256.56 feet to the point of beginning.

Approximately 309,971 Square Feet

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ENGINEERING / SURVEYING / PLANNING

EXHIBIT C



Jim Weddle
& Associates, Inc.

AUGUST 27, 1990
SF90-1780C

PROPERTY DESCRIPTION
(PORTION OF TAX LOT 100 & 104)
WILSONVILLE PARK LTD.

CLACKAMAS CO. ASSESSOR'S MAP NO. 3 1W 14D

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, being a part of those certain parcels of land described in Clackamas County Recorder's Fee No. 78-18237 and 82-31330, and a part of vacated Boberg Road No. 1571, Clackamas County Recorder's Fee No. 81-14598, all being more particularly described as follows:

Beginning at a point which bears South 89°53'55" West 236.00 feet from a brass cap monument marking the East 1/4 corner of Section 14, aforesaid; thence continuing South 89°53'55" West 884.39 feet to a point in the east right-of-way line of Interstate 5; thence along said east line South 00°03'30" East 293.36 feet to a point therein; thence North 89°52'00" East 375.33 feet; thence parallel to the east line of said Interstate 5, South 00°03'30" East 142.81 feet to a point in the northerly line of Town Center Loop West, a dedicated public street 72 feet wide; thence easterly along said line along the arc of a non-tangent 486.00 foot radius curve right 18.81 feet through a central angle of 02°11'39" (chord bears North 83°46'11" East 18.81 feet); thence tangent to said curve along said northerly line North 84°52'00" East 398.55 feet to the beginning of a tangent 486.00 foot radius curve right; thence along the arc of said curve 211.78 feet through a central angle of 24°58'03" (chord bears North 77°21'01" East 210.11 feet); thence along said northerly line North 89°50'03" East 116.30 feet to a point therein; thence leaving said street North 00°24'21" East 255.52 feet to the point of beginning.

CONTAINING THEREIN an area of 271,802 square feet. (6.240 acres, more or less).

12

1750 S.W. Skyline Blvd. • Suite 105 • Portland, Oregon 97221 • Telephone (503) 292-8083 • FAX (503) 292-0938

EXHIBIT D

REGISTERED
PROFESSIONAL
LAND SURVEYOR

James O. Weddle
ORIGON
JULY 15, 1988
JAMES O. WEDDLE
874

JULY 20, 1980
FILE NO 80-17808

PROPERTY DESCRIPTION
(PORTION OF TAX LOT 100 A 104)
LES SCHWAB TIRE CENTERS, INC.

CLACKAMAS CO. ASSESSOR'S MAP NO. 3 1W 14D

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, being part of those certain parcels of land described in Clackamas County Recorder's Fee Numbers 78-18237 and 82-31330, were particularly described as follows:

Beginning at a point in the east right-of-way line of Interstate 5, said point bears South 83°53'55" West 1120.39 feet and South 90°03'30" East 293.38 feet from a brass cap monument marking the East 1/4 corner of Section 14, aforesaid; thence continuing along said east right-of-way line South 90°03'30" East 488.42 feet to a point therein, said point being the northwest corner of Town Center Loop West, a dedicated public street, described in Clackamas County Recorder's Fee No. 83-17888; thence along the northerly line of said street North 89°58'30" East 20.00 feet; thence along the northwesterly line of said Town Center Loop West, 72 feet wide, along the arc of a non-tangent 488.00 foot radius curve right 443.80 feet through a central angle of 82°19'15" (chord bears North 36°30'44" East 428.54 feet) to a point therein; thence leaving said street parallel to the east line of Interstate 5, North 90°03'30" West 142.61 feet; thence South 83°52'00" West 275.33 feet to the point of beginning.

CONTAINING THEREIN an area of 75,862.1 square feet. (1.737 acres, more or less).

13

EXHIBIT D

REGISTERED
PROFESSIONAL
LAND SURVEYOR

James O. Weddle
ORIGON
JULY 12, 1988
JAMES O. WEDDLE
474

JULY 20, 1990
FILE NO 90-1780B

PROPERTY DESCRIPTION
(PORTION OF TAX LOT 100 & 104)
LES SCHWAB TIRE CENTERS, INC.

