



# NOTICE OF DECISION

**TAX LOT:** 2S128D001200  
**CASE NO:** 2020-019 CUP, SP, VAR  
**DATE OF NOTICE:** December 17, 2020

**Applicant**

Willamette Water Supply System  
1850 SW 170<sup>th</sup> Ave  
Beaverton, OR 97003

**Owner**

Willamette Water Supply System  
1850 SW 170<sup>th</sup> Ave  
Beaverton, OR 97003

## NOTICE

Because you testified in writing or in person at the Planning Commission Public Hearing on this matter, you are receiving notice that on December 8, 2020, the Sherwood City Planning Commission approved the Land Use Application 2020-019 CUP, SP, VAR. The approval is for a new water treatment plant for the Willamette Water Supply System. The development site is located in the City of Sherwood and requires Site Plan, Conditional Use, and Class A Variance approvals from the City. The development site is approximately 46 acres and is located in the City's Employment Industrial zoning district. The proposal includes new treatment plant buildings and structures, site improvements including landscaping, parking, and fencing, a monopole radio facility, and right-of-way improvements. The southern portion of the site will remain as wetland and forested canopy cover. Access to the site will be provided via two new driveways at the north end of the site, off a new collector status street that will be constructed as part of the development. The decision was made after consideration of the staff report, application materials, and public testimony.

**INFORMATION:**

To obtain copies of file materials, go to <https://www.sherwoodoregon.gov/planning/project/t-s-corporate-park> or contact Eric Rutledge, Associate Planner, at 503-625-4242 or [rutledgee@sherwoodoregon.gov](mailto:rutledgee@sherwoodoregon.gov)

## APPEAL

Pursuant to Sherwood Zoning and Community Development Code Section 16.72.010.B.3.d, an appeal of the Planning Commission decision may be made to the City Council. Pursuant to Section 16.76, any person who appeared before the local government, orally or in writing, on this matter may file a notice of intent to appeal to the City of Sherwood Planning Director not later than 14 days from the date of this notice. **An appeal of this decision must be filed no later than 5:00 PM on December 31, 2020.**

I, Eric Rutledge, for the Planning Department, City of Sherwood, State of Oregon, in Washington County, declare that the Notice of Decision LU 2020-019 CUP, SP, VAR was placed in a U.S. Postal receptacle, or transmitted via electronic mail, on December 17, 2020.

Eric Rutledge, Associate Planner  
City of Sherwood Planning Department

**CITY OF SHERWOOD**

**December 1, 2020**

**Staff Report**



**NOTICE OF DECISION**

**WILLAMETTE WATER SUPPLY SYSTEM  
CONDITINAL USE PERMIT; SITE PLAN REVIEW;  
CLASS A VARIANCE  
LU 2020-019 CUP / SP / VAR**

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Pre-App Meeting:	April 2, 2020
App. Submitted:	September 11, 2020
App. Complete:	October 9, 2020
Hearing Date:	December 8, 2020
120-Day Deadline:	February 6, 2021

On December 8, 2020 the Planning Commission (Commission) opened the public hearing for the subject application and accepted public testimony. No written public testimony was received. Staff provided a presentation and after receiving testimony from the applicant, the Commission closed the public hearing and deliberated on the proposal before them.

During the staff presentation, staff submitted a supplemental memo into the record dated December 8, 2020 (Exhibit X). The memo provided updated agency comments (City of Sherwood Engineering; Washington County Land Use & Transportation) and recommended revised Conditions of Approval C12, C14, C20, C21, D1, B4, and E2. The proposed changes were requested by the applicant after the release of the staff report and correct conditions of approval related to the provision and timing of public utilities. The revised conditions also clarify the timing of the installation of the fence around the outdoor storage area. A complete list of the modified conditions and the reason for the change is included under Exhibit X. The revised agency comments and conditions have been incorporated into the staff findings and conditions below.

The Commission questions and deliberations were focused on the treatment plant and forest platform operating hours, the perimeter landscaping and retaining walls, compliance with the industrial design standards for on-site buildings, and the general positive and negative impacts of the plant being located in Sherwood.

The Planning Commission unanimously approved the application and based their decision on the findings of fact and conditions contained in this notice, including the staff report dated December 1, 2020 and supplemental memo dated December 8, 2020.

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Jean Simson, Planning Commission Chair

**PROPOSAL:** The applicant is proposing a new water treatment plant for the Willamette Water Supply System. The development site is located in the City of Sherwood and requires Site Plan, Conditional Use, and Class A Variance approvals from the City. The development site is approximately 46 acres and is located in the City's Employment Industrial zoning district. The proposal includes new treatment plant buildings and structures, site improvements including landscaping, parking, and fencing, a monopole radio facility, and right-of-way improvements. The southern portion of the site will remain as wetland and forested canopy cover. Access to the site will be provided via two new driveways at the north end of the site off SW Orr Drive (also identified as SW Blake St. in this report), a new collector status street that will be constructed as part of the development.

**I. BACKGROUND**

A. Applicant: Sam Christina Walter  
Willamette Water Supply Program  
1850 SW 170<sup>th</sup> Ave  
Beaverton, OR 97003

Owner: Willamette Water Supply System Commission  
1850 SW 170<sup>th</sup> Ave  
Beaverton, OR 97003

B. Location: 21309 SW 124<sup>th</sup> Avenue  
Sherwood, OR 97062  
(Tax Lot 2S128D001200)

C. Review Type: The applicant is requesting the following land use approvals:

- Street Design Modification (Type II)
- Conditional Use Permit (Type III)
- Class A Variance (Type IV)
- Site Plan Review – Greater than 40,000 SF (Type IV)

All of the required approvals will be reviewed concurrently under the Type IV procedures with the Planning Commission as the Hearing Authority and the City Council as the Appeal Authority.

D. Public Notice: Notice of the application was provided in accordance with § 16.72.020 of the Sherwood Zoning and Development Code (SZDC) as follows: notice was distributed in five locations throughout the City, posted on the property, and mailed to property owners within 1,000 feet of the site

on November 17, 2020. Notice of the application was also published in a local newspaper (Tigard Times) on November 19 and December 3, 2020.

- E. Review Criteria: Sherwood Zoning and Community Development Code (SZCDC) Chapter 16.31 – Industrial Land Use Districts; Chapter 16.50 - Accessory Structures, Architectural Features and Decks; Chapter 16.58 - Clear Vision and Fence Standards; Chapter 16.60 - Yard Requirements; Chapter 16.62 – Chimneys, Spires, Antennas, and Similar Structures; Chapter 16.72 - Procedures for Processing Development Permits; Chapter 16.82 - Conditional Uses; Chapter 16.84 – Variances; Chapter 16.90 - Site Planning; Chapter 16.92 – Landscaping; Chapter 16.94 - Off-Street Parking and Loading; Chapter 16.96 - On-Site Circulation; Chapter 16.98 - On-Site Storage; Chapter 16.104 - General Provisions; Chapter 16.106 - Transportation Facilities; Chapter 16.108 - Improvement Plan Review; Chapter 16.110 - Sanitary Sewers; Chapter 16.112 - Water Supply; Chapter 16.114 - Storm Water; Chapter 16.116 - Fire Protection; Chapter 16.118 - Public and Private Utilities; Chapter 16.142 - Parks, Trees and Open Spaces; Chapter 16.144 - Wetland, Habitat and Natural Areas; Chapter 16.146 – Noise; Chapter 16.148 – Vibrations; Chapter 16.150 - Air Quality; Chapter 16.152 – Odors; Chapter 16.154 - Heat and Glare; Chapter 16.156 - Energy Conservation
- F. History and Background: The project area includes one tax lot of approximately 46 acres. The property is located within the Tonquin Employment Area (TEA) and was annexed into the City of Sherwood in 2019 (AN 19-03).

The Willamette Water Supply System Commission is a partnership of the Tualatin Valley Water District, City of Hillsboro, and City of Beaverton, formed to design and build the Willamette Water Supply System (WWSS), illustrated in Figure 1 of the applicant submittal. The WWSS is seeking land use approvals from the City of Sherwood in order to develop a Water Treatment Plant (WTP).

The WWSS will provide a resilient and redundant water supply for the TVWD-Hillsboro service area and partnering urban areas, including the City of Beaverton. When complete, the WWSS will be one of Oregon's most seismically resilient water systems – built to better withstand natural disasters, protect public health, and speed regional economic recovery by restoring critical services more quickly than existing systems.

The proposed WWSS WTP site in the TEA in Sherwood meets several important criteria, including that it is: geologically stable; in the Urban

Growth Boundary (UGB); an adequate size for required treatment facilities; and, in close proximity to the existing WWSS pipeline alignment.

The WWSS WTP will initially produce up to 60 million gallons of water per day (mgd) and is designed for maximum production of 120 mgd, following expansion of select process areas and structures. A separate land use approval is required for that expansion.

The facilities and improvements proposed in this application include the following:

- Treatment plant buildings and structures;
- A radio facility (monopole) for communications between the WTP and other WWSS facilities;
- Site features including landscaping, storage yard, fencing, gates, circulation roads, vehicle and bicycle parking, and stormwater facilities;
- Right-of-way dedication of and full-street improvements for the new SW Orr Drive, including stormwater planters and other plantings;
- Right-of-way dedication and half-street improvements on SW 124th Avenue; and
- A publicly accessible forest platform along the edge of the forested vegetated corridor associated with the wetland that occupies the southeastern portion of the site.

The treatment plant itself will occupy approximately 20 acres of the 46 acre parcel. Roadway improvements, setbacks, and natural resource and habitat preservation account for most of the remaining 26 acres.

G. Existing Conditions: The project area includes parcel of approximately 46 acres. The site is undeveloped with forest canopy in the north and mixed vegetation and wetland in the south. The site contains a central hill with rough terrain, rock outcroppings, and shallow soil. The northern portion of the site slopes down generally to the north and the southern portion slopes down generally to the south. The elevation of the high point on the site is approximately 270 feet, just over 40 feet above the current elevation of 228.6 feet at the intersection of SW 124th Avenue and SW Orr Dr. Vegetation on the site features Oregon Oak, Douglas Fir, Pacific Madrone, and underbrush including Poison Oak.

H. Surrounding Land Uses:

- West: Undeveloped land, light industrial, and residential uses;
- South: Bonneville Power Administration (BPA) right-of-way (with power lines and towers) and gravel and rock extraction;

- East (Across SW 124th Avenue, Tualatin): gravel and rock extraction and undeveloped land; and
  - North (Across SW Orr Drive and SW Tualatin-Sherwood Road): light industrial and other employment uses.
- I. Current Zoning: The property is zoned Employment Industrial (EI) and is in the City's Tonquin Employment Area.

## II. AFFECTED AGENCY AND PUBLIC COMMENTS

- A. Notice of the application was sent to affected agencies via email on October 13, 2020. The following responses were received:
1. City of Sherwood Engineering Department provided comments dated November 30, 2020 (Exhibit Q). The comments address traffic and transportation, public utilities, and other engineering requirements. The comments and Conditions of Approval are incorporated throughout the report under each applicable code section.
  2. Washington County Land Use & Transportation – Washington County has submitted comments dated November 13, 2020 (Exhibit R). The comments address requirements and conditions related to SW 124<sup>th</sup> Avenue which is a County arterial.
  3. Tualatin Valley Fire and Rescue (TVF&R) – TVF&R has issued a Service Provider Letter for the project which is included in the applicant submittal (Exhibit S). Issuance of the Service Provider Letter indicates the plans submitted comply with fire code requirements. Changes to the plans would require re-review and approval.
  4. Clean Water Services provided a memorandum dated November 13, 2020 (Exhibit T). The memorandum provides Conditions of Approvals related to CWS regulations for stormwater, erosion control, and sensitive habitat areas. The applicant has also submitted a CWS Service Provider Letter (Exhibit T) dated September 22, 2020 which addresses water quality and sensitive habitat protection requirements in detail.
  5. Pride Disposal Company – Pride Disposal provided comments dated November 12, 2020 (Exhibit U). Pride has reviewed the site plan and can service the development as proposed. The trash enclosure is required to meet certain design standards as described in the comments.
  6. Oregon Department of State Lands (DSL) – DSL provided a Wetland Land Use Notice Response dated October 23, 2020 (Exhibit V). The response indicates wetlands are located on the property and state and federal permits may be required. The applicant has submitted a

wetland permit from DSL and the US Army Corps of Engineers (USACE) under Exhibit N, however, the DSL permit is expired. The applicant has obtained letter of concurrence from DSL which is still valid and which serves to verify the location and extent of wetlands on the site. The delineation is included as Appendix B to the Sensitive Area and Vegetated Corridors Site Assessment Report (Exhibit H).

7. Portland General Electric (PGE) – PGE provided comments via email dated October 14, 2020 (Exhibit W). The comments state PGE has been working with the applicant on a preliminary design and the power source will be from a future PGE substation that will be constructed directly across 124<sup>th</sup> Ave from their site.
8. The following agencies acknowledged the application without expressing any issues or concerns: Sherwood Police Department.

B. Public Comments

1. As of the date of this report, no written public comments were received on the application.

### III. APPLICABLE CODE PROVISIONS

*Note – three asterisks (\*\*\*) Indicates code has been omitted because it is not applicable*

#### Chapter 16.72 PROCEDURES FOR PROCESSING DEVELOPMENT PERMITS

##### 16.72.010 – Generally

A. Classifications

**Except for Final Development Plans for Planned Unit Developments, which are reviewed per Section 16.40.030, all quasi-judicial development permit applications and legislative land use actions shall be classified as one of the following:**

2. Type II

The following quasi-judicial actions shall be subject to a Type II review process:

h. Street Design Modification

3. Type III

The following quasi-judicial actions shall be subject to a Type III review process:

a. Conditional Uses

4. Type IV

The following quasi-judicial actions shall be subject to a Type IV review process:

c. Site Plans — Greater than 40,000 square feet of floor area, parking or seating capacity.

**g. Class A Variance**

**ANALYSIS:** The application is proposing a new water treatment plant, monopole radio facility, and street improvements with design modifications. Site Plans greater than 40,000 SF are subject to the Type IV land use review process. Lower classification land use applications are being reviewed concurrently by the Planning Commission as part of the Type IV Site Plan Review, with the exception of a Type I Sign Permit which are generally reviewed with the building permit submittal. Staff will review and approve the sign permit separately prior to the issuance of building permits.

**FINDING:** The application is subject to the Type IV land use review procedures and this criterion is met.

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**B. Hearing and Appeal Authority**

**3. The quasi-judicial Hearing and Appeal Authorities shall be as follows:**

**d. The Type IV Hearing Authority is the Planning Commission and the Appeal Authority is the City Council.**

**(1) The Planning Commission shall hold a public hearing following public notice in accordance with Sections 16.72.020 through 16.72.080.**

**(2) Any person who testified before the Planning Commission at the public hearing or submitted written comments prior to the close of the record may appeal the Planning Commission's decision.**

**ANALYSIS:** The application is being processed as a Type IV quasi-judicial decision with the Planning Commission as the Hearing Authority. A public hearing will be held on the application on December 8, 2020 in accordance with SZCDC § 16.72.

**FINDING:** This criterion is met.

**C. Approval Criteria**

**1. The approval criteria for each development permit application shall be the approval standards and requirements for such applications as contained in this Code. Each decision made by a Hearing Authority or Appeal Authority shall list the approval criteria and indicate whether the criteria are met. It is the applicant's burden to demonstrate to the Hearing Authority and Appeal Authority how each of the approval**



criteria are met. An application may be approved with conditions of approval imposed by the Hearing Authority or Appeal Authority. On appeal, the Appeal Authority may affirm, reverse, amend, refer, or remand the decision of the Hearing Authority.

2. In addition to Section 1 above, all Type IV quasi-judicial applications shall also demonstrate compliance with the Conditional use criteria of Section 16.82.020.

**ANALYSIS:** The approval criteria for the development is addressed throughout this report. The applicant has provided a detailed narrative and supporting plans and documents addressing the applicable criteria.

**FINDING:** This criterion is met.

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## **Chapter 16.31 - INDUSTRIAL LAND USE DISTRICTS**

### **16.31.010 - Purpose**

- A. **Employment Industrial (EI) - The EI zoning district provides employment areas that are suitable for, and attractive to, key industries and industry clusters that have been identified by the State of Oregon and the City's economic development strategy as important to the state and local economy. The following are preferred industry sectors for areas zoned EI: Clean Technology; Technology and Advanced Manufacturing; and Outdoor Gear and Active Wear.**

**Land zoned EI shall provide for large and medium-sized parcels for industrial campuses and other industrial sites that can accommodate a variety of industrial companies and related businesses. Areas zoned EI are also intended to provide the opportunity for flex building space within small- and medium-sized industrial campuses and business parks to accommodate research and development companies, incubator/emerging technology businesses, related materials and equipment suppliers, and/or spin-off companies and other businesses that derive from, or are extensions of, larger campus users and developments. Retail and commercial uses are allowed only when directly supporting area employers and employees.**

### **16.31.020 - Uses**

- A. The table below identifies the land uses that are permitted outright (P), permitted conditionally (C) and not permitted (N) in the industrial zoning districts. The specific land use categories are described and defined in Chapter 16.88.
- B. Uses listed in other sections of this Code, but not within this specific table are prohibited.
- C. Any use not otherwise listed that can be shown to be consistent or associated with the uses permitted outright or conditionally in the industrial zones or contribute to the achievement of the objectives of the industrial zones may be permitted outright or conditionally, utilizing the provisions of Chapter 16.88.
- D. Additional limitations for specific uses are identified in the footnotes of this table.

Uses	EI <sup>1</sup>
Public and private utility structures, including but not limited to telephone exchanges, electric substations, gas regulator stations, treatment plants, water wells, and public work yards	C
Wireless communication towers <sup>11</sup> and transmitters	C

1 See special criteria for the EI zone, 16.31.050 and the Tonquin Employment Area (TEA), 16.31.060.

11 Except for towers located within one thousand (1,000) feet of the Old Town District which are prohibited.

**ANALYSIS:** The applicant is proposing a new water treatment plant and associated site improvements including parking and landscaping. A monopole wireless communication tower is also proposed. The communication facility is not located within 1,000 feet of the Old Town District. Both land uses are allowed as a Conditional Use in the EI zone. The special criteria for development in the EI zone and the TEA is addressed below.

**FINDING:** This standard is met.

**16.31.030 - Development Standards**

**A. Generally**

No lot area, setback, yard, landscaped area, open space, off-street parking or loading area, or other site dimension or requirement, existing on, or after, the effective date of this Code shall be reduced below the minimum required by this Code. Nor shall the conveyance of any portion of a lot, for other than a public use or right-of-way, leave a lot or structure on the remainder of said lot with less than minimum Code dimensions, area, setbacks or other requirements, except as permitted by Chapter 16.84 (Variances and Adjustments).