CLACKAMAS CO. ASSESSOR'S MAP NO. 3 1W 14D

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, being part of those certain parcels of land described in Clackamas County Recorder's Fee Numbers 78-18237 and 82-31330, more particularly described as follows:

Beginning at a point in the east right-of-way line of Interstate 5, said point bears South 89°53'55" West 1120.39 feet and South 90°03'30" East 293.38 feet from a brass cap monument marking the East 1/4 corner of Section 14, aforesaid; thence continuing along said east right-of-way line South 00°03'30" East 486.42 feet to a point therein, said point being the northwest corner of Town Center Loop West, a dedicated public street, described in Clackamas County Recorder's Fee No. 83-17882; thence along the northerly line of said street North 89°55'30" East 20.00 feet; thence along the northwesterly line of said Town Center Loop West, 72 feet c/c'd, along the arc of a non-tangent 486.00 foot radius curve right 443.90 feet through a central angle of 52°18'15" (chord bears North 38°30'44" East 428.56 feet) to a point therein; thence leaving said street parallel to the east line of Interstate 5, North 00°03'30" West 142.61 feet; thence South 89°52'00" West 275.33 feet to the point of beginning.

CONTAINING THEREIN an area of 75,862.1 square feet. (1.737 acres, more or less).

ILLEGIBLE WHEN RECORDED

13

EXHIBIT D

REGISTERED
PROFESSIONAL
LAND SURVEYOR

James O. Weddle
OREGON
JULY 12, 1981
JAMES O. WEDDLE
874

JULY 20, 1990
FILE NO 90-17208

PROPERTY DESCRIPTION
(PORTION OF TAX LOT 100 & 104)
LES SCHWAB TIRE CENTERS, INC.

CLACKAMAS CO. ASSESSOR'S MAP NO. 3 18 14D

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 2 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, being part of those certain parcels of land described in Clackamas County Recorder's Fee Numbers 78-18237 and 82-31330, more particularly described as follows:

Beginning at a point in the east right-of-way line of Interstate 5, said point bears South 89°53'55" West 1120.39 feet and South 00°03'30" East 293.36 feet from a brass cap monument marking the East 1/4 corner of Section 14, aforesaid; thence continuing along said east right-of-way line South 00°03'30" East 486.42 feet to a point therein, said point being the northwest corner of Town Center Loop West, a dedicated public street, described in Clackamas County Recorder's Fee No. 83-17888; thence along the northerly line of said street North 89°58'30" East 20.00 feet; thence along the northwesterly line of said Town Center Loop West, 72 feet wide, along the arc of a non-tangent 486.00 foot radius curve right 443.80 feet through a central angle of 82°19'15" (chord bears North 35°30'44" East 428.64 feet) to a point therein; thence leaving said street parallel to the east line of Interstate 5, North 00°03'30" West 142.61 feet; thence South 89°52'00" West 275.33 feet to the point of beginning.

CONTAINING THEREIN an area of 75,862.1 square feet. (1.737 acres, more or less).

13

EXHIBIT D

REGISTERED
PROFESSIONAL
LAND SURVEYOR

L. Jew Weddle
OREGON
JULY 14, 1924
JAMES O. WEDDLE
074

JULY 20, 1980
FILE NO 90-1780B

PROPERTY DESCRIPTION
(PORTION OF TAX LOT 100 & 104)
LES SCHWAB TIRE CENTERS, INC.

CLACKAMAS CO. ASSESSOR'S MAP NO. 3 17 14D

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, being part of those certain parcels of land described in Clackamas County Recorder's Fee Numbers 76-18237 and 82-31330, more particularly described as follows:

Beginning at a point in the east right-of-way line of Interstate 5, said point bears South 89°53'55" West 1120.38 feet and South 00°03'30" East 233.36 feet from a brass cap monument marking the East 1/4 corner of Section 14, aforesaid; thence continuing along said east right-of-way line South 00°03'30" East 486.42 feet to a point therein, said point being the northwest corner of Town Center Loop West, a dedicated public street, described in Clackamas County Recorder's Fee No. 83-17882; thence along the northerly line of said street North 89°56'30" East 20.00 feet; thence along the northwesterly line of said Town Center Loop West, 72 feet wide, along the arc of a non-tangent 486.00 foot radius curve right 443.80 feet through a central angle of 52°19'15" (chord bears North 36°30'44" East 428.54 feet) to a point therein; thence leaving said street parallel to the east line of Interstate 5, North 00°03'30" West 142.81 feet; thence South 89°52'00" West 275.33 feet to the point of beginning.