**B. Development Standards**

Except as otherwise provided, required minimum lot areas and dimensions and setbacks shall be:

Development Standards by Zone	EI Zone
Lot area – Industrial Uses:	3 acres <sup>9</sup>
Lot area – Commercial Uses (subject to Section 16.31.050):	10,000 SF
Lot width at front property line:	100 feet
Lot width at building line:	100 feet
Front yard setback <sup>11</sup>	20 feet
Side yard setback <sup>10</sup>	None
Rear yard setback <sup>11</sup>	None
Corner lot street side <sup>11</sup>	20 feet
Height <sup>11</sup>	50 ft.

<sup>9</sup> Lots within the EI zone that were legal lots of record prior to October 5, 2010 and smaller than the minimum lot size required in the table below may be developed if found

consistent with other applicable requirements of Chapter 16.31 and this Code. Further subdivision of lots smaller than three acres shall be prohibited unless Section 16.31.050 applies.

- <sup>10</sup> When a yard is abutting a residential zone or public park, there shall be a minimum setback of forty (40) feet provided for properties zoned Employment Industrial and Light Industrial zones, and a minimum setback of fifty (50) feet provided for properties zoned General Industrial.
- <sup>11</sup> Structures located within one-hundred (100) feet of a residential zone shall be limited to the height requirements of that residential zone.

**ANALYSIS:** The proposed development standards are shown in the right-hand column in the table below:

<b>Development Standards by Zone</b>	<b>EI Zone</b>	<b>Proposed</b>
<b>Lot area – Industrial Uses:</b>	<b>3 acres <sup>9</sup></b>	Approx. 46 acres
<b>Lot area – Commercial Uses (subject to Section 16.31.050):</b>	<b>10,000 SF</b>	N/A
<b>Lot width at front property line:</b>	<b>100 feet</b>	Approx. 1,325 ft. (SW Orr Dr.)
<b>Lot width at building line:</b>	<b>100 feet</b>	Approx. 1,325 ft. (SW Orr Dr.)
<b>Front yard setback<sup>11</sup></b>	<b>20 feet</b>	33.28 ft. (SW Orr Dr.)
<b>Side yard setback<sup>10</sup></b>	<b>None</b>	N/A; site also does not abut a residential zone or public park per footnote <sup>10</sup>
<b>Rear yard setback<sup>11</sup></b>	<b>None</b>	Greater than 100 feet to the outdoor storage yard; the site is also not within 100 ft. of a residential zone per footnote <sup>11</sup>

<b>Corner lot street side<sup>11</sup></b>	<b>20 feet</b>	37.37 (SW 124 <sup>th</sup> Ave); the site is also not within 100 ft. of a residential zone per footnote <sup>11</sup>
<b>Height<sup>11</sup></b>	<b>50 ft.</b>	45 ft. (Ballasted Flocculation Building); the site is also not within 100 ft. of a residential zone per footnote <sup>11</sup>  The monopole communication tower is proposed between 200-250 ft. and requires Conditional Use approval. Findings for the communication tower are addressed under SZCDC § 16.82.

**FINDING:** These standards are met as described in the table above.

**16.31.050 - Employment Industrial (EI) Restrictions modified**

**A. Use Restrictions**

1. **Retail and professional services that cater to daily customers, such as restaurants and financial, insurance, real estate, legal, medical and dental offices, shall be limited in the EI zone.**
  - a. **New buildings for stores, branches, agencies or other retail uses and services shall not occupy more than five thousand (5,000) square feet of sales or service area in a single outlet and no more than twenty thousand (20,000) square feet of sales or service area in multiple outlets in the same development project, and**
  - b. **New buildings for stores, branches, agencies or other retail uses and services shall not be located on lots or parcels smaller than five acres in size. A "development project" includes all improvements proposed through a site plan application.**
2. **Notwithstanding the provisions of Section 16.31.050 "Commercial Nodes Use Restrictions," commercial development permitted under 16.31.050(1)(a) may only be proposed concurrent with or after industrial development on**

**the same parcel. Commercial development may not occur prior to industrial development on the same parcel.**

**ANALYSIS:** The proposal is for a new water treatment plant and commercial uses are not proposed.

**FINDING:** This standard does not apply.

**B. Land Division Restrictions**

- 1. Lots of record prior to October 5, 2010 that are smaller than the minimum lot size required in the EI zone may be developed if found consistent with other applicable requirements of Chapter 16.31 and this Code. Further subdivision of lots smaller than three acres shall be prohibited unless Section 16.31.050 applies.**
- 2. Lots or parcels larger than fifty (50) acres may be divided into smaller lots and parcels pursuant to a planned unit development approved by the city so long as the resulting division yields at least one lot or parcel of at least fifty (50) acres in size.**
- 3. Lots or parcels fifty (50) acres or larger, including those created pursuant to subsection (2) above, may be divided into any number of smaller lots or parcels pursuant to a planned unit development approved by the city so long as at least forty (40) percent of the area of the lot or parcel has been developed with industrial uses or uses accessory to industrial use.**

**ANALYSIS:** A land division of the 46-acre parent parcel is not proposed. A portion of the property will be dedicated for right-of-way purposes.

**FINDING:** This standard does not apply.

**16.31.060 - Tonquin Employment Area (TEA) Commercial Nodes Use Restrictions modified**

- A. Within the Tonquin Employment Area (TEA), only commercial uses that directly support industrial uses located within the TEA are permitted as conditional uses.**
- B. Commercial development, not to exceed a total of five contiguous acres in size, may be permitted.**

- C. Commercial development may not be located within three hundred (300) feet of SW 124th Avenue or SW Oregon Street, and must be adjacent to the proposed east-west collector street.**

**ANALYSIS:** Commercial uses are not proposed as part of the development project.

**FINDING:** This standard does not apply.

#### **16.31.070 - Community Design**

**For standards relating to off-street parking and loading, energy conservation, historic resources, environmental resources, landscaping, access and egress, signs, parks and open space, on-site storage, and site design, the applicable provisions of Divisions V, VIII and IX will apply.**

**ANALYSIS:** The proposal includes development features that are subject to the Community Design Standards of the development code. The applicable standards are addressed in this report.

**FINDING:** Community Design standards apply and are addressed below.

#### **16.31.080 - Floodplain**

**Except as otherwise provided, Section 16.134.020 shall apply.**

**ANALYSIS:** The project site does not contain any floodplains and is located in an area of “minimal flood hazard” based on the latest FEMA maps.

**FINDING:** This standard does not apply.

### **Chapter 16.50 - ACCESSORY STRUCTURES, ARCHITECTURAL FEATURES AND DECKS**

#### **16.50.020 - Conditional Uses**

**Any accessory use and/or structure associated with a conditional use shall be allowed only after approval in accordance with Chapter 16.82.**

**ANALYSIS:** A new monopole radio facility is proposed as an accessory use on the site. The applicant has requested Conditional Use approval for the facility which is addressed under Chapter 16.82.

**FINDING:** This standard is met.

### **16.50.050 - Architectural Features**

Architectural features such as cornices, eaves, canopies, sunshades, gutters, signs, chimneys, and flues may project up to five (5) feet into a front or rear required yard setback and two and one half (2 ½) into the required side yard setback.

**ANALYSIS:** The development meets the required setbacks without utilizing encroachments described in the section above.

**FINDING:** This standard does not apply.

## **Chapter 16.58 - VISION CLEARANCE AND FENCE STANDARDS**

### **16.58.010 Clear Vision Areas**

- A.** A clear vision area shall be maintained on the corners of all property at the intersection of two (2) streets, intersection of a street with a railroad, or intersection of a street with an alley or private driveway.
- B.** A clear vision area shall consist of a triangular area, two (2) sides of which are lot lines measured from the corner intersection of the street lot lines for a distance specified in this regulation; or, where the lot lines have rounded corners, the lot lines extended in a straight line to a point of intersection, and so measured, and the third side of which is a line across the corner of the lot joining the non-intersecting ends of the other two (2) sides.
- C.** A clear vision area shall contain no planting, sight obscuring fence, wall, structure, or temporary or permanent obstruction exceeding two and one-half (2½) feet in height, measured from the top of the curb, or where no curb exists, from the established street center line grade, except that trees exceeding this height may be located in this area, provided all branches and foliage are removed to the height of seven (7) feet above the ground on the sidewalk side and ten (10) feet on the street side.

The following requirements shall govern clear vision areas:

- 1.** In all zones, the minimum distance shall be twenty (20) feet.
- 2.** In all zones, the minimum distance from corner curb to any driveway shall be twenty-five (25) feet.
- 3.** Where no setbacks are required, buildings may be constructed within the clear vision area.

**ANALYSIS:** The development site will be located at the southwest corner of the new street intersection of SW Orr Drive and SW 124<sup>th</sup> Ave. Two new driveways are proposed off SW Orr Drive. Therefore, clear vision areas are required at the following locations:



- SW 124<sup>th</sup> Ave & SW Orr Drive
- SW Orr Drive & private driveway “Road A”
- SW Orr Drive & private driveway “Road D”

The Transportation Circulation Plan (Exhibit A – Sheet B-028) and Planting Overall Plan (Exhibit A – Sheet B-030) show clear vision areas at each of the required locations.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G1:** Prior to Final Occupancy, the clear vision areas shall be established at each required intersection.

**16.58.020 - Fences, Walls and Hedges.**

- A. Purpose:** The fence standards promote the positive benefits of fences without negatively impacting the community or endangering public or vehicle safety. Fences can create a sense of privacy, protect children and pets, provide separation from busy streets, and enhance the appearance of property by providing attractive landscape materials. The negative effect of fences can include the creation of street walls that inhibit police and community surveillance, decrease the sense of community, hinder the safe movement of pedestrians and vehicles, and create an unattractive appearance. These standards are intended to promote the positive aspects of fences and to limit the negative ones.
- B. Reserved**
- C. Applicability:** The following standards apply to walls, fences, hedges, lattice, mounds, and decorative toppers. The standards do not apply to vegetation, sound walls and landscape features up to four (4) feet wide and at least twenty (20) feet apart.
- D. Location—Non-Residential Zone:**
  - 1. Fences up to eight (8) feet high are allowed along front, rear and side property lines, subject to Section 16.58.010. (Clear Vision) and building department requirements.
  - 2. A sound wall is permitted when required as a part of a development review or concurrent with a road improvement project. A sound wall may not be taller than twenty (20) feet.
  - 3. Hedges up to twelve (12) feet tall are allowed, however, when the non-residential zone abuts a residential zone the requirements of section 16.58.030.d.6. shall apply.
- E. General Conditions—All Fences:**

1. Retaining, masonry, concrete, and modular retaining walls may not be constructed within the eight-foot public utility easement (PUE) located on the front and corner street side yards, without approval from the City Engineer.
2. Fences must be structurally sound and maintained in good repair. A fence may not be propped up in any way from the exterior side.
3. Chain link fencing is not allowed in any required residential front yard setback.
4. The finished side of the fence must face the street or the neighboring property. This does not preclude finished sides on both sides.
5. Buffering: If a proposed development is adjacent to a dissimilar use such as a commercial use adjacent to a residential use, or development adjacent to an existing farming operation, a buffer plan that includes, but is not limited to, setbacks, fencing, landscaping, and maintenance via a homeowner's association or managing company must be submitted and approved as part of the preliminary plat or site plan review process per Section 16.90.020 and Chapter 16.122.
6. In the event of a conflict between this Section and the clear vision standards of Section 16.58.010, the standards in Section 16.58.010 prevail.
7. The height of a fence or wall is measured from the actual adjoining level of finished grade measured six (6) inches from the fence. In the event the ground is sloped, the lowest grade within six (6) inches of the fence is used to measure the height.
8. Call before you dig (811) if placing a fence within the public utility easement (PUE) to have your utility lines located. This easement area is usually located eight (8) feet across the front yard and the side yard setback on a corner lot. Utility lines can be buried just beneath the surface.

**ANALYSIS:** A variety of fences and walls are throughout the development site and are shown on the Hardscape Plans (Exhibit A – Sheet B-046). Profiles of the fences are shown in Exhibit A – Sheet B-075. No fencing is proposed within the clear vision areas or within public utility easements. All fencing will be metal and finished on both sides. The maximum height of all proposed fences is 8 ft. as allowed in non-residential zones.

**FINDING:** These criteria are met.

## **Chapter 16.62 - CHIMNEYS, SPIRES, ANTENNAS, AND SIMILAR STRUCTURES\***

### **16.62.010 - Heights**

**Except as otherwise provided, the height limits established by this Code shall not apply to chimneys, stacks, water towers, radio or television antennas, towers, windmills, grain elevators, silos, elevator penthouses, monuments, domes, spires, belfries, hangars, solar heating devices, and to wireless communication facilities two hundred (200) feet in height or less.**

### **16.62.020 - Permit Required**

**Notwithstanding Section 16.62.010, a conditional use permit shall be required for all such structures that exceed the height limitations of a zoning district, except as specifically otherwise permitted in that district.**

### **16.62.030 - Parapets**

**A parapet wall not exceeding four (4) feet in height may be erected above the height limit of the building on which it rests.**

**ANALYSIS:** A monopole radio facility between 200 and 250 ft. in height is proposed west of the outdoor storage area as shown in Exhibit A – Sheet B-169. The radio tower requires a conditional use permit and findings for the permit are included under SZCDC § 16.82.

**FINDING:** The radio tower requires a conditional use permit and findings for the permit are included under SZCDC § 16.82.

## **Chapter 16.82 – CONDITIONAL USES**

### **16.82.020 – Permit Approval**

#### **C. Use Criteria**

**No conditional use shall be granted unless each of the following is found:**

- 1. All public facilities and services to the proposed use, including but not limited to sanitary sewers, water, transportation facilities, and services, storm drains, electrical distribution, park and open space and public safety are adequate; or that the construction of improvements needed to provide adequate services and facilities is guaranteed by binding agreement between the applicant and the City.**

**ANALYSIS:** A Conditional Use permit is required for the following proposed uses:

- Public and private utility structures in the EI zone
- Radio tower exceeding the height limit of the EI zone

Public facilities - the project area is currently undeveloped with limited surrounding public infrastructure. The applicant will be extending new utilities required to serve the site including water, sanitary sewer, and storm drainage. The applicant is also constructing the new public street (SW Orr Drive) and will provide frontage improvements along SW 124<sup>th</sup> Ave. Full findings for public facilities and services are provided under SZCDC Division IV Public Infrastructure.

Public services - the property is located within the service districts of the Sherwood Police Department, Tualatin Valley Fire and Rescue, and Pride Waste Disposal. The application has been routed to these service districts and no service issues were indicated. The site is located in an industrial zone and public parks and open space are not proposed or required; however, the applicant is providing a public viewing platform over the forest surrounding the wetland as a new public enjoyment and education area.

**FINDING:** As described in this section and the Sherwood Zoning and Community Development Code Division VI Public Infrastructure, this criterion is met.

**2. Proposed use conforms to other standards of the applicable zone and is compatible with abutting land uses in regard to noise generation and public safety.**

**ANALYSIS:** The applicant’s narrative states, “The proposed WTP and radio facility conform to standards of the EI zone, as demonstrated in the responses to applicable requirements in Chapter 16.31. Per the code definition, abutting land uses (land uses not separated by a roadway) are found to the west and south of the WTP site; they include undeveloped land, light industrial uses, residential uses, BPA right-of-way with power lines and towers, and gravel and rock extraction. Abutting land is zoned Future Development 20 Acres (FD-20) by Washington County as a holding zone until the land annexes into the City and is zoned EI.”

“The WTP and radio facility monopole are compatible with abutting land uses, in terms of noise and public safety, in the following ways:

- Radio facility monopole – The radio facility is necessary for public safety – for communications between the WTP and other WWSS facilities, particularly in the case of an emergency. The radio facility will be a monopole structure rather than a traditional tower (see Exhibit M for a sample image). A PGE electrical transmission tower is already located on the site to the northeast of where the radio facility is proposed (see Exhibit A, Sheet B-169); the radio monopole structure will be visually simpler and more attractive as compared to the tower. The structure’s neutral galvanized grey color and neighboring tall trees (addressed in responses to Chapter 16.142 in this narrative, including in Figure 6

in those responses) will soften the presence of the radio facility. The facility does not emit sound; thus, it presents no noise impacts.

- Plant operations noise – Operations equipment is almost entirely located within structures or enclosures and, thus, will emit only minimal noise that would be detectible outdoors on the WTP site or from adjacent public rights-of-way. Equipment noise is restricted by equipment specifications to a maximum of 80 dBA, as measured 3 feet from the equipment, in compliance with Oregon Occupational Health and Safety Administration (OSHA) guidelines.
- Hazardous materials – Chemicals and hazardous materials necessary for water treatment processes and emergency back-up procedures will be subject to safety measures including the following: interior containment sumps in chemical storage areas, sized to accommodate more than one full tank if catastrophic failure occurs; outdoor chemical containment sumps at the truck offloading area; dedicated leak containment at discrete points of chemical injection; environmental monitoring of outdoor chemical storage areas; and, secondary containment. Chemical and hazardous materials storage and handling is further addressed in response to materials storage criteria in Section 16.98.030.C.
- Plant failure – In the unlikely event that internal WTP processes fail while raw water cannot be stopped from continued pumping to the site, overflow basins proposed on the site will manage overflow . Proposed stormwater systems on the site and existing stormwater systems to which the proposed systems will connect will provide secondary management of overflow. Emergency overflow is addressed in more detail in response to stormwater capacity criteria in Section 16.114.020.A.
- Site security – The WTP site will be secure, with fencing (curved at the top to deter climbing), gates, and gabion walls around the perimeter of operations and surveillance technology (e.g., cameras). See the Planting Overall Plan (Exhibit A, Sheet B-030) and the fence and wall images (Exhibit A, Sheets B-073 through B-078).” (Applicant’s Narrative – p. 30).

Staff concurs with the detailed analysis above and finds the treatment plant and radio tower are compatible with abutting land uses in regard to noise generation and safety.

**FINDING:** This criterion is met.

- 3. The granting of the proposal will provide for a facility or use that meets the overall needs of the community and achievement of the goals and/or policies of the Comprehensive Plan, the adopted City of Sherwood Transportation System Plan and this Code.**

**ANALYSIS:** The subject property is zoned Employment Industrial and is located in the City's Tonquin Employment Area. The TEA is addressed under Chapter 8 of the Comprehensive Plan which includes the following policies:

*Chapter 8 Urban Growth Boundary Additions*

*D.4. Area 48 – Tonquin Employment Area*

- Policy 4      Permit light industrial uses not associated with the preferred industry sectors in Employment Industrial areas provided that such uses are not incompatible with the types of industry preferred for these areas.*
- Policy 7      Encourage aesthetically attractive, well designed industrial uses and sites within development approved for construction in the Employment Industrial areas.*
- Policy 9      Encourage future development designs that are sensitive to the existing natural features of the area and support development proposals that incorporate, preserve, and enhance natural features.*

The proposed development is not a preferred industry sector for the TEA, however, the treatment plant and radio tower are not incompatible with the preferred industries (clean technology, technology and advanced manufacturing, and outdoor gear and active wear).

As demonstrated in the applicant's drawings, the buildings have been designed using attractive building design and materials that incorporates the contextual history of the area through features like shed roofs. Building elevation and site renderings are provided in Exhibit A – Sheet B-01 – B-13.

The development will also be located in a challenging location for other types of industrial development due to the site's natural features including shallow rock and the kolk pond wetland. The site's shallow rock requires costly site preparation but will serve as a seismically resilient foundation for the treatment plant buildings. The applicant's narrative states that due to its long term commitment to the use and site, the applicant and owner are in a unique position to absorb the costs associated with developing the site that may be a deterrent for other types of industrial developers.

Regarding compliance with the City's Transportation System Plan (TSP), the proposed development site is at the southwest corner of the future intersection of SW Orr Drive and SW 124<sup>th</sup> Avenue. The TSP identifies SW Orr Drive as a future City collector and SW 124<sup>th</sup> Ave. as a future County arterial. SW Orr Drive has not been dedicated or constructed and SW 124<sup>th</sup> is currently improved as an interim 2-lane street. The

applicant is responsible for constructing full street improvements for SW Orr Drive and half street improvements for SW 124<sup>th</sup> Avenue. The specific transportation improvement required are addressed under the public facilities section below.

The proposed development meets the applicable regulations and policies of the City's Comprehensive Plan, Transportation System Plan, and development code.

**FINDING:** This criterion is met.

4. **Surrounding property will not be adversely affected by the use, or that the adverse effects of the use on the surrounding uses, the neighborhood, or the City as a whole are sufficiently mitigated by the conditions proposed.**

**ANALYSIS:** As described in the findings above, the proposed use is compatible with abutting uses and is consistent with policies in the City's Comprehensive Plan and development code. Surrounding uses to the north and east include an approved industrial park, gravel and rock extraction, and land planned for industrial use. No Conditions of Approval are recommended to mitigate against off-site impacts to surrounding land uses. In addition, the site contains an existing PGE transmission line with towers located to the north of the proposed radio facility. These types of electric and communication facilities currently exist throughout the Tonquin Employment Area.

**FINDING:** This criterion is met.

5. **The impacts of the proposed use of the site can be accommodated considering size, shape, location, topography and natural features.**

**ANALYSIS:** As described in the findings above, the development will be located on an area of shallow bedrock that will serve as a seismically resilient foundation for the water treatment plant. The shall bedrock conditions would likely be seen as a significant site challenge for other industrial users. Finally, the extent of development will be limited to the northern portion of the site in order to preserve the kolk pond wetland at the southern portion of the site.

**FINDING:** This criterion is met.

6. **The use as proposed does not pose likely significant adverse impacts to sensitive wildlife species or the natural environment.**

**ANALYSIS:** The applicant has submitted a Tree Inventory and Habitat Assessment (Exhibit D) and Sensitive Areas and Vegetated Corridors Site Assessment Report that describes the site’s natural environment and sensitive areas in detail (Exhibit H).

The applicant’s narrative states “Existing wetlands located throughout the WTP site will be reduced only as necessary for development of this critical water infrastructure facility. The WTP development has been very intentionally designed to be tightly clustered in the northern portion of the site, which removes smaller and isolated wetlands. However, avoiding these wetlands would render the site undevelopable. In clustering the development in the north, the project is able to preserve the large valuable wetland and its Vegetated Corridor (VC) and surrounding area in the south.

The US Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL) have approved mitigation of all of these wetland impacts through the purchase of mitigation bank credits, which are designed to offset the loss of wetland functions, values, and acreage. On-site mitigation is proposed to account for a small impact on the VC around the kolk wetland in constructing the forest platform as part of this development. (See narrative responses in Chapter 16.144.)” (Applicant’s Narrative p. 33).

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

- 7. For wireless communication facilities, no Conditional Use Permit will be granted unless the following additional criteria is found:**
  - a. The applicant demonstrates to the satisfaction of the City that the wireless communication facility cannot be located in an IP zone due to the coverage needs of the applicant.**
  - b. The proposed wireless communication facility is designed to accommodate co-location or it can be shown that the facility cannot feasibly accommodate co-location.**
  - c. The applicant demonstrates a justification for the proposed height of the tower or antenna and an evaluation of alternative designs which might result in lower heights.**
  - d. The proposed wireless communication facility is not located within one-thousand (1,000) feet of an existing wireless facility or that the proposed wireless**



**communication facility cannot feasibly be located on an existing wireless communication facility.**

- e. The proposed wireless communication facility is located a minimum of three-hundred (300) feet from residentially zoned properties.**

**ANALYSIS:** The applicant’s narrative states, “The proposed radio facility (Exhibit A, Sheet B-169 and Exhibit M) is needed for communication between WWSS facilities including the WTP, Raw Water Facilities in Wilsonville, and the Reservoir Storage Facilities on Cooper Mountain in Washington County. As such, it must be located on the WTP site (i.e., not in the IP zone or co-located with another wireless communication facility). The WTP radio facility will allow for communication using handheld radios throughout the WWSS – from the system’s terminus at Highway 26 in Hillsboro down to the Raw Water Facilities in Wilsonville, including critical communications during and following emergencies. The project’s managing partner has conducted a radio study that indicates that, in conjunction with the system’s existing radio facilities, the addition of a facility at the WTP site (a monopole) will allow for continuous “line of sight” communications coverage throughout the entire WWSS system. The facility’s height will be approximately 200 to 250 feet. The height of the facility is necessary to provide “line of sight” between the new WTP radio facility and the existing radio facilities. There is no residential zoning within 300 feet of the proposed radio facility site, as shown in the zoning map in Figure 3.”

Staff concurs with this analysis. The radio tower is needed for emergency communications by the applicant and that co-location is not feasible.

**FINDING:** These criteria have been met.

**8. The following additional criteria apply to transportation facilities...**

**ANALYSIS:** A Conditional Use permit is not required for any of the transportation facilities.

**FINDING:** These criteria do not apply.

**D. Additional Conditions**

**In permitting a conditional use or modification of an existing conditional use, additional conditions may be applied to protect the best interests of the surrounding properties and neighborhoods, the City as a whole, and the intent of this Chapter. These conditions may include but are not limited to the following:**

1. Mitigation of air, land, or water degradation, noise, glare, heat, vibration, or other conditions which may be injurious to public health, safety or welfare in accordance with environmental performance standards.
2. Provisions for improvement of public facilities including sanitary sewers, storm drainage, water lines, fire hydrants, street improvements, including curb and sidewalks, and other above and underground utilities.
3. Increased required lot sizes, yard dimensions, street widths, and off-street parking and loading facilities.
4. Requirements for the location, number, type, size or area of vehicular access points, signs, lighting, landscaping, fencing or screening, building height and coverage, and building security.
5. Submittal of final site plans, land dedications or money-in-lieu of parks or other improvements, and suitable security guaranteeing conditional use requirements.
6. Limiting the number, size, location, height and lighting of signs.
7. Requirements for the protection and preservation of existing trees, soils, vegetation, watercourses, habitat areas and drainage areas.
8. Requirements for design features which minimize potentially harmful environmental impacts such as noise, vibration, air pollution, glare, odor and dust.

**ANALYSIS:** As described in the findings above, and throughout the applicant's narrative, the proposed water treatment and monopole radio tower have been located and designed to protect natural features and mitigate potential off-site impacts to surrounding properties. No additional conditions are recommended to protect the best interests of the surrounding properties.

**FINDING:** No additional conditions are recommended and this standard is met.

**E. Time Limits**

Unless approved under Section 16.82.020.A.2 for a larger development to include future tenants of such development, authorization of a conditional use shall be void after two (2) years or such lesser time as the approval may specify unless substantial construction, in the City's determination, has taken place. The Hearing Authority may extend authorization for an additional period, not to exceed one (1) year, upon a written request from the applicant

showing adequate cause for such extension, and payment of an extension application fee as per Section 16.74.010.

**F. Revocation**

Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits. Furthermore, if, in the City's determination, a condition or conditions of CUP approval are not or cannot be satisfied, the CUP approval, or building and occupancy permits, shall be revoked.

**ANALYSIS:** The Conditional Use permit is subject to the time limits and revocation standards described above.

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A9:** The Conditional Use permit shall be void after two (2) years unless substantial construction, in the City's determination, has taken place.

**RECOMMENDED CONDITION OF APPROVAL A10:** Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits.

## **Chapter 16.84 - VARIANCES**

### **16.84.010 – Purpose**

This Chapter provides standards and procedures for variances, which are modifications to land use or development standards that are not otherwise permitted elsewhere in this Code as exceptions to Code standards. This Chapter provides flexibility, while maintaining the purposes and intent of the Code. No variances shall be granted to allow the use of property for a purpose not authorized within the zone in which the proposed use is located. In granting a variance, conditions may be imposed when necessary to protect the best interests of surrounding properties and neighborhoods, and otherwise achieve the purposes of the adopted Comprehensive Plan, the Transportation System Plan, and other Code provisions.

### **16.84.020 - Applicability**

**A. Exceptions and Modifications versus Variances**

A code standard or approval criterion may be modified without approval of a variance if the applicable code section expressly allows exceptions or modifications. If the code provision does not expressly

provide for exceptions or modifications then a variance is required to modify that code section and the provisions of Chapter 16.84 apply.

**B. Combining Variances with Other Approvals; Permit Approvals by Other Agencies.**

Variance requests may be combined with and reviewed concurrently by the City approval body with other land use and development applications (e.g., development review, site plan review, subdivision, conditional use, etc.); however, some variances may be subject to approval by other permitting agencies, such as ODOT in the case of State Highway access.

**C. Adjustments and variances cannot be applied to change any existing Planned Unit Development (PUD).**

**ANALYSIS:** The applicant is requesting a Class A variance to the visual corridor requirements of SZCDC § 16.142.020. The visual corridor standards do not expressly allow exceptions or modifications and the applicant is therefore requesting a variance to the tree planting and landscaping standards for both visual corridors.

**FINDING:** The visual corridor standards do not expressly allow for exceptions or modifications and thus a variance is required to modify the standards.

### 16.84.030 - Types of Variances

As provided in this Section, there are three types of variances: Adjustments, Class A variance and Class B variance; the type of variance required depends on the extent of the variance request and the discretion involved in the decision making process.

**A. Adjustments**

1. **Applicability:** The following variances are reviewed using a Type I procedure, as governed by Chapter 16.72, using the approval criteria in Subsection 2, below:
  - a. **Front yard setbacks** Up to a 10 percent change to the front yard setback standard in the land use district.
  - b. **Interior setbacks** Up to a 10 percent reduction of the dimensional standards for the side and rear yard setbacks required in the base land use district so long as the three foot setback is maintained based on Building Code requirements where applicable.
  - c. **Landscape area** Up to a 10% reduction in landscape area (overall area or interior parking lot landscape area.
  - d. **A 5% increase or decrease in other Code standards or dimensions not otherwise specifically identified in this**

section and not applicable at the time of the subdivision or partition approval.

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**B. Class B Variances**

**1. Generally**

- a. The Class B variance standards apply to individual platted and recorded lots only.
- b. A variance shall not be approved that would vary the "permitted uses" or "prohibited uses" of a land use zoning district.
- c. Front yard setbacks: Up to a 20 percent change to the front yard setback standard in the land use district.
- d. Interior setbacks: Up to a 20 percent reduction of the dimensional standards for the side and rear yard setbacks required in the base land use district so long as the three foot setback is maintained if required by the Building Code requirements.
- e. A 20% or less increase or decrease in other Code standards or dimensions not otherwise specifically identified in this section.

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**C. Class A Variances**

**1. Generally**

- a. The Class A variance procedure may be used to modify a standard for three (3) or fewer lots, including lots yet to be created through a partition process.
- b. An applicant who proposes to vary a standard for lots yet to be created through a subdivision process may not utilize the Class A variance procedure. Approval of a Planned Unit Development shall be required to vary a standard for lots yet to be created through a subdivision process, where a specific code section does not otherwise permit exceptions.
- c. A Class A Variance shall not be approved that would vary the "permitted, conditional or prohibited uses" of a land use district.

**ANALYSIS:** The applicant's narrative states "Roughly 6,500 square feet of the 14,500 square feet of the visual corridor on SW Blake Street cannot be planted with trees or will include a retaining wall. Roughly 6,000 square feet of the 8,500 square feet of the visual corridor on the developed length of SW 124th Avenue cannot be planted with trees or will include a retaining wall." (Applicant's Narrative – p. 39).

Therefore, the proposed modification will impact approximately 44.8% of the visual corridor along SW Orr Drive and approximately 70.5% of the visual corridor along SW

124<sup>th</sup> Avenue. The proposal will modify the visual corridor planting standards by greater than 20% and a Class A Variance is required.

The variance will only apply to one parcel and does not vary any of the uses of the underlying zoning district. The approval criteria for a Class A Variance is below.

**FINDING:** The proposal will modify the visual corridor planting standards by greater than 20% and a Class A Variance is required.

**2. Approval Process:**

- a. **Class A Variances shall be processed using a Type IV procedure, as governed by Chapter 16.84, using the approval criteria in subsection 3, below.**
- b. **In addition to the application requirements contained in Chapter 16.72.010, the applicant shall provide a written narrative describing the reason for the variance, why it is required, alternatives considered, and compliance with the criteria in subsection 3.**

**ANALYSIS:** The applicant's narrative states:

*"Reasons for the Variance and Alternatives Considered"*

The following findings address where trees cannot be provided uniformly throughout the visual corridors on SW Blake Street and SW 124<sup>th</sup> Avenue and where retaining walls must be located within the visual corridors. See the Planting Overall Plan and Planting Plan Area A1 through A7 in Exhibit A (Sheets B-030 through B-037 for the location of visual corridors, the PGE easement, retaining walls, fences, and proposed plantings.

- **Legal restrictions** – Tree planting is extremely limited in PGE easements. Therefore, only low growing vegetation can be planted in the section of WTP frontage that overlaps with a PGE easement on SW Blake Street, directly to the west of the primary WTP entrance (Road A). There are no alternatives to PGE's legal restriction. The applicant is proposing to robustly plant the PGE easement area with shrubs and ground cover.
- **Site topography and natural resources** – The developable area of the site is bounded by SW Blake Street on the north, SW 124<sup>th</sup> Avenue on the east, and the kolk wetland and its VC on the south. Within this area, there are significant elevation changes, with approximately 30-40 feet of change between the high points in the western and central areas of the site and the low points along SW 124<sup>th</sup> Avenue. Retaining walls within portions of the visual corridor are necessary to develop the WTP within these boundaries and topographic constraints. The retaining walls also serve as perimeter security walls.

Prior to the two-lot partition that created the subject property and the industrial parcel to the north, the applicant evaluated variations and alternatives for the location of SW Blake Street. The location of the intersection with SW 124th Avenue was driven by sight distance standards coordinated with Washington County and the City. The alignment of SW Blake Street was established to enable sufficient acreage for both the treatment plant and the industrial property to the north, in compliance with County policy for pre-annexation land divisions in the TEA. In summary, a variance for retaining walls is needed due to the above-described physical constraints: topography; the specific alignment of SW Blake Street that is necessitated by street and lot design factors; the “hard edge” of SW 124th Avenue; and, the intent to preserve the kolk pond and VC south of the treatment plant. Proposed mitigation includes planting shrubs and ground cover in front of the walls where possible and planting large shrubs and/or trees on top of the walls. See the Planting Overall Plan (Exhibit A, Sheet B- 030) and site visualizations from roadways (Exhibit A, Sheets B-001 through B-004).

There are no feasible alternatives to the placement of retaining walls in the visual corridors on SW Blake Street and SW 124th Avenue because the full set of buildings needed for water treatment, required internal circulation widths, and preservation of the kolk wetland must be accommodated.

- **Security** – The security of the site and water treatment facilities, and hence the drinking water they produce, is a vital objective. Best practice security measures do not allow trees near perimeter security walls and fences for two reasons: trees must not provide a way to surmount a security wall or fence; and distance must be kept between trees and security walls and fences so that security cameras have clear, unobstructed views around the perimeter. Alternatives include setting walls and fences farther back on the site so that there is more distance between the walls, fences, and edge of the site in order to provide trees. However, as addressed above in relation to site topography, there is not sufficient space to pull walls and fences back and still accommodate the necessary buildings, internal circulation, and preserved wetland and natural resources. Thus, it is proposed that the areas in front of walls and fences still be planted, but that they be planted with shrubs and ground cover instead of trees.” (Applicant’s Narrative - pp. 39-40)

Staff concurs with this detailed analysis describing why the variance is required and the alternatives considered. The request also complies with the Class A Variance approval criteria as discussed below.

**FINDINGS:** This criterion is met.

3. **Approval Criteria: The City shall approve, approve with conditions, or deny an application for a Class A Variance based on the following criteria:**

- a. **The proposed variance will not be materially detrimental to the purposes of this Code, to any other applicable policies and standards, and to other properties in the same land use district or vicinity;**

**ANALYSIS:** The applicant’s narrative states “The proposed variance relates to the visual corridor criteria in Section 16.142.040. As noted in the responses to those criteria, the proposed plantings, fences, and walls will serve the purpose of visual corridors to provide a visual and acoustic buffer between proposed uses and major streets. Visualizations of the site from SW Blake Street and SW 124th Avenue illustrate how this purpose is served (Exhibit A, Sheets B-001 through B-004). The buffering that can still be achieved with the variance helps ensure that the proposed development will not adversely affect or be materially detrimental to surrounding development. Permitting this variance (retaining walls in the visual corridor and trees not uniformly provided throughout the corridor) does not interfere with complying with other applicable requirements, as is demonstrated in the other responses in this narrative.” (Applicant’s Narrative p. 41)

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

- b. **A hardship to development exists which is peculiar to the lot size or shape, topography, or other similar circumstances related to the property over which the applicant has no control, and which are not applicable to other properties in the vicinity (e.g., the same land use district);**

**ANALYSIS:** The applicant’s narrative states “The proposed variance is driven by physical constraints that are unique to the site as compared to surrounding properties, namely: the combination of the sloping of the site to the north and south from the center; significant grade differences between the site and adjacent SW Blake Street and SW 124th Avenue rights-of-way; and, a large contiguous wetland and surrounding Clean Water Services (CWS) VC in the southern portion of the site. (See the Existing Conditions plan and aerial views in Exhibit A, Sheets B-024 through B-027.) As described in response to Subsection 2 above, the site is limited in pulling retaining walls and fences back and away from visual corridors and allowing continuous tree planting in the corridors. If this were done, the necessary treatment structures and internal circulation could not be accommodated without pushing into the large contiguous wetland and CWS buffer to the south.” (Applicant’s Narrative - pp. 41-42))

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.