CONTAINING THEREIN an area of 75,862.1 square feet. (1.737 acres, more or less).

ILLEGIBLE WHEN RECORDED

13

EXHIBIT E

REGISTERED
PROFESSIONAL
LAND SURVEYOR

James Weddle
OREGON
JULY 14, 1981
JAMES O. WEDDLE
874

JULY 20, 1990
FILE NO. 90-1730RE

PROPERTY DESCRIPTION
RECIPROCAL EASEMENT
LES SCHWAB TIRE CENTERS, INC. &
WILSONVILLE PARK LTD.

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, for reciprocal easement purposes, 38.90 feet in width, (19.00 feet on each side of centerline) said centerline more particularly described as follows:

Commencing at a brass cap monument marking the East one-quarter corner of Section 14, aforesaid; thence South 88°53'55" West 1120.38 feet to a point in the east right-of-way line of Interstate 5; thence along said line South 00°03'30" East 293.38 feet to a point therein; thence North 88°52'00" East 275.13 feet to the Point of Beginning of said centerline; thence parallel to the east line of Interstate 5, South 90°03'30" East 142.61 feet to a point in the northerly right-of-way line of Town Center Loop West, a dedicated public street 72 feet wide, and the termination of said centerline.

SUBJECT TO extension and/or shortening of easement limit lines, 19.00 feet right and left of centerline, so as said easement terminates and abuts to the street right of way line.

STATE OF OREGON
County of Clackamas
I, John F. Kaufman, County Clerk for the County of Clackamas, do hereby certify that a copy of this plat was received for recording in the records of said county at

91 JAN -7 PH 3:50



Witness my hand and seal this 7th day of July, 1990.
John F. Kaufman
County Clerk

91 00871

14

EXHIBIT E

REGISTERED
PROFESSIONAL
LAND SURVEYOR

James Weddle
OREGON
JULY 14, 1925
JAMES O. WEDDLE
874

JULY 20, 1990
FILE NO. 90-1780RE

PROPERTY DESCRIPTION
RECIPROCAL EASEMENT
LES SCHWAB TIRE CENTERS, INC. &
WILSONVILLE PARK LTD.

A parcel of land situated in the Southeast one-quarter Section 14, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, County of Clackamas and State of Oregon, for reciprocal easement purposes, 38.00 feet in width, (19.00 feet on each side of centerline) said centerline more particularly described as follows:

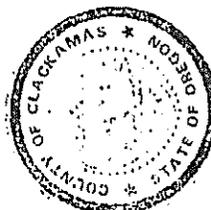
Commencing at a brass cap monument marking the East one-quarter corner of Section 14, aforesaid; thence South 84°53'55" West 1120.38 feet to a point in the east right-of-way line of Interstate 5; thence along said line South 00°03'30" East 293.38 feet to a point therein; thence North 84°52'00" East 275.33 feet to the Point of Beginning of said centerline; thence parallel to the east line of Interstate 5, South 90°03'30" East 142.61 feet to a point in the northerly right-of-way line of Town Center Loop West, a dedicated public street 72 feet wide, and the termination of said centerline.

SUBJECT TO extension and/or shortening of easement limit lines, 19.00 feet right and left of centerline, so as said easement terminates and abuts to the street right of way line.

ILLEGIBLE WHEN RECORDED

STATE OF OREGON
County of Clackamas
I, John F. Karfman, County Clerk for the County of Clackamas, do hereby certify that the instrument of which this is a copy has been received for recording in the records of this county at

91 JAN -7 PM 3:50



Witness my hand and seal at the
John F. Karfman
County Clerk
Clackamas County, Oregon
2023 Jan 17 AM

12800 16
91 00871

14