- c. **The use proposed will be the same as permitted under this title and City standards will be maintained to the greatest extent that is reasonably possible while permitting reasonable economic use of the land;**

**ANALYSIS:** The variance does not change the proposed use which is conditionally permitted in the EI zone. The development complies or is conditioned to comply with all other applicable City standards as discussed in this report.

**FINDING:** This criterion is met.

- d. **Existing physical and natural systems, such as but not limited to traffic, drainage, natural resources, and parks will not be adversely affected any more than would occur if the development occurred as specified by the subject Code standard;**

**ANALYSIS:** The applicant’s narrative states “The visual corridor sections with retaining walls and without uniform tree plantings will not have adverse effects on traffic and drainage. Transportation and drainage facilities will be adequate and meet or exceed City standards, as demonstrated by the responses to criteria in Chapter 16.106 (Transportation Facilities) and Chapter 16.114 (Storm Water) and in the TIA and Preliminary Stormwater Report included in this application (Exhibit F and Exhibit G). Internal circulation and natural resources could be adversely affected if the variance is not granted. As described in previous responses to criteria in this Section, if retaining walls, in particular, had to be moved away from the east and north borders of the site to prevent any section of a retaining wall from being in the visual corridor or to provide more space for continuous tree planting, this would push the treatment plant’s structures and internal circulation to the south, significantly impacting the large contiguous wetland and CWS VC buffer to the south. Alternatively, if attempting to prevent moving the development footprint to the south, the dimensions of site features such as internal circulation would need to be reduced, which cannot be done while maintaining functionality and compliance with City and Tualatin Valley Fire & Rescue (TVF&R) standards.” (Applicant’s Narrative – p. 42).

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

- e. **The hardship is not self-imposed; and**

**ANALYSIS:** The applicant’s narrative states “The requested variance is driven by the existing constrained conditions of the site, including the sloping of the site to the north and south from the center; significant grade differences between the site and adjacent SW Blake Street and SW 124th Avenue rights-of-way; and a large contiguous wetland

and surrounding CWS VC in the southern portion of the site. (See the Existing Conditions plan and aerial views in Exhibit A, Sheets B-024 through B-027.) Project designers have maximized the concentration of proposed development in the northern portion of the site in order to work within the constraints of the site and preserve the large wetland. The hardship is due to existing site conditions and is not self imposed.” (Applicant’s Narrative – p. 43).

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

**f. The variance requested is the minimum variance that would alleviate the hardship.**

**ANALYSIS:** The applicant’s narrative states “The requested variance to visual corridor requirements is the minimum necessary to allow the water treatment facilities and internal circulation to be feasibly provided within the topographic constraints of the site, while providing security for the water treatment facility and protecting the large wetland in the southern portion of the site. In a virtual meeting with City Engineering and Planning staff on April 23, 2020, the applicant and City staff discussed how the applicant will provide continuous plantings in the visual corridors – at a minimum, ground cover and shrubs where trees cannot feasibly be provided. Plantings (shrubs or trees) will also be provided atop the retaining walls, small sections of which are proposed in the visual corridors. The applicant will also plant street trees, in the planting strip adjacent to the roadway on SW Blake Street and SW 124th Avenue as well as in a median on SW Blake Street. The plantings overall will provide a highly green and vegetated buffer between the proposed uses and adjacent streets. See the Planting Overall Plan and the visualizations from the roadways in Exhibit A (Sheets B-030 and B-001 through B-004).” (Applicant’s Narrative – p. 43).

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

**Chapter 16.90 – SITE PLANNING**

**16.90.020 – Site Plan Review**

**A. Site Plan Review Required**

**Site Plan review is required prior to any substantial change to a site or use that does not meet the criteria of a minor or major modification, issuance of building permits for a new building or structure, or for the substantial alteration of an existing structure or use.**

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**ANALYSIS:** The proposal is for a new building and site improvements including parking, circulation, and landscaping.

**FINDING:** The application is required to comply with the Site Planning criteria and standards.

**D. Required Findings**

**No site plan approval shall be granted unless each of the following is found:**

- 1. The proposed development meets applicable zoning district standards and design standards in Division II, and all provisions of Divisions V, VI, VIII and IX.**

**ANALYSIS:** The proposed development meets or is conditioned to meet all of the applicable zoning district standards as discussed in this report.

**FINDING:** This criterion is met.

- 2. The proposed development can be adequately served by services conforming to the Community Development Plan, including but not limited to water, sanitary facilities, storm water, solid waste, parks and open space, public safety, electric power, and communications.**

**ANALYSIS:** The subject site is located within City boundaries and can be adequately served by the required public services as demonstrated in this report under Division VII – Public Infrastructure and in the agency comments.

**FINDING:** This criterion is met.

- 3. Covenants, agreements, and other specific documents are adequate, in the City's determination, to assure an acceptable method of ownership, management, and maintenance of structures, landscaping, and other on-site features.**

**ANALYSIS:** The property will be under single ownership and the property owner is responsible for management and maintenance of on-site development features and landscaping.

The applicant has provided a Title Report (Applicant Transmittal Dated 9/11/20 - Attachment 6) that describes ownership and encumbrance details for the property. A 125 ft. wide PGE transmission line easement is located over the property for the

purposes of access to the lines and the right to remove dangerous trees. The applicant has also provided an Encroachment Agreement (Applicant Transmittal Dated 9/11/20 – Attachment 8) signed by the property owner and PGE that allows certain uses within the easement including driveways, parking, fencing, stormwater facilities, and landscaping.

An 8 ft. wide Public Utility Easement (PUE) for franchise and other utilities will be provided within the development site along each right-of-way frontage.

**FINDING:** This criterion is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL E2:** The applicant shall adhere to the Encroachment Agreement between the applicant and PGE.

4. **The proposed development preserves significant natural features to the maximum extent feasible, including but not limited to natural drainage ways, wetlands, trees, vegetation (including but not limited to environmentally sensitive lands), scenic views, and topographical features, and conforms to the applicable provisions of Division VIII of this Code and Chapter 5 of the Community Development Code.**

**ANALYSIS:** The development site is undeveloped with forest canopy in the north and mixed vegetation and wetland in the south. The site contains a central hill with rough terrain, rock outcroppings, and shallow soil. The northern portion of the site slopes down generally to the north and the southern portion slopes down generally to the south.

The development has been designed to fit compactly at the north end of the site in order to preserve approximately 20-acres of the property including the kolk pond wetland. The development will also provide a new place for environmental education through its forest viewing platform. The buildings and viewing platform have been strategically placed in relation to the natural resources on the site. As discussed in SZCDC Division VIII Environmental Resources below, the applicant complies or is conditioned to comply with applicable local, state, and federal environmental regulations.

**FINDING:** This criterion is met.

5. **For developments that are likely to generate more than 400 average daily trips (ADTs), or at the discretion of the City Engineer, the applicant must provide adequate information, such as a traffic impact analysis (TIA) or traffic counts, to demonstrate the level of impact to the surrounding**

**transportation system. The developer is required to mitigate for impacts attributable to the project, pursuant to TIA requirements in Section 16.106.080 and rough proportionality requirements in Section 16.106.090. The determination of impact or effect and the scope of the impact study must be coordinated with the provider of the affected transportation facility.**

**ANALYSIS:** The City Engineer has required a TIA for project. The applicant submitted a TIA which is included as Exhibit F. Full transportation findings and conditions are approval are included under SZCDC § 16.106 Transportation Facilities and in the City of Sherwood Engineering Comments (Exhibit Q) and Washington County Land Use & Transportation Comments (Exhibit R).

**FINDING:** This criterion is met.

- 6. The proposed commercial, multi-family, institutional or mixed-use development is oriented to the pedestrian and bicycle, and to existing and planned transit facilities. Urban design standards include the following:**

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**ANALYSIS:** The proposal is for an industrial development and the design standards in subsection (7) below apply.

**FINDING:** This standard does not apply.

- 7. Industrial developments provide employment opportunities for citizens of Sherwood and the region as a whole. The proposed industrial development is designed to enhance areas visible from arterial and collector streets by reducing the "bulk" appearance of large buildings. Industrial design standards include the following:**
  - a. Portions of the proposed industrial development within 200 feet of an arterial or collector street and visible to the arterial or collector (i.e. not behind another building) must meet any four of the following six design criteria:**
    - (1) A minimum 15% window glazing for all frontages facing an arterial or collector.**
    - (2) A minimum of two (2) building materials used to break up vertical facade street facing frontages (no T-111 or aluminum siding).**

- (3) **Maximum thirty-five (35) foot setback for all parts of the building from the property line separating the site from all arterial or collector streets (required visual corridor falls within this maximum setback area).**
- (4) **Parking is located to the side or rear of the building when viewed from the arterial or collector.**
- (5) **Loading areas are located to the side or rear of the building when viewed from the arterial or collector. If a loading area is visible from an arterial or collector, it must be screened with vegetation or a screen made of materials matching the building materials.**
- (6) **All roof-mounted equipment is screened with materials complimentary to the building design materials.**

**ANALYSIS:** The development features listed in the table below are within 200 ft. of SW Orr Drive or SW 124<sup>th</sup> Avenue and are visible from the right-of-way. Compliance with four of the six design criteria is shown in the table:

Standard / Location	Administration Building	Finished Water Pump Station	EQ / Overflow Pumping Facility	Dewatering Facility
1. Min. 15% window glazing	20%			
2. Min. 2 building materials	Glass and metal panels	Concrete, glass, metal panels	Metal panel 1, metal panel 2	Concrete, metal panel, glass
3. Max 35 ft. setback				
4. Parking on side or rear of building		Side	Side	Side

5. Loading on side or rear of building	Rear	Side	Side	Side
6. Roof-mounted equipment screened	Roofline, louvers	Equipment indoors	Equipment indoors	Louvers

**FINDING:** This standard is met.

- 8. **Driveways that are more than twenty-four (24) feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where prevented by topography, rail lines, freeways, pre-existing development, or leases, easements, or covenants.**

**ANALYSIS:** Two new driveways are proposed off SW Orr Drive that will be over 24 ft. wide, however, there are no existing or planned streets on the opposite side of the street.

**FINDING:** This standard is not applicable.

**E. Approvals**

The application is reviewed pursuant to Chapter 16.72 and action taken to approve, approve with conditions, or deny the application for site plan review. Conditions may be imposed by the Review Authority if necessary to fulfill the requirements of the adopted Comprehensive Plan, Transportation System Plan or the Zoning and Community Development Code. The action must include appropriate findings of fact as required by Section 16.90.020. The action may be appealed to the Council in accordance with Chapter 16.76.

**F. Time Limits**

Site plan approvals are void after two (2) years unless construction on the site has begun, as determined by the City. The City may extend site plan approvals for an additional period not to exceed one (1) year, upon written request from the applicant showing adequate cause for such extension, and payment of an extension application fee as per Section 16.74.010. A site plan approval granted on or after

**January 1, 2007 through December 31, 2009, is extended until December 31, 2013.**

**ANALYSIS:** The applicant is required to comply with all conditions of approval included in the Notice of Decision and has the right to appeal to City Council in accordance with SZCDC § 16.76. The site plan approval becomes void after two (2) years unless construction on the site has begun, as determined by the City. Condition of Approval A4 states that the land use decision is valid for a period of two years.

**FINDING:** This standard is met by Condition of Approval A4.

## **Chapter 16.92 – LANDSCAPING**

### **16.92.010-Landscaping Plan Required**

**All proposed developments for which a site plan is required pursuant to Section 16.90.020 shall submit a landscaping plan that meets the standards of this Chapter. All areas not occupied by structures, paved roadways, walkways, or patios shall be landscaped or maintained according to an approved site plan.**

**ANALYSIS:** The applicant has submitted detailed landscaping plans (Exhibit A – Sheets B-030 and B-042 – B045) that shows perimeter, parking lot, and site landscaping. The southeast corner of the site is currently wooded and will remain a natural area. Compliance with the specific landscaping standards is discussed below.

**FINDING:** This criterion is met.

### **16.92.020 Landscaping Materials**

#### **A. Type of Landscaping**

**Required landscaped areas shall include an appropriate combination of native evergreen or deciduous trees and shrubs, evergreen ground cover, and perennial plantings. Trees to be planted in or adjacent to public rights-of-way shall meet the requirements of this Chapter. Plants may be selected from the City's "Suggested Plant Lists for Required Landscaping Manual" or suitable for the Pacific Northwest climate and verified by a landscape architect or certified landscape professional.**

#### **1. Ground Cover Plants**

- a. All of the landscape that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses. Mulch is not a substitute for ground cover, but is allowed in addition to the ground cover plants.**



- b. **Ground cover plants other than grasses must be at least the four-inch pot size and spaced at distances appropriate for the plant species. Ground cover plants must be planted at a density that will cover the entire area within three (3) years from the time of planting.**
- 2. **Shrubs**
  - a. **All shrubs must be of sufficient size and number to be at full growth within three (3) years of planting.**
  - b. **Shrubs must be at least the one-gallon container size at the time of planting.**
- 3. **Trees**
  - a. **Trees at the time of planting must be fully branched and must be a minimum of two (2) caliper inches and at least six (6) feet in height.**
  - b. **Existing trees may be used to meet the standards of this chapter, as described in Section 16.92.020.C.2.**

**ANALYSIS:** The proposed landscaping includes a combination of evergreen and deciduous trees, shrubs, and ground cover as shown in the plans. The plants have been selected from the City’s suggested plant list or have otherwise been deemed suitable for the area by the project’s landscape architect, Greenworks. The applicant’s narrative and plans provide details on the planting size and mature coverage of trees, shrubs, and ground cover that meet the standards above.

**FINDING:** These standards are met.

**B. Plant Material Selection and Preparation**

- 1. **Required landscaping materials shall be established and maintained in a healthy condition and of a size sufficient to meet the intent of the approved landscaping plan. Specifications shall be submitted showing that adequate preparation of the topsoil and subsoil will be undertaken.**
- 2. **Landscape materials should be selected and sited to produce a hardy and drought-resistant landscape area. Selection of the plants should include consideration of soil type, and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site.**

**ANALYSIS:** The applicant’s plans (Exhibit A – Sheets B-042 and B-043) provide details on plant material selection and preparation as required in the standards above. All site landscaping will be inspected prior to issuance of occupancy.

**FINDING:** These standards are met.

**C. Existing Vegetation**

1. All developments subject to site plan review per Section 16.90.020 and required to submit landscaping plans per this section shall preserve existing trees, woodlands and vegetation on the site to the maximum extent possible, as determined by the Review Authority, in addition to complying with the provisions of Section 16.142 (Parks, Trees and Open Space) and Chapter 16.144 (Wetland, Habitat, and Natural Resources).
2. Existing vegetation, except those plants on the Nuisance Plants list as identified in the "Suggested Plant Lists for Required Landscaping Manual" may be used to meet the landscape standards, if protected and maintained during the construction phase of the development.
  - a. If existing trees are used, each tree six (6) inches or less in diameter counts as one (1) medium tree.
  - b. Each tree that is more than six (6) inches and up to nine (9) inches in diameter counts as two (2) medium trees.
  - c. Each additional three (3) inch diameter increment above nine (9) inches counts as an additional medium tree.

**ANALYSIS:** The development has been designed to fit compactly within the northern portion of the site allowing existing vegetation including that associated with the kolk pond (Wetland G) to remain. The applicant has provided a Tree Protection Plan (Exhibit A – Sheets B-021 – B-023) that shows areas of tree protection. The existing trees will be counted towards meeting the minimum tree canopy requirements in SZCDC § 16.142.070.

**FINDING:** These standards have been met.

**D. Non-Vegetative Features**

1. Landscaped areas as required by this Chapter may include architectural features interspersed with planted areas, such as sculptures, benches, masonry or stone walls, fences, rock groupings, bark dust, semi-pervious decorative paving, and graveled areas.
2. Impervious paving shall not be counted toward the minimum landscaping requirements unless adjacent to at least one (1) landscape strip and serves as a pedestrian pathway.

3. **Artificial plants are prohibited in any required landscaped area.**

**ANALYSIS:** The site landscaping will include non-vegetative features including fences, walls, benches, and graveled areas. Artificial plants are not proposed and the impervious areas are not counted towards the minimum landscaping requirements under SZCDC § 16.142.070.

**FINDING:** These standards have been met.

### **16.92.030 Site Area Landscaping and Perimeter Screening Standards**

#### **A. Perimeter Screening and Buffering**

1. **Perimeter Screening Separating Residential Zones:**  
**A minimum six-foot high sight-obscuring wooden fence, decorative masonry wall, or evergreen screen, shall be required along property lines separating single and two-family uses from multi-family uses, and along property lines separating residential zones from commercial, institutional/public or industrial zones subject to the provisions of Chapter 16.48.020 (Fences, Walls and Hedges).**

**ANALYSIS:** The proposed development does not abut and is not adjacent to a residential zone.

**FINDING:** This standard is not applicable.

2. **Perimeter Landscaping Buffer**
  - a. **A minimum ten (10) foot wide landscaped strip comprised of trees, shrubs and ground cover shall be provided between off-street parking, loading, or vehicular use areas on separate, abutting, or adjacent properties.**

**ANALYSIS:** All of the proposed off-street loading and vehicular use areas are situated to be internal to the site and will be buffered from the street with internal site landscaping. Landscaping is also proposed along the perimeter of the site including the required 10 ft. visual corridor along SW Orr Drive and 15 ft. wide visual corridor along SW 124<sup>th</sup> Ave as modified by the Class A Variance.

**FINDING:** This standard is met.

3. **Perimeter Landscape Buffer Reduction**

If the separate, abutting property to the proposed development contains an existing perimeter landscape buffer of at least five (5) feet in width, the applicant may reduce the proposed site's required perimeter landscaping up to five (5) feet maximum, if the development is not adjacent to a residential zone. For example, if the separate abutting perimeter landscaping is five (5) feet, then applicant may reduce the perimeter landscaping to five (5) feet in width on their site so there is at least five (5) feet of landscaping on each lot.

**ANALYSIS:** The development site meets the perimeter landscaping buffer requirements within the subject site. A buffer reduction is not requested or required.

**FINDING:** This standard is met.

**B. Parking Area Landscaping**

**1. Purpose**

The standard is a landscape treatment that uses a combination of trees, shrubs, and ground cover to provide shade, storm water management, aesthetic benefits, and screening to soften the impacts of large expanses of pavement and vehicle movement. It is applied to landscaped areas within and around the parking lot and loading areas.

**2. Definitions**

a. **Parking Area Landscaping:** Any landscaped area on the site that is not required as perimeter landscaping § 16.92.030 (Site Landscaping and Screening).

b. **Canopy Factor**

(1) Landscape trees are assigned a canopy factor to determine the specific number of required trees to be planted. The canopy factor is calculated based on the following formula:

**Canopy Factor = Mature Height (in feet) × Canopy Spread (in feet) × Growth Rate Factor × .01**

(2) **Growth Rate Factor:** The growth rate factor is three (3) for fast-growing trees, two (2) for medium growing trees, and one (1) for slow growing trees. The growth rate of a tree is identified in the "Suggested Plant Lists for Required Landscaping Manual."

**ANALYSIS:** The site will contain 47 off-street parking stalls in two general locations. 40 spaces will be located near the south/west entrance to the site and provide parking for staff and the public. An additional 7 spaces will be located south of the Equalization Overflow Basin and Recycled Pump Station off internal "Road B". Both parking areas will be surrounded by internal site landscaping, however, the canopy factor of trees has not been provided.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL B1:** Prior to Final Site Plan approval, provide tree canopy calculations for the parking lot landscaping. The trees provided shall meet the requirements for 47 parking stalls.

**3. Required Landscaping**

**There shall be at least forty-five (45) square feet parking area landscaping for each parking space located on the site. The amount of required plant materials are based on the number of spaces as identified below.**

**ANALYSIS:** The site will contain 47 off-street parking stalls requiring 2,115 SF of landscaping. The Planting Overall Plan (Exhibit A – Sheet B-030) shows landscaping will be provided around each parking area that exceeds the required 2,115 SF. As defined above, parking lot landscaping includes any site landscaping that is not required as perimeter landscaping.

**FINDING:** This standard is met.

**4. Amount and Type of Required Parking Area Landscaping**

**a. Number of Trees required based on Canopy Factor**  
**Small trees have a canopy factor of less than forty (40), medium trees have a canopy factor from forty (40) to ninety (90), and large trees have a canopy factor greater than ninety (90);**

**(1) Any combination of the following is required:**

**(i) One (1) large tree is required per four (4) parking spaces;**

**(ii) One (1) medium tree is required per three (3) parking spaces; or**

**(iii) One (1) small tree is required per two (2) parking spaces.**

**(iv) At least five (5) percent of the required trees must be evergreen.**

- (2) Street trees may be included in the calculation for the number of required trees in the parking area.
- b. Shrubs:
  - (1) Two (2) shrubs are required per each space.
  - (2) For spaces where the front two (2) feet of parking spaces have been landscaped instead of paved, the standard requires one (1) shrub per space. Shrubs may be evergreen or deciduous.
- c. Ground cover plants:
  - (1) Any remainder in the parking area must be planted with ground cover plants.
  - (2) The plants selected must be spaced to cover the area within three (3) years. Mulch does not count as ground cover.

**ANALYSIS:** The development will include 47 parking stalls and requires trees, shrubs, and groundcover at the quantities described above. As shown on the Planting Overall Plans (Exhibit A – Sheet B-030) all non-hardscape areas will be planted with shrubs and ground cover. The size of the parking lots trees has not been provided and is required as Condition of Approval B1

**FINDING:** These standards are met by Condition of Approval B1.

- 5. Individual Landscape Islands Requirements
  - a. Individual landscaped areas (islands) shall be at least ninety (90) square feet in area and a minimum width of five (5) feet and shall be curbed to protect the landscaping.
  - b. Each landscape island shall be planted with at least one (1) tree.
  - c. Landscape islands shall be evenly spaced throughout the parking area.
  - d. Landscape islands shall be distributed according to the following:
    - (2) Multi or mixed-uses, institutional and commercial uses: one (1) island for every ten (10) contiguous parking spaces.
  - e. Storm water bio-swales may be used in lieu of the parking landscape areas and may be included in the calculation of the required landscaping amount.

**ANALYSIS:** Individual landscape islands to break up 10 or more contiguous stalls are not proposed or required based on the proposed parking lot layout (Exhibit A – Sheet B-028 and B-029)). Curbs will form the perimeter of the parking areas and landscaping will be provided around each with a combination of trees, shrubs, and groundcover. The 12 parking stalls located between Road A and Road E are broken up into two rows of 6 stalls and are located within the PGE easement.

**FINDING:** These standards are met.

**6. Landscaping at Points of Access**

**When a private access-way intersects a public right-of-way or when a property abuts the intersection of two (2) or more public rights-of-way, landscaping shall be planted and maintained so that minimum sight distances shall be preserved pursuant to Section 16.58.010.**

**ANALYSIS:** As discussed in Section 16.58.010 above, the development will contain three (3) intersections or points of access where clear vision areas are required. The site will be inspected to ensure clear vision areas have been established prior to issuance of occupancy.

**FINDING:** This standard is met by Condition of Approval G1.

**7. Exceptions**

- a. **For properties with an environmentally sensitive area and/or trees or woodlands that merit protection per Chapters 16.142 (Parks, Trees and Open Space) and 16.144 (Wetland, Habitat and Natural Areas) the landscaping standards may be reduced, modified or "shifted" on-site where necessary in order to retain existing vegetation that would otherwise be removed to meet the above referenced landscaping requirements.**
- b. **The maximum reduction in required landscaping buffer permitted through this exception process shall be no more than fifty (50) percent. The resulting landscaping buffer after reduction may not be less than five (5) feet in width unless otherwise permitted by the underlying zone. Exceptions to the required landscaping may only be permitted when reviewed as part of a land use action application and do not require a separate variance permit.**

**ANALYSIS:** The applicant is not requesting any additional reduction to the site landscaping requirements.

**FINDING:** This standard is not applicable.

**C. Screening of Mechanical Equipment, Outdoor Storage, Service and Delivery Areas**

**All mechanical equipment, outdoor storage and manufacturing, and service and delivery areas, shall be screened from view from all public streets and any adjacent residential zones. If unfeasible to fully screen due to policies and standards, the applicant shall make efforts to minimize the visual impact of the mechanical equipment.**

**ANALYSIS:** The applicant's narrative states roof-mounted mechanical equipment within 200 ft. of SW Orr Drive and SW 124<sup>th</sup> Ave will be screened from view by rooflines and louvers (Applicant's Narrative – pp. 36 - 37). Other site features that require screening include loading / unloading areas, trash / recycle enclosure, and an outdoor storage yard. All of these areas are setback from the public streets and screened from view by street trees and on-site landscaping, fences and walls, and on-site buildings. No outdoor manufacturing is proposed and the site is not located adjacent to a residential zone.

**FINDING:** This standard is met.

**D. Visual Corridors**

**Except as allowed by subsection 6. above, new developments shall be required to establish landscaped visual corridors along Highway 99W and other arterial and collector streets, consistent with the Natural Resources and Recreation Plan Map, Appendix C of the Community Development Plan, Part II, and the provisions of Chapter 16.142 ( Parks, Trees, and Open Space). Properties within the Old Town Overlay are exempt from this standard.**

**ANALYSIS:** Visual corridor standards are addressed under SZCDC § 16.142.040(A).

**FINDING:** These standards are addressed under § 16.142.040(A).

**16.92.040 Installation and Maintenance Standards**

**A. Installation**

**All required landscaping must be in-ground, except when in raised planters that are used to meet minimum Clean Water Services storm water management requirements. Plant materials must be installed**



to current nursery industry standards. Plant materials must be properly supported to ensure survival. Support devices such as guy wires or stakes must not interfere with vehicular or pedestrian movement.

**B. Maintenance and Mitigation of Landscaped Areas**

1. Maintenance of existing non-invasive native vegetation is encouraged within a development and required for portions of the property not being developed.
2. All landscaping shall be maintained in a manner consistent with the intent of the approved landscaping plan.
3. Any required landscaping trees removed must be replanted consistent with the approved landscaping plan and comply with § 16.142, (Parks, Trees and Open Space).

**C. Irrigation**

The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All landscaped areas must provide an irrigation system, as stated in Option 1, 2, or 3.

1. Option 1: A permanent built-in irrigation system with an automatic controller installed.
2. Option 2: An irrigation system designed and certified by a licensed landscape architect or other qualified professional as part of the landscape plan, which provides sufficient water to ensure that the plants become established. The system does not have to be permanent if the plants chosen can survive independently once established.
3. Option 3: Irrigation by hand. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.

**ANALYSIS:** Landscaping is required to be in-ground and installed to current nursery standards with an approved form of irrigation. The applicant has submitted installation and irrigation details that conform to the standards above (Exhibit A – Sheets B-030; B-042 – B-045; and B-060).

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G2:** Prior to Receiving Occupancy, all landscaping must be installed and have an irrigation system in accordance with SZCDC § 16.92.040(C).

## Chapter 16.94 OFF-STREET PARKING AND LOADING

### 16.94.010 General Requirements

#### A. Off-Street Parking Required

No site shall be used for the parking of vehicles until plans are approved providing for off-street parking and loading space as required by this Code. Any change in uses or structures that reduces the current off-street parking and loading spaces provided on site, or that increases the need for off-street parking or loading requirements shall be unlawful and a violation of this Code, unless additional off-street parking or loading areas are provided in accordance with Section 16.94.020, or unless a variance from the minimum or maximum parking standards is approved in accordance with Chapter 16.84 Variances.

#### B. Deferral of Improvements

Off-street parking and loading spaces shall be completed prior to the issuance of occupancy permits, unless the City determines that weather conditions, lack of available surfacing materials, or other circumstances beyond the control of the applicant make completion impossible. In such circumstances, security equal to one hundred twenty five (125) percent of the cost of the parking and loading area is provided the City. "Security" may consist of a performance bond payable to the City, cash, certified check, or other assurance of completion approved by the City. If the installation of the parking or loading area is not completed within one (1) year, the security may be used by the City to complete the installation.

**ANALYSIS:** Details on the proposed off-street parking and loading areas are provided in the narrative and on the plans (Exhibit A – Sheet B-028 and B0-029). The development can provide parking in accordance with this chapter, as described and conditioned below. No deferral of improvements is proposed at this time.

**FINDING:** These criteria are met.

#### C. Options for Reducing the Required Parking Spaces

1. Two (2) or more uses or, structures on multiple parcels of land may utilize jointly the same parking and loading spaces when the peak hours of operation do not substantially overlap, provided that satisfactory evidence is presented to the City, in the form of deeds, leases, or contracts, clearly establishing the joint use.
  - a. Within commercial, institutional and public, or industrial zones, shared parking may be provided on lots that are

within five hundred (500) feet of the property line of the use to be served.

- b. Shared parking is allowed if the application can show that the combined peak use is available by a parking study that demonstrates:
  - (1) There is a sufficient number of parking spaces to accommodate the requirements of the individual businesses; or
  - (2) That the peak hours of operation of such establishments do not overlap, and
  - (3) That an exclusive permanent easement over a delineated area has been granted for parking space use.

**ANALYSIS:** A reduction to the amount of required parking is not proposed.

**FINDING:** This standard does not apply.

- 2. **Mixed use projects are developments where a variety of uses occupies a development project or complex. For example, an eating establishment, professional office building and movie theater are all components of a mixed use site. It does not include a secondary use within a primary use such as an administrative office associated with a retail establishment. In mixed-use projects, the required minimum vehicle parking shall be determined using the following formula:**
  - a. **Primary use: i.e. that with the largest proportion of total floor area within the development at one hundred (100) percent of the minimum vehicle parking required for that use.**
  - b. **Secondary Use: i.e. that with the second largest percentage of total floor area within the development, at ninety (90) percent of the vehicle parking required for that use.**
  - c. **Subsequent use or uses, at eighty (80) percent of the vehicle parking required for that use.**

**ANALYSIS:** A reduction to the amount of required parking is not proposed.

**FINDING:** This standard does not apply.

#### **D. Prohibited Uses**

**Required parking, loading and maneuvering areas shall not be used for long-term storage or sale of vehicles or other materials, and shall not be rented, leased or assigned to any person or organization not using or occupying the building or use served.**

**ANALYSIS:** The applicant's narrative states that no prohibited uses are proposed for the off-street parking area.

**FINDING:** This standard is met.

**E. Location**

- 1. Residential off-street parking spaces:**
  - a. Shall be located on the same lot or development as the residential use.**
  - b. Shall not include garages or enclosed buildings with the exception of a parking structure in multifamily developments where three (3) or more spaces are not individually enclosed. (Example: Underground or multi-level parking structures).**
- 2. For other uses, required off-street parking spaces may include adjacent on-street parking spaces, nearby public parking and shared parking located within five hundred (500) feet of the use. The distance from the parking, area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use private off-site parking must be evidenced by a recorded deed, lease, easement, or similar written notarized letter or instrument.**
- 3. Vehicle parking is allowed only on improved parking shoulders that meet City standards for public streets, within garages, carports and other structures, or on driveways or parking lots that have been developed in conformance with this code. Specific locations and types of spaces (car pool, compact, etc.) for parking shall be indicated on submitted plans and located to the side or rear of buildings where feasible.**
  - a. All new development with forty (40) employees or more shall include preferential spaces for carpool/vanpool designation. Carpool and vanpool parking spaces shall be located closer to the main employee entrance than all other parking spaces with the exception of ADA parking**

**spaces. Carpool/vanpool spaces shall be clearly marked as reserved for carpool/vanpool only.**

- b. Existing development may redevelop portions of designated parking areas for multi-modal facilities (transit shelters, park and ride, and bicycle parking), subject to meeting all other applicable standards, including minimum space standards.**

**ANALYSIS:** All required parking spaces are proposed on-site as shown in the Transportation Circulations Plans (Exhibit A – Sheet B-028 – B-029). No shared or on-street parking is proposed. The development is not anticipated to carry 40 or more employees and carpool / vanpool spaces are not required.

**FINDING:** These standards are met.

**F. Marking**

**All parking, loading or maneuvering areas shall be clearly marked and painted. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.**

**ANALYSIS:** The Transportation Circulations Plans (Exhibit A – Sheets B-028 – B-029) indicate the following on-site parking and loading areas:

- 47 marked parking stalls
- 20 unmarked parking stalls
- 3 uncovered loading / unloading stalls
- 2 covered loading / unloading stalls

The preliminary plants show adequate marking for all of the parking and loading areas except for the following areas (Exhibit A – Sheet B-029):

- 20 ft. x180 ft. uncovered unloading area east of the Chemical Facilities Building
- Approximately 20 unmarked parallel parking stalls east of the Plant Maintenance and Chemical Facilities buildings.

The parking stall layout requirements under SZCDC § 16.94.020(B)(2) do not address standards for parking spaces located parallel to a drive aisle. However, on-street parallel parking stalls are required to be 24 ft. in length per SZCDC § 16.94.020(B)(5)(b)(1). Therefore, on-site parallel stalls shall be a minimum of 24 ft. in length x 9 ft. wide to provide adequate space for parking and maneuvering. The applicant may also opt not to provide parking in this area because the spaces are not

needed to meet the minimum parking requirements. The uncovered loading area east of the Chemical Facilities Building is also not required to meet the minimum loading standards and the applicant may opt not to provide this area.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL B2:** Prior to Final Site Plan approval, revise the Transportation Circulation Plans to show the parallel parking stalls along Road A east of the Plant Maintenance and Chemical Facilities buildings to be sized and marked based on the dimensional standards of SZCDC § 16.94.020(B). Parallel parking stalls shall be a minimum of 24 ft. length x 9 ft. width.

**RECOMMENDED CONDITION OF APPROVAL B3:** Prior to Final Site Plan approval, revise the Transportation Circulation Plans to show the proposed markings for the 20 ft. x 180 ft. uncovered unloading area located east of the Chemical Facilities building.

**RECOMMENDED CONDITION OF APPROVAL G3:** Prior to Receiving Occupancy, all parking, loading or maneuvering areas including ADA and loading stalls shall be clearly marked and signed. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.

**G. Surface and Drainage**

- 1. All parking and loading areas shall be improved with a permanent hard surface such as asphalt, concrete or a durable pervious surface. Use of pervious paving material is encouraged and preferred where appropriate considering soils, location, anticipated vehicle usage and other pertinent factors.**
- 2. Parking and loading areas shall include storm water drainage facilities approved by the City Engineer or Building Official.**

**ANALYSIS:** The parking and loading areas will be surfaced with asphalt or concrete and include stormwater drainage facilities (Exhibit A – Sheet B-129).

**FINDING:** These standards are met.

**H. Repairs**

**Parking and loading areas shall be kept clean and in good repair. Breaks in paved surfaces shall be repaired. Broken or splintered wheel stops shall be replaced. Painted parking space boundaries and directional symbols shall be maintained in a readable condition.**

**ANALYSIS:** The property owner will be responsible for the proper maintenance of the parking and loading areas. Violations are subject to City code compliance action.

**FINDING:** This standard is met.

**I. Parking and Loading Plan**

**An off-street parking and loading plan, drawn to scale, shall accompany requests for building permits or site plan approvals, except for single and two-family dwellings, and manufactured homes on residential lots. The plan shall show but not be limited to:**

- 1. Delineation of individual parking and loading spaces and dimensions.**
- 2. Circulation areas necessary to serve parking and loading spaces.**
- 3. Location of accesses to streets, alleys and properties to be served, and any curb cuts.**
- 4. Landscaping as required by Chapter 16.92.**
- 5. Grading and drainage facilities.**
- 6. Signing and bumper guard specifications.**
- 7. Bicycle parking facilities as specified in Section 16.94.020.C.**
- 8. Parking lots more than one (1) acre in size shall provide street-like features including curbs, sidewalks, and street trees or planting strips.**

**ANALYSIS:** The applicant has provided a narrative and plans that include information at an adequate level to determine compliance with the parking and loading standards.

**FINDING:** This standard is met.

**J. Parking Districts**

**The City may establish a parking district (i.e., permits or signage) in residential areas in order to protect residential areas from spillover parking generated by adjacent commercial, employment or mixed-use areas, or other uses that generate a high demand for parking. The district request shall be made to the City Manager, who will forward a recommendation to the City Council for a decision. Structured parking and on-street parking are exempt from the parking space maximums in Section 16.94.020.A.**

**ANALYSIS:** No parking districts or structured parking is proposed.

**FINDING:** This standard is not applicable.

**16.94.020 Off-Street Parking Standards**

**A. Generally**

Where square feet are specified, the area measured shall be the gross building floor area primary to the functioning of the proposed use. Where employees are specified, persons counted shall be those working on the premises, including proprietors, during the largest shift at peak season. Fractional space requirements shall be counted as a whole space. The Review Authority may determine alternate off-street parking and loading requirements for a use not specifically listed in this Section based upon the requirements of comparable uses.

**Table 1: Minimum and Maximum Parking Standards  
(Metro spaces are based on 1 per 1,000 sq ft of gross leasable area)**

<b>Use</b>	<b>Minimum Parking Standard</b>	<b>Maximum Permitted Parking Zone A<sup>1</sup></b>	<b>Maximum Permitted Parking Zone B<sup>2</sup></b>
<b>Industrial</b>	<b>1.6</b>	<b>None</b>	<b>None</b>

**ANALYSIS:** The applicant’s narrative states the following areas will be occupied by plant operations and staff and therefore are primary to the functioning of the proposed use (Applicant’s Narrative – p. 64).

- Administration Building 9,634 SF
- Maintenance portion of the UV / Switchgear Building 4,100 SF
- Dewatering Building 5,148 SF
- Total 18,882 SF**

Industrial uses require 1.6 spaces per 1,000 SF of gross area.

$$18.882 \times 1.6 = 30.21 \text{ or } 31 \text{ parking stalls}$$

The minimum number of required off-street parking spaces is 31 with no maximum. The applicant is proposing 47 marked parking stalls which meets this standard. Parking

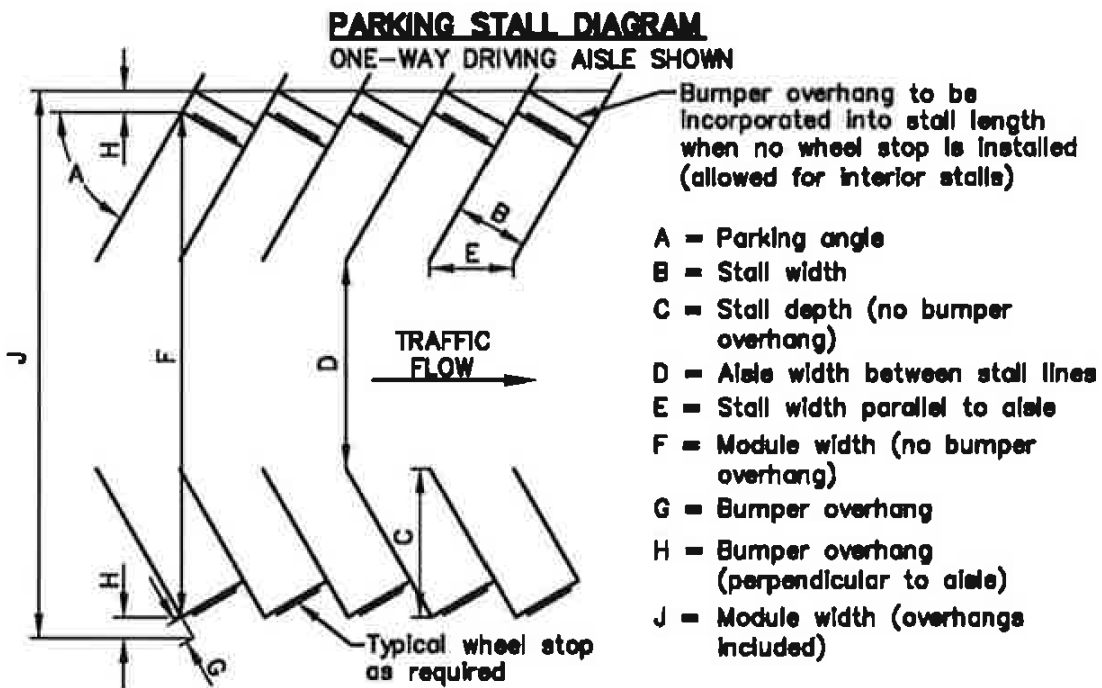


spaces can be added prior to Final Site Plan approval that meet the dimensional requirements of the code, as indicated in Condition of Approval B2.

**FINDING:** This standard is met.

**B. Dimensional and General Configuration Standards**

1. **Dimensions** For the purpose of this Chapter, a "parking space" means a stall nine (9) feet in width and twenty (20) feet in length. Up to twenty five (25) percent of required parking spaces may have a minimum dimension of eight (8) feet in width and eighteen (18) feet in length so long as they are signed as compact car stalls.
2. **Layout**  
 Parking space configuration, stall and access aisle size shall be of sufficient width for all vehicle turning and maneuvering. Groups of more than four (4) parking spaces shall be served by a driveway so as to minimize backing movements or other maneuvering within a street, other than an alley. All parking areas shall meet the minimum standards shown in the following table and diagram.





dimensional tables do not provide standards for on-site parallel parking stalls; however, on-street parallel parking stalls are required to be 24 ft. in length per SZCDC § 16.94.020(B)(5)(b)(1). Condition of Approval B2 requires new stalls to meet the size requirements of the dimensional tables, or provide parallel stalls at a minimum size of 24 ft. l x 9 ft. w.

**FINDING:** These standards are met by Condition of Approval B2.

**4. Service Drives**

**Service drives shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers, and shall have minimum vision clearance area formed by the intersection of the driveway center line, the street right-of-way line, and a straight line joining said lines through points fifteen (15) feet from their intersection.**

**ANALYSIS:** Two driveways will provide access to the site off SW Orr Drive. Road A will serve as the primary public and staff entrance while Road D is considered a secondary, emergency access. Road D may also be used infrequently for egress of trucks. Both driveways will be clearly marked with full improvements including driveways, paint, and signage. The driveways also meet the clear vision requirements of SZCDC § 15.58.010 as discussed in this report.

**FINDING:** This standard is met.

\*\*\*

**C. Bicycle Parking Facilities**

**1. General Provisions**

- a. **Applicability.** Bicycle parking spaces shall be provided for new development, changes of use, and major renovations, defined as construction valued at twenty-five (25) percent or more of the assessed value of the existing structure.
- b. **Types of Spaces.** Bicycle parking facilities shall be provided in terms of short-term bicycle parking and long-term bicycle parking. Short-term bicycle parking is intended to encourage customers and other visitors to use bicycles by providing a convenient and readily accessible place to park bicycles. Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for

at least several hours a weather-protected place to park bicycles.

- c. **Minimum Number of Spaces.** The required total minimum number of bicycle parking spaces for each use category is shown in Table 4, Minimum Required Bicycle Parking Spaces.
- d. **Minimum Number of Long-term Spaces.** If a development is required to provide eight (8) or more required bicycle parking spaces in Table 4, at least twenty-five (25) percent shall be provided as long-term bicycle with a minimum of one (1) long-term bicycle parking space.
- e. **Multiple Uses.** 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.

**2. Location and Design.**

**a. General Provisions**

- (1) Each space must be at least two (2) feet by six (6) feet in area, be accessible without moving another bicycle, and provide enough space between the rack and any obstructions to use the space properly.
- (2) There must be an aisle at least five (5) feet wide 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) **Lighting.** Bicycle parking shall be at least as well lit as vehicle parking for security.
- (4) **Reserved Areas.** Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.
- (5) **Bicycle parking in the Old Town Overlay District** can be located on the sidewalk within the right-of-way. A standard inverted "U shaped" or staple design is appropriate. Alternative, creative designs are strongly encouraged.
- (6) **Hazards.** Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas

shall be located so as to not conflict with vision clearance standards.

- b. **Short-term Bicycle Parking**
  - (1) **Provide lockers or racks that meet the standards of this section.**
  - (2) **Locate inside or outside the building within thirty (30) feet of the main entrance to the building or at least as close as the nearest vehicle parking space, whichever is closer.**

**Table 4: Minimum Required Bicycle Parking Spaces**

<b>Use Categories</b>	<b>Minimum Required Spaces</b>
<b>Industrial</b>	<b>2 or 1 per 40 auto spaces, whichever is greater</b>

**ANALYSIS:** The development is required to provide 31 auto spaces. Based on the table above, a minimum of 2 bicycle parking spaces are therefore required. The applicant is proposing eight bicycle spaces (four racks) near the entrance to the administration building (Exhibit A – Sheet B-028). The rack will be located in an open concrete area for convenient access and use. The bicycle parking is located just north of the ADA vehicle parking, immediately adjacent to the front courtyard and entrance to the administration building. A bike rack detail is provided in Exhibit A – Sheet B-075. Additional details demonstrating compliance with the dimensions, lighting, and safety standards of the racks is provided in the applicant’s narrative (Applicant’s Narrative – p. 70)

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G4:** Prior to Receiving Occupancy, bicycle parking shall be installed in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6’ for each bicycle.

**16.94.030 - Off-Street Loading Standards**

**A. Minimum Standards**

- 1. **A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers shall be located on the site of any school, or other public meeting place, which is designed to accommodate more than twenty five (25) persons at one time.**
- 2. **The minimum loading area for non-residential uses shall not be less than ten (10) feet in width by twenty-five (25) feet in length and shall have an unobstructed height of fourteen (14) feet.**

3. **Multiple uses on the same parcel or adjacent parcels may utilize the same loading area if it is shown in the development application that the uses will not have substantially overlapping delivery times.**
4. **The following additional minimum loading space is required for buildings in excess of twenty thousand (20,000) square feet of gross floor area:**
  - a. **Twenty thousand (20,000) to fifty (50,000) sq. ft. - five hundred (500) sq. ft.**
  - b. **Fifty (50,000) sq. ft. or more - seven hundred fifty (750) sq. ft.**

**ANALYSIS:** The water treatment plant will contain two buildings between 20,000 – 50,000 SF and require an additional 1,000 SF of loading area above the base requirement of 250 SF. The applicant’s narrative indicates a total of 14,940 SF of loading / unloading area is proposed (Applicant’s Narrative – p. 72).

**FINDING:** This standard is met.

**B. Separation of Areas**

**Any area to be used for the maneuvering of delivery vehicles and the unloading or loading of materials shall be separated from designated off-street parking areas and designed to prevent the encroachment of delivery vehicles onto off-street parking areas or public streets. Off-street parking areas used to fulfill the requirements of this Chapter shall not be used for loading and unloading operations.**

**ANALYSIS:** The off-street parking loading are primarily located on the inside of the gated areas and are physically separated from the staff and public parking spaces. The applicant is proposing unmarked stalls along Road A, east of the Plant Maintenance and Chemical Facilities buildings. Conditions of Approval B2 and B3 require details on the markings for the area. The plans will also be reviewed for final conformance with this standard.

**FINDING:** This standard is met by Conditions of Approval B2 and B3.

**C. Exceptions and Adjustments.**

**The review authority, through Site Plan Review, may approve loading areas within a street right-of-way in the Old Town Overlay District when all of the following conditions are met:**

1. Short in duration (i.e., less than one (1) hour);
2. Infrequent (less than three (3) operations occur daily between 5:00 a.m. and 12:00 a.m. or all operations occur between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);
3. Does not unreasonably obstruct traffic; [or] Does not obstruct traffic during peak traffic hours;
4. Does not obstruct a primary emergency response route; and
5. Is acceptable to the applicable roadway authority.

**ANALYSIS:** No exceptions are requested.

**FINDING:** This standard is met.

## **Chapter 16.96 - ONSITE CIRCULATION**

### **16.92.010 – On-Site Pedestrian and Bicycle Circulation**

#### **A. Purpose**

On-site facilities shall be provided that accommodate safe and convenient pedestrian access within new subdivisions, multi-family developments, planned unit developments, shopping centers and commercial districts, and connecting to adjacent residential areas and neighborhood activity centers within one-half mile of the development. Neighborhood activity centers include but are not limited to existing or planned schools, parks, shopping areas, transit stops or employment centers. All new development, (except single-family detached housing), shall provide a continuous system of private pathways/sidewalks.

#### **B. Maintenance**

No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements, shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.

#### **C. Joint Access**

Two (2) or more uses, structures, or parcels of land may utilize the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfied the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use.

#### **D. Connection to Streets**

1. **Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways with paved sidewalk.**
2. **Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.**

**ANALYSIS:** The Transportation Circulation Plans (Exhibit A – Sheets B-028 and B-029) show the proposed pedestrian and vehicular circulation patterns. New sidewalks will be provided along both street frontages which can be extended by adjacent properties as they develop. A 6 ft. wide sidewalk will be provided along the north side Road A to provide pedestrian access into the site from the public right-of-way. Joint access is not proposed.

**FINDING:** These standards are met.

- E. Maintenance of Required Improvements**  
**Required ingress, egress and circulation improvements shall be kept clean and in good repair.**

**ANALYSIS:** Maintenance of the required circulation improvements will be addressed after construction. Any issues related to maintenance will fall under the City's Code Compliance program.

**FINDING:** This standard is met.

- F. Access to Major Roadways**  
**Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Appendix C of the Community Development Plan, Part II, shall be limited as follows:**
1. **Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W and arterial roadways. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.**
  2. **Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses**



developed after the effective date of this Code shall be required to use the alternative ingress and egress.

3. All site plans for new development submitted to the City for approval after the effective date of this Code shall show ingress and egress from existing or planned local or collector streets, consistent with the Transportation Plan Map and Section VI of the Community Development Plan.

**G. Service Drives**

Service drives shall be provided pursuant to Section 16.94.030.

**ANALYSIS:** Vehicle and pedestrian access to the site will be provided via SW Orr Drive, a new collector street. The site has frontage along a County arterial (SW 124<sup>th</sup> Ave.), however, no private vehicle access points are proposed off this street. Service drives have been previously addressed previously in this report.

**FINDING:** These standards are met.

**16.96.030 - Minimum Non-Residential Standards**

Minimum standards for private, on-site circulation improvements in non-residential developments:

**A. Driveways**

2. Industrial: Improved hard surfaced driveways are required as follows:

Required Parking Spaces	# Driveways	Minimum Width: One-Way	Minimum Width: Two-Way
1 - 249	1	15 feet	24 feet
250 & above	2	15 feet	24 ft.

**ANALYSIS:** The site requires a minimum of 31 parking stalls and therefore requires a minimum of one (1) driveway. The development will include two two-way concrete driveways. The primary access driveway at the western end of the site will be 40 ft. wide and while secondary eastern driveway will be 30 ft. wide.

**FINDING:** This standard is met.

3. Surface materials are encouraged to be pervious when appropriate considering soils, anticipated vehicle usage and other pertinent factors.

**B. Sidewalks and Curbs**

1. **A private pathway/sidewalk system extending throughout the development site shall be required to connect to existing development, to public rights-of-way with or without improvements, to parking and storage areas, and to connect all building entrances to one another. The system shall also connect to transit facilities within five hundred (500) feet of the site, future phases of development, and whenever possible to parks and open spaces.**

**ANALYSIS:** The applicant's narrative states "An on-site pedestrian walkway system, shown in the Transportation/ Circulation Plans (Exhibit A, Sheets B-028 and B-029), connects SW Blake Street to the Administration Building and forest platform. The walkways also connect to visitor vehicle and bicycle parking in front of the Administration Building. Other buildings on-site will be accessible only to the small number of WTP employees (gated areas), which they can access via an internal roadway system.

There are no transit facilities within 500 feet of the site nor future phases of development beyond the proposed site footprint with which to connect. While there are also no proximate parks and open spaces, the pedestrian connection of the site to SW Blake Street leads, in turn, to sidewalk connections on SW Blake Street and SW 124th Avenue to SW Tualatin-Sherwood Road. Sidewalks on this part of SW Tualatin-Sherwood Road are part of the Tonquin Ice Age Trail system." (Applicant's Narrative – p. 76).

Staff concurs with this analysis and finds the standard has been met.

**FINDING:** This standard is met.

2. **Curbs shall also be required at a standard approved by the Hearing Authority. Private pathways/sidewalks shall be connected to public rights-of-way along driveways but may be allowed other than along driveways if approved by the Hearing Authority.**

**ANALYSIS:** The applicant's narrative indicates standard curbs will be provided for the pedestrian circulation system including for the pedestrian connecting along the primary ingress / egress driveway (Road A). (Applicant's Narrative – p. 76).

**FINDING:** This standard is met.

3. **Private Pathway/Sidewalk Design.** Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface. Primary pathways connecting front entrances to the right of way shall be at least 6 feet wide and conform to ADA standards. Secondary pathways between buildings and within parking areas shall be a minimum of four (4) feet wide and/or conform to ADA standards. Where the system crosses a parking area, driveway or street, it shall be clearly marked with contrasting paving materials or raised crosswalk (hump). At a minimum all crosswalks shall include painted striping.

**ANALYSIS:** The applicant's narrative states "As noted in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029), on-site pedestrian walkways will be at least 6 feet wide. The walkways will be built to ADA standards, including ramps, and will have concrete surfaces. The four locations where the pedestrian circulation system crosses parking areas and internal roadways will be clearly marked with painted striping and either contrasting paving materials or raised paving, as noted in the Transportation / Circulation Plans." ((Applicant's Narrative – p. 77).

Staff concurs with this analysis and recommends the condition of approval below.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G5:** Prior to Receiving Occupancy, where a pedestrian pathway crosses a parking area, driveway, or street, it shall be clearly marked with contrasting paving materials or a raised crosswalk.

4. **Exceptions.** Private pathways/sidewalks shall not be required where physical or topographic conditions make a connection impracticable, where buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or pathways would violate provisions of leases, restrictions or other agreements.

**ANALYSIS:** There are no physical or topographic conditions that make connection impracticable.

**FINDING:** This standard does not apply.

#### **16.96.040 - On-Site Vehicle Circulation**

##### **A. Maintenance**

No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements, shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.

- B. **Joint Access [See also Chapter 16.108]**  
Two (2) or more uses, structures, or parcels of land are strongly encouraged to utilize jointly the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfy the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use. In some cases, the City may require a joint access to improve safety, vision clearance, site distance, and comply with access spacing standards for the applicable street classification.
- C. **Connection to Streets**
  - 1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways.
  - 2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.
- D. **Maintenance of Required Improvements**  
Required ingress, egress and circulation improvements shall be kept clean and in good repair.
- E. **Service Drives**  
Service drives shall be provided pursuant to Section 16.94.030.

**ANALYSIS:** Two new driveways off SW Orr Drive are proposed to provide vehicular ingress and egress to the site. No joint access is proposed. Maintenance of the on-site vehicular circulation areas is the ongoing responsibility of the property owner. Service drives are proposed and addressed under SZCDC § 16.94.030.

**FINDING:** These standards are met.

## **Chapter 16.98 - ONSITE STORAGE**

### **16.98.020 Solid Waste and Recycling Storage**

All uses shall provide solid waste and recycling storage receptacles which are adequately sized to accommodate all solid waste generated on site. All solid waste and recycling storage areas and receptacles shall be located out of public view. Solid waste and recycling receptacles for multi-family, commercial,

**industrial and institutional uses shall be screened by six (6) foot high sight-obscuring fence or masonry wall and shall be easily accessible to collection vehicles.**

**ANALYSIS:** The applicant's narrative states "The proposed waste and recycling storage enclosure will be adjacent to the Flash Mix, Flow Split, and Flocculation Building and the staff parking area, as shown in the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). The enclosure will be a minimum 6 feet high by 10 feet deep by 20 feet wide, with CMU side walls and concrete back wall (against basin) and full-width chain link gates, consistent with Pride Disposal & Recycling standards. The enclosure area will also be obscured from public view given its location beyond the security fence between the Administration Building and the Flash Mix, Flow Split, and Flocculation Building. Access to the enclosure area will be via the primary entrance (western driveway) on SW Blake Street and through the secured staff parking area, passage to which will be granted by WTP staff. More than 75 feet of unobstructed access that is required by Pride Disposal & Recycling in front of the enclosure will be provided, based on dimensions noted in the Transportation/Circulation Plan."

Staff concurs with this analysis and adds that Pride Disposal provided comment on the application (Exhibit U) approving the location of the trash enclosure.

**FINDING:** This standard is met.

#### **16.98.030 - Material Storage**

- A. Generally. Except as otherwise provided herein, external material storage is prohibited, except in commercial and industrial zones where storage areas are approved by the Review Authority as part of a site plan or per Section 16.98.040.**
- B. Standards. Except as per Section 16.98.040, all service, repair, storage, and merchandise display activities carried on in connection with any commercial or industrial activity, and not conducted within an enclosed building, shall be screened from the view of all adjacent properties and adjacent streets by a six (6) foot to eight (8) foot high, sight obscuring fence subject to chapter 16.58.020. In addition, unless adjacent parcels to the side and rear of the storage area have existing solid evergreen screening or sight-obscuring fencing in place, new evergreen screening no less than three (3) feet in height shall be planted along side and rear property lines. Where other provisions of this Code require evergreen screening, fencing, or a landscaped berm along side and rear property lines, the additional screening stipulated by this Section shall not be required.**

**C. Hazardous Materials. Storage of hazardous, corrosive, flammable, or explosive materials, if such storage is otherwise permitted by this Code, shall comply with all local fire codes, and Federal and State regulations.**

**ANALYSIS:** The applicant's narrative states "A long-term outdoor storage yard is proposed in the southwestern portion of the site where temporary staging will be located during construction. See the Construction Staging and Storage Areas Plan (Exhibit A, Sheet B-019). This storage yard will be significantly set back from SW Blake Street to the north (at least 200 feet), with a buffer of street trees, a planted visual corridor, and LIDA facilities 8B and 8C. The area will be set back (at least 50 feet) and buffered to the west by preserved trees and vegetation. The area will be set back (at least 35 feet) and buffered to the south by preserved trees and vegetation. The area will be set back (at least 1,000 feet) and buffered to the east by preserved trees, vegetation, Wetland G (large kolk pond), and the surrounding VC. See the Planting Overall Plan and Tree Protection Overall Plan (Exhibit A, Sheets B-030 and B-021)." (Applicant's Narrative – p. 39).

Staff concurs with the analysis but notes that a sight-obscuring fence is not proposed around the long-term outdoor storage yard. A Condition of Approval is recommended below to add a sight-obscuring fence around the long-term storage yard.

Regarding hazardous materials, the applicant's narrative states "Water treatment processes require on-site storage, and use of chemicals, delivered by commercial tanker trucks, cryogenic tanker trucks, or flatbed trucks with expected frequencies ranging from once every two weeks to once annually. The WTP is designed with several layers of protection (prevention and response) associated with "potential facilities failures" for the types of substances listed above, including:

- Interior containment sumps in chemical storage areas: Within the main Chemical Facilities, storage tanks are elevated above fixed, secondary containment sumps sized for over 100 percent of the full working tank volume. This strategy mitigates potential hazards associated with interior chemical storage failures impacting the public.
- Outdoor chemical containment sumps: Immediately outside of the main chemical facilities, a common "drive aisle" is provided for accepting, and safely facilitating, bulk chemical deliveries. Each chemical area (within the main Chemical Facilities) is provided with a dedicated outdoor chemical containment sump beneath the common drive aisle to capture any potential leaks/ruptures of chemical delivery trucks during delivery. This strategy mitigates potential hazards associated with chemical delivery failures impacting the public.
- Dedicated leak containment at discrete points of chemical injection: At all locations where treatment process chemicals are continuously injected into closed vessels or pipes, curbed containment is provided (with leak detection) to capture incidental volumes and allow plant personnel to respond in a controlled

manner to address any potentially hazardous conditions that develop. This strategy mitigates potential hazards associated with chemical injection failures impacting the public.

- Environmental monitoring of outdoor chemical storage areas: Within outdoor chemical storage areas, environmental monitoring for potentially hazardous compounds (e.g., carbon monoxide, oxygen, etc.) is provided through dedicated monitoring that will alarm locally and at the plant's central control room. This strategy mitigates potential hazards associated with outdoor chemical storage failures impacting the public.

In addition to the process treatment chemicals listed above, other substances that will be subject to periodic delivery and/or pick-up at the WTP site, include the following:

- Mechanically dewatered solids (MDS) are designed to be collected in containers that are hauled off-site for disposal at a regional landfill. Personal protective equipment (PPE) to be used by plant staff while handling MDS on-site will mitigate potential hazards associated with MDS hauling impacting the public.
- Microsand (SND) is associated with the ballasted flocculation (high-rate clarification) treatment process and is an inert solid. There are no potential hazards to the public associated with its delivery, offloading (in contained supersacks), or handling – all of which will be accomplished indoors within a secured portion of the site.
- Diesel Fuel Oil (DFO) is exclusively used for stand-by generators that are needed only if primary power – in this case, from a new, adjacent regional substation – is lost. Though not expected to be used frequently, the standby generation system is critical to meeting resiliency goals established for the overall WWSS. As such, delivery, storage, and handling provisions such as secondary containment and dedicated oil/water separation are provided at the standby generator and diesel fuel oil storage area to effectively mitigate potential hazards to the public.

The measures outlined above will ensure compliance with applicable local fire codes as well as applicable federal and state regulations.” (Applicant’s Narrative – p. 80-81).

Staff concurs with the detailed analysis provided and recommends the conditions of approval provided below.

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL B4:** Prior to Final Site Plan approval, revise the plans to show a minimum 6 ft. tall site obscuring fence around the long-term outdoor storage area. The fence shall be installed prior to the area being used for permanent outdoor storage.

**RECOMMENDED CONDITION OF APPROVAL A11:** The site shall conform to all local building and fire code regulations, in addition to any applicable state and federal regulations, for hazardous materials storage on the site.

**Chapter 16.106 - TRANSPORTATION FACILITIES**

**16.106.010 - Generally**

**A. Creation**

Public streets shall be created in accordance with provisions of this Chapter. Except as otherwise provided, all street improvements and rights-of-way shall conform to standards for the City's functional street classification, as shown on the Transportation System Plan (TSP) Map (Figure 17) and other applicable City standards. The following table depicts the guidelines for the street characteristics.

Type of Street	ROW Width	Number of Lanes	Minimum Land Width	On Street Parking Width	Bike Lane Width	Sidewalk Width	Landscape Strip (exclusive of curb)	Median Width
Arterial	60-102'	2-5	12'	Limited	6'	6-8'	5'	14' if required
Collector	58-92'	2-3	11'	8' optional	6'	6-8'	5'	14' median turn lane

**ANALYSIS:** The development site will be located at southwest intersection of SW 124<sup>th</sup> Avenue, a County arterial and SW Orr Drive, a City collector. The applicant is required to dedicate right-of-way and construct street improvements to City and County standards. The SW Orr Drive right-of-way will be dedicated from property along the northern property line of the subject site. Right-of-way will also be dedicated along the eastern property line for widening of SW 124<sup>th</sup> Ave.



As such, the development will provide street dedications and improvements that implement the City's Transportation System Plan. Figure 18 Local Street Connectivity Map shows a new east-west collector connecting SW Oregon St. to SW 124<sup>th</sup> Ave. The proposed development will construct the eastern intersection of the roadway within City limits.

The City of Sherwood Engineering comments (Exhibit Q) state "The applicant has prepared and submitted a TIA (DKS Associates, dated July 2, 2020) for the proposed development, which has been reviewed and the conclusions accepted by City and County staff. The TIA concludes that the highest traffic usage will be during construction of the site, and that permanent traffic impacts during the long term operations will be minimal and not require any additional traffic mitigation measures.

### SW ORR Drive

As part of an existing agreement with the Trammel-Crowe, the WWSP site development has agreed to dedicate the necessary right-of-way and construct an east-west collector status road (SW Orr Drive) meeting City standards. The City Transportation System Plan (TSP) and the Tonquin Employment Area (TEA) Concept Plan indicate that a 3-lane without on-street parking collector cross section, with an overall right-of-way width of between 72-feet and 76-feet is preferred.

The applicant has submitted a 76-foot road right-of-way section for SW Orr Drive that consists of the following design elements:

- a) Two 13-foot wide travel lanes (11-foot drive lane with 2-foot shy distance)
- b) One 14-foot wide median/turn lane
- c) Two 5-foot wide planter strips
- d) Two 12-foot wide multiuse paths
- e) Two 1-foot clear zone at back of sidewalks

The proposed SW Orr Drive right-of-way section is a deviation from City standards. Deviation from City standards may be approved by submittal/acceptance of a design modification request to the City Engineer. A design modification request must be made for each individual design item that does not conform with City standards. Each design modification request will be reviewed/approved on a case by case basis by the City Engineer.

The applicant has submitted a Design Modification Request form associated with the proposed section. The City Engineer has reviewed the proposed request and has signed off on the Design Modification Request for the SW Orr Drive street section. The approved Design Modification Request is attached to these Review Comments (see attached Exhibit B). GIS contour information surrounding SW Orr Drive indicate that there will be cut/fill sections that will require respective easements outside the ROW.

Although SW Orr Drive is classified as a collector status road, the cross section design

is to meet the City standards for a collector status road, excepting that no on-street parking is being required, and any design modification requests are approved.

The intersection of SW Orr Drive with SW 124th will fall under the jurisdictional requirements of County. ROW dedication requirements along SW 124th Avenue shall at a minimum comply with County requirements, although frontage improvements along SW 124th Avenue shall comply with City of Sherwood requirements.

### SW 124th Ave

The County has submitted a letter dated November 13th, 2020 which has listed conditions which are incorporated into the Engineering Conditions of Approval comments in their entirety (see attached County letter as Exhibit A to the Engineering Comments). Highlighting several conditions of the County letter include:

- 1) Requiring half street improvements for a 5-lane arterial with turn lanes along the entire frontage with SW 124th Avenue meeting County standards, including:
  - a. Half-width pavement for a left turn lane
  - b. Dual through lanes
  - c. Curb & gutter
  - d. A 5-foot wide planter strip
  - e. A 12-foot wide multi-use path
  - f. Continuous street lighting.
- 2) Right-of-way dedication of 52-feet from the existing SW 124th Avenue road centerline, including adequate corner radius at the intersection with SW Orr Drive.

The County frontage improvements conditions include certain improvements which fall under the City's jurisdictional control. A Design Modification Request form for frontage and right-of-way improvements along SW 124th Avenue has been submitted by the applicant, reviewed and approved by the City Engineer (see Exhibit C).

The City will be requiring frontage improvements along the SW 124th Avenue frontage, which will include the following items:

- a. An 12-foot wide concrete sidewalk
- b. A 5-foot wide planter strip, measured between street face of curb and street face edge of sidewalk
- c. Street trees, with approved root barriers
- d. Planter strip ground cover plantings
- e. Planter strip irrigation system (including controller, valves and sprinklers)
- f. Street lighting system

The applicant has submitted two Design Modification Request forms to the Engineering Department, for each non-conforming design element shown in the plans for review and

approval by the City Engineer.

The pavement section for this road shall meet the maximum of either the City pavement section standard for a collector road or as recommended by a geotechnical pavement design based on local site soils conditions.

A geotechnical report prepared by McMillan-Jacobs Associates (dated May 12, 2020) was submitted in the Land Use packet. The report has provided recommendations for pavement base rock and pavement surfaces. The recommendations appear to conform to the City's minimum standards.

Full transportation comments are included in the City of Sherwood Engineering Comments (Exhibit Q) and the Washington County Land Use & Transportation Comments (Exhibit R). The conditions of approval recommended in each document are included as recommended conditions below.

**FINDING:** This criterion is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C1:** Prior to Approval of Engineering Public Improvement Plans, applicant shall have dedicated 52-feet of right-of-way along the west side of SW 124th Avenue in conformance with requirements delineated in the stated in a letter from County dated November 13th, 2020 which has listed conditions which are incorporated into the Engineering Conditions of Approval comments in their entirety (see attached County letter as Exhibit A to the Engineering Comments).

**RECOMMENDED CONDITION OF APPROVAL C2:** Prior to Approval of Engineering Public Improvement Plans, applicant shall have dedicated 76-foot right-of-way for SW Orr Drive in conformance with the proposed section submitted as a Design Modification Request, reviewed and approved by the City Engineer (see attached Exhibit B).

**RECOMMENDED CONDITION OF APPROVAL F1:** Prior to Final Acceptance of Constructed Public Improvements, applicant shall record an 8-foot wide public utility easement (PUE) along all public street frontages, and provide proof that PUE has been recorded by adjacent land owner along the north side of SW Orr Drive. The PUE shall be located adjacent to and outside the public street right-of-way.

**RECOMMENDED CONDITION OF APPROVAL C3:** Prior to Approval of Engineering Public Improvement Plans, construction plans shall include City required frontage improvements along SW 124th Avenue consistent with City standards as follows:

- a) An 12-foot wide concrete sidewalk & ADA ramps (if needed)
- b) A 5-foot wide planter strip, measured between street side face of curb and street side edge of sidewalk.
- c) Street trees, with approved root barrier
- d) Planter strip ground cover plantings

- e) Planter strip irrigation system, including controller, electronically controlled valves, piping and sprinkler heads
- f) Street lighting system

These frontage improvements shall commence at the north property line intersecting SW 124th Avenue right-of-way, and end at the point as defined by conditions set per County letter dated November 13th, 2020 (see attached County letter as Exhibit A to the Engineering Comments).

**RECOMMENDED CONDITION OF APPROVAL C4:** Prior to Approval of Engineering Public Improvement Plans, construction plans shall include public road frontage improvements for SW Orr Drive conforming with City standards as follows:

- g) 12-foot wide concrete sidewalks with ADA ramps at the intersection of SW Orr Drive and SW 124th Avenue.
- h) 5-foot wide planter strips, measured between street side face of curb and street side edge of sidewalk.
- i) Street trees, with approved root barrier
- j) Planter strip ground cover plantings
- k) Planter strip irrigation system, including controller, electronically controlled valves, piping and sprinkler heads
- l) Street lighting system

These frontage improvements shall commence at the intersecting SW Orr Drive and SW 124th Avenue, and end at the west property line of the site development.

**RECOMMENDED CONDITION OF APPROVAL D2:** Prior to Issuance of any Site Grading Permit, the applicant shall obtain and submit a copy of an issued County Facility Permit, to the City as part of any Site Grading Permit submittal.

**RECOMMENDED CONDITION OF APPROVAL C5:** Prior to Approval of Engineering Public Improvement Plans, the applicant shall submit a separate design modification request form for any additional nonconforming public infrastructure design element(s) that were not submitted under the Land Use process, to the City Engineer for review and approval.

**RECOMMENDED CONDITION OF APPROVAL C6:** Prior to Approval of Engineering Public Improvement Plans, engineering plans shall show a pavement section conforming to the City standard for a collector road, or as recommended by a geotechnical pavement design based on local site soils conditions which shall be submitted to the City as part of the plan review process. The design life of the geotechnical pavement design shall be 25-years.

**RECOMMENDED CONDITION OF APPROVAL C7:** Prior to Approval of the Engineering Public Improvement Plans, a photometric analysis shall be performed that

encompasses the entire length of the SW Orr Drive including the intersection with SW 124th Avenue, and the site frontage along SW 124th Avenue.

**RECOMMENDED CONDITION OF APPROVAL C8:** Prior to Approval of Engineering Public Improvement Plans, the street lighting plans for SW Orr Drive and SW 124th Avenue shall show PGE Option “B” Cobra Head street lighting systems.

**RECOMMENDED CONDITION OF APPROVAL F2:** Prior to Acceptance of Constructed Public Improvements, the applicant shall record an 8-foot wide PUE along the north side of the SW Orr Drive alignment that lays within the subject site.

**RECOMMENDED CONDITION OF APPROVAL F3:** Prior to Acceptance of Constructed Public Improvements, the applicant shall provide proof of a recorded PUE along the north right-of-way line of SW Orr Drive.

**RECOMMENDED CONDITION OF APPROVAL C9:** Prior to Approval of Engineering Public Improvement Plans, the applicant shall either record any slopes easements necessary to support the SW Orr Drive section/alignment, or provide proof of recorded slope easements by the adjacent property owner necessary to support the SW Orr Drive section/alignment. Slope easements shall be based on a 2 horizontal to 1 vertical finish slope grade.

**RECOMMENDED CONDITION OF APPROVAL D1:** (WASHINGTON COUNTY CONDITION) Prior to the Issuance of a Grading Permit by the City of Sherwood, the applicant shall obtain a Washington County Facility Permit for the Construction of the Following Public Improvements on SW 124<sup>th</sup> Ave:

- A. Submit the following to Washington County Public Assurance Staff (503-846-3843):
  - 1. Completed "Design Option" form.
  - 2. \$20,000.00 Administration Deposit.

*NOTE: The Administration Deposit is a cost-recovery account used to pay for County services provided to the developer, including plan review and approval, field inspections, as-built approval, and project administration. The Administration Deposit amount noted above is an estimate of what it will cost to provide these services. If, during the project, the Administration Deposit account is falls below County approved level, additional funds will be requested to cover the estimated time left on the project (at then-current rates per the adopted Washington County Fee Schedule). If there are any unspent funds at project close out, they will be refunded to the applicant. Any point of contact with County staff can be a chargeable cost. If project plans are not complete or do not comply with County standards and codes, costs will be higher. There is a charge to cover the cost of every field inspection. Costs for enforcement actions will also be charged to the applicant.*

3. Copy of the City's Notice of Decision (NOD) and the County's letter dated November 13, 2020.
4. Engineering plans, Geotech/Pavement report and Sight Distance Analysis via ProjectDox for construction of the following public improvements to County standards:
  - a. Closure of all existing access from the subject tax lot to SW 124th Avenue.
  - b. Construction access from SW 124th Avenue. Include sight distance analysis, traffic control plan and truck turning templates per County Engineer requirements.
  - c. SW Orr Street connection to SW 124th Avenue (stop-controlled) aligned with SW Blake Street, including adequate street illumination, to County standard. The access shall be constructed to permit future signalization of the intersection, including streetlight conduit, signal conduit(s) and interconnect conduit.
  - d. Half-street improvement for a 5-lane Arterial with turn lanes along the site's frontage of SW 124<sup>th</sup> Avenue to County standards. The half-street improvement shall include half-width pavement for a left-turn lane, dual through lanes, curb/gutter, a 12 foot multi-use path with a 5 foot planter strip and continuous street lighting.

*NOTE: The outside travel lane shall be a minimum of 15 feet. Street trees shall meet City standards.*

- e. Half-street improvement for a 5-lane Arterial along the site's frontage of SW 124th Avenue to County standards if the County can acquire the right-of-way from Tax Lot 851 that fronts the applicant's tax lot by February 1, 2021. The half-street shall include half-width pavement for a left-turn lane, dual through lanes, curb/gutter, a 12 foot multi-use path with a 5 foot planter strip and continuous street lighting. The planter strip that fronts the retaining wall shall be reduced to 3 feet.

*NOTE: The outside travel lane shall be a minimum of 15 feet. Street trees/shrubs shall meet City standards.*

5. The following shall be recorded with Washington County Survey Division (Contact John Kidd @ 503.846.7932 if dedication is via document or the Survey Division at 503.846.8723 if dedication is via a plat):

- a. Dedication of additional right-of-way to provide 52 feet from the centerline of SW 124<sup>th</sup> Avenue, including adequate corner radius at the intersection with SW Orr Street.
- b. Dedication of an 8 foot PUE along the site's frontage of SW 124<sup>th</sup> Avenue.

**RECOMMENDED CONDITION OF APPROVAL G6: WASHINGTON COUNTY CONDITION)** Prior to issuance of occupancy from the City of Sherwood:

- A. All public improvements required on SW 124<sup>th</sup> Avenue and the intersection of SW Orr Street/SW 124<sup>th</sup> Avenue shall be completed and accepted by Washington County.
- B. Provide Final Sight Distance Certification for the intersection of SW Orr Street/124<sup>th</sup> Avenue.

**B. Street Naming**

1. **All streets created by subdivision or partition will be named prior to submission of the final plat.**
2. **Any street created by a public dedication shall be named prior to or upon acceptance of the deed of dedication.**
3. **An action to name an unnamed street in the City may be initiated by the Council or by a person filing a petition as described in this Section.**
4. **All streets named shall conform to the general requirements as outlined in this Section.**
5. **At the request of the owner(s), the City may approve a private street name and address. Private streets are subject to the same street name standards as are public streets. All private street signs will be provided at the owner(s) expense.**

**C. Street Name Standards**

1. **All streets named or renamed shall comply with the following criteria:**
  - a. **Major streets and highways shall maintain a common name or number for the entire alignment.**
  - b. **Whenever practicable, names as specified in this Section shall be utilized or retained.**
  - c. **Hyphenated or exceptionally long names shall be avoided.**
  - d. **Similar names such as Farview and Fairview or Salzman and Saltzman shall be avoided.**

- e. Consideration shall be given to the continuation of the name of a street in another jurisdiction when it is extended into the City.
2. The following classifications (suffixes) shall be utilized in the assignment of all street names:
    - a. Boulevards: North/south arterials providing through traffic movement across the community.
    - b. Roads: East/west arterials providing through traffic movement across the community.
    - c. Avenues: Continuous, north/south collectors or extensions thereof.
    - d. Streets: Continuous, east-west collectors or extensions thereof.
    - e. Drives: Curvilinear collectors (less than 180 degrees) at least 1,000 feet in length or more.
    - f. Lanes: Short east/west local streets under 1,000 feet in length.
    - g. Terraces: short north/south local streets under 1,000 feet in length.
    - h. Court: All east/west cul-de-sacs.
    - i. Place: All north/south cul-de-sacs.
    - j. Ways: All looped local streets (exceeding 180 degrees).
    - k. Parkway: A broad landscaped collector or arterial.
  3. Except as provided for by this section, no street shall be given a name that is the same as, similar to, or pronounced the same as any other street in the City unless that street is an extension of an already-named street.
  4. All proposed street names shall be approved, prior to use, by the City.

**D. Preferred Street Names**

Whenever practicable, historical names will be considered in the naming or renaming of public roads. Historical factors to be considered shall include, but not be limited to the following:

1. Original holders of Donation Land Claims in Sherwood.
2. Early homesteaders or settlers of Sherwood.
3. Heirs of original settlers or long-time (50 or more years) residents of Sherwood.
4. Explorers of or having to do with Sherwood.
5. Indian tribes of Washington County.
6. Early leaders and pioneers of eminence.
7. Names related to Sherwood's flora and fauna.
8. Names associated with the Robin Hood legend.



**STAFF ANALYSIS:** The applicant will be located at the new street intersection of SW Orr Drive and SW 124<sup>th</sup> Ave. SW 124<sup>th</sup> Ave is an existing street and does not require naming. SW Orr Drive is a new street that will be constructed by the applicant and requires naming.

The City has selected “Orr” as the name of the new street. The new street will ultimately connect SW 124<sup>th</sup> Avenue to SW Oregon St. through the TEA. The street will be curvilinear and exceed 1,000 lineal feet. Based on the standards above, the suffix shall be “Drive”. Therefore, the name of the new public street is “SW Orr Drive”.

**FINDING:** These criteria are met.

#### **16.106.020 - Required Improvements**

##### **A. Generally**

**Except as otherwise provided, all developments containing or abutting an existing or proposed street, that is either unimproved or substandard in right-of-way width or improvement, shall dedicate the necessary right-of-way prior to the issuance of building permits and/or complete acceptable improvements prior to issuance of occupancy permits. Right-of-way requirements are based on functional classification of the street network as established in the Transportation System Plan, Figure 17.**

##### **B. Existing Streets**

**Except as otherwise provided, when a development abuts an existing street, the improvements requirement shall apply to that portion of the street right-of-way located between the centerline of the right-of-way and the property line of the lot proposed for development. In no event shall a required street improvement for an existing street exceed a pavement width of thirty (30) feet.**

##### **C. Proposed Streets**

- 1. Except as otherwise provided, when a development includes or abuts a proposed street, in no event shall the required street improvement exceed a pavement width of forty (40) feet.**
- 2. Half Streets: When a half street is created, a minimum of 22 feet of driving surface shall be provided by the developer**

##### **D. Extent of Improvements**

- 1. Streets required pursuant to this Chapter shall be dedicated and improved consistent with Chapter 6 of the Community Development Plan, the TSP and applicable City specifications included in the City of Sherwood Construction Standards. Streets shall include curbs, sidewalks, catch basins, street lights, and street trees. Improvements shall also include any**

bikeways designated on the Transportation System Plan map. Applicant may be required to dedicate land for required public improvements only when the exaction is directly related to and roughly proportional to the impact of the development, pursuant to Section 16.106.090.

2. If the applicant is required to provide street improvements, the City Engineer may accept a future improvements guarantee in lieu of street improvements if one or more of the following conditions exist, as determined by the City:
  - a. A partial improvement is not feasible due to the inability to achieve proper design standards;
  - b. A partial improvement may create a potential safety hazard to motorists or pedestrians.
  - c. Due to the nature of existing development on adjacent properties it is unlikely that street improvements would be extended in the foreseeable future and the improvement associated with the project under review does not, by itself, provide a significant improvement to street safety or capacity;
  - d. The improvement would be in conflict with an adopted capital improvement plan;
  - e. The improvement is associated with an approved land partition on property zoned residential use and the proposed land partition does not create any new streets; or
  - f. Additional planning work is required to define the appropriate design standards for the street and the application is for a project that would contribute only a minor portion of the anticipated future traffic on the street.

**ANALYSIS:** As described in the findings above and in agency comments (Exhibit Q & R), the applicant is required to dedicate public right-of-way and construct street improvements to serve the new development. Preliminary street designs have been submitted and are part of the application package. The latest street cross sections are located in the applicant's supplemental submittal dated November 24, 2020 (Exhibit P).

**FINDING:** These criteria are met as conditioned above.

**E. Transportation Facilities Modifications**

1. A modification to a standard contained within this Chapter and Section 16.58.010 and the standard cross sections

contained in Chapter 8 of the adopted TSP may be granted in accordance with the procedures and criteria set out in this section.

2. A modification request concerns a deviation from the general design standards for public facilities, in this Chapter, Section 16.58.010, or Chapter 8 in the adopted Transportation System Plan. The standards that may be modified include but are not limited to:
  - a. Reduced sight distances.
  - b. Vertical alignment.
  - c. Horizontal alignment.
  - d. Geometric design (length, width, bulb radius, etc.).
  - e. Design speed.
  - f. Crossroads.
  - g. Access policy.
  - h. A proposed alternative design which provides a plan superior to these standards.
  - i. Low impact development.
  - j. Access Management Plans
3. **Modification Procedure**
  - a. A modification shall be proposed with the application for land use approval.
  - b. A modification is processed as a Type II application. Modification requests shall be processed in conjunction with the underlying development proposal.
  - c. When a modification is requested to provide a green street element that is not included in the Engineering Design Manual, the modification process will apply, but the modification fee will be waived.

**ANALYSIS:** The applicant has requested the following Transportation Design Modifications:

SW 124<sup>th</sup> Ave

- Install a 12 ft. multi-use path on the west side of the roadway instead of an 8 ft. sidewalk and 6 ft. bike lane
- Reduce the planter strip width adjacent to the existing retaining wall from 5 ft. to 3 ft.

SW Orr Drive

- Install a 12 ft. multi-use path on both sides of the road (north & south) instead of an 8 ft. sidewalk and 6 ft. bike lane

- Exceed the maximum block of 530 ft. with a new public roadway approximately 1,850 ft. in length along the north property frontage

The applicant has submitted engineering design modifications for each of the requests above and addressed the approval criteria for the modifications in the narrative. The modified street cross sections for each roadway are included at the end of the supplemental submittal dated November 24, 2020 (Exhibit P).

Staff analysis and findings for these requests are provided below.

**FINDING:** The standard is met.

4. **Criteria for Modification: Modifications may be granted when criterion 4a and any one of criteria 4b through 4e are met:**
  - a. **Consideration shall be given to public safety, durability, cost of maintenance, function, appearance, and other appropriate factors to advance the goals of the adopted Sherwood Comprehensive Plan and Transportation System Plan as a whole. Any modification shall be the minimum necessary to alleviate the hardship or disproportional impact.**
  - b. **Topography, right-of-way, existing construction or physical conditions, or other geographic conditions impose an unusual hardship on the applicant, and an equivalent alternative which can accomplish the same design purpose is available.**
  - c. **A minor change to a specification or standard is required to address a specific design or construction problem which, if not enacted, will result in an unusual hardship. Self-imposed hardships shall not be used as a reason to grant a modification request.**
  - d. **An alternative design is proposed which will provide a plan equal to or superior to the existing street standards.**
  - e. **Application of the standards of this chapter to the development would be grossly disproportional to the impacts created.**

**ANALYSIS:** The applicant has provided the following analysis demonstrating compliance with the criteria for modifications:

SW Orr Drive block length modification

The design modification memo dated September 8, 2020 (Applicant Transmittal dated 9/11/20 – Attachment 9) states “The WWSS WTP property, providing a connection to future SW Blake Street from the south would impose significant hardship on the WWSP WTP building layout and would significantly impact existing wetlands, in particular the large, contiguous Wetland G. A connection is not needed by the WTP or for access to the property to the south. Future access is not precluded if needed. Due to existing topography and environmentally sensitive areas and within the future Trammel Crow property, not providing a connection to future SW Blake Street from the north avoids significant hardship on the future Trammel Crow building layout impacting existing wetlands, and a significant road slope required for connection. Additionally, we would like the City to consider that the modification to not connect future Cipole Place to future SW Blake Street was already approved through Land Use Case No 2020-001 SP, CUP, VAR, SUB decided on September 2, 2020.”

#### Multi-use path on 124<sup>th</sup> Ave and SW Orr Drive

The applicant’s narrative states “The difference between an 8-foot sidewalk and 12-foot multi-use path is not anticipated to present any notable durability or cost of maintenance differences on SW 124th Avenue. The modification will enhance public safety by providing a bicycle facility that is separated from roadway traffic. In terms of function, the proposed 12-foot multi-use path will better serve City pedestrian and bicycle goals, given that the larger size (width) and separation of multi-use paths from the roadway tend to be more attractive to pedestrians and bicyclists than sidewalks and bike lanes, especially along higher-speed roads like SW 124th Avenue. The multi-use path will enhance the regional pedestrian and bicycle network by connecting to multi-use paths that will be developed on the SW 124th Avenue frontage of the TCC site to the north and on SW Tualatin-Sherwood Road. The requested modification reflects the minimum area necessary in that it is part of the cross section that County and City staff have agreed upon as required. Therefore, this standard is met.

This proposed alternative design will provide a plan equal or superior to the existing street standards, because the County and City have coordinated and deemed it to be an acceptable design to serve multi-modal mobility, safety, and connectivity objectives on SW 124th Avenue and for this part of the regional transportation network. Therefore, this standard is met. (Applicant’s Narrative - p. 95)

Staff concurs with this analysis and adds that the findings can be applied towards the modification request for SW Orr Drive as well.

#### Landscape Strip on 124<sup>th</sup> Ave

The applicant’s supplemental submittal dated November 24, 2020 (Exhibit P) states “Regarding the landscape strip on SW 124th Avenue, any potential impacts of the modification will be very limited given the modification applies to approximately 100 feet of a frontage that is more than 1,600 feet long. The modification should have no appreciable effects on safety because a landscape strip would still be provided, offering separation between the multi-use path and the roadway. Maintenance costs should also

not differ significantly; if anything, the smaller landscape strip will cost less to maintain. Durability and function will be maintained given the 3-foot width will still provide space for planting. It is possible that this section of landscape strip will not support street trees but it will support shrubs and other plantings, continuing the “green” of this corridor from the proposed street trees, landscaping, and preserved vegetation to the north and south along this roadway.”

Staff concurs with the analysis above and adds the City Engineer has reviewed and approved the modifications as included in Exhibit Q

**FINDING:** This criterion is met.

\*\*\*

### **16.106.030 - Location**

#### **A. Generally**

**The location, width and grade of streets shall be considered in their relation to existing and planned streets, topographical conditions, and proposed land uses. The proposed street system shall provide adequate, convenient and safe traffic and pedestrian circulation, and intersection angles, grades, tangents, and curves shall be adequate for expected traffic volumes. Street alignments shall be consistent with solar access requirements as per Chapter 16.156, and topographical considerations.**

**ANALYSIS:** The applicant’s narrative states “The location of SW Blake Street was conceptually determined by planning processes (TEA Concept Plan, TSP, and TEA Implementation Plan) and then specifically located by the partition process that created the lot for the WTP site. Sight distance standards and coordination with the County and City drove the location of the intersection of SW Blake Street with SW 124th Avenue.10 The alignment of SW Blake Street was established to enable sufficient acreage for both the WTP and the industrial property to the north, consistent with County policy for pre-annexation land divisions in the TEA.”

The narrative continues “SW Blake Street will provide adequate, convenient, and safe traffic and pedestrian circulation in the following ways: implementing recommendations from the TIA (Exhibit F); complying with City code standards including vision clearance (Chapter 16.58) and access standards later in this Chapter; and providing sidewalks that will provide connections to other parts of the City’s sidewalk system (e.g., providing a crossing and connection to sidewalks or multi-use paths to be constructed by TCC on its SW 124th Avenue frontage that provide access to sidewalks or multi-use paths on SW Tualatin-Sherwood Road). Street grade and intersection angles, grades, tangents, and curves will be provided consistent with City standards (namely the City’s

Engineering Design Standards Manual and Drawings) and in coordination with City Engineering.” (Applicant’s Narrative – p. 96).

Staff concurs with this analysis and finds the criterion has been met.

**FINDING:** This criterion is met.

**B. Street Connectivity and Future Street Systems**

- 1. Future Street Systems. The arrangement of public streets shall provide for the continuation and establishment of future street systems as shown on the Local Street Connectivity Map contained in the adopted Transportation System Plan (Figure 16).**
- 2. Connectivity Map Required. New residential, commercial, and mixed use development involving the construction of new streets shall be submitted with a site plan that implements, responds to and expands on the Local Street Connectivity map contained in the TSP.**
  - a. A project is deemed to be consistent with the Local Street Connectivity map when it provides a street connection in the general vicinity of the connection(s) shown on the map, or where such connection is not practicable due to topography or other physical constraints; it shall provide an alternate connection approved by the decision-maker.**
  - b. Where a developer does not control all of the land that is necessary to complete a planned street connection, the development shall provide for as much of the designated connection as practicable and not prevent the street from continuing in the future.**
  - c. Where a development is disproportionately impacted by a required street connection, or it provides more than its proportionate share of street improvements along property line (i.e., by building more than 3/4 width street), the developer shall be entitled to System Development charge credits, as determined by the City Engineer.**
  - d. Driveways that are more than 24 feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where prevented by topography, rail lines, freeways, pre-**

**existing development, or leases, easements, or covenants.**

**ANALYSIS:** The development will provide street dedications and improvements that implement Figure 18 Local Street Connectivity Map of the City's Transportation System Plan. A new east-west street (SW Orr Drive) will be constructed in the general location shown on the map. Two driveways will be greater than 24 ft. in width, however, there are no existing or planned streets on the opposite side of SW Orr Drive with which to align.

**FINDING:** This criterion is met.

- 3. Block Length. For new streets except arterials, block length shall not exceed 530 feet. The length of blocks adjacent to arterials shall not exceed 1,800 feet.**

**ANALYSIS:** The proposed street length for SW 124<sup>th</sup> Ave along the property's eastern frontage is approximately 1,600 which conforms to the standard above. SW 124<sup>th</sup> Ave is an arterial and the proposed length meets the standard above.

The proposed street length for SW Orr Drive along the property's northern frontage is approximately 1,850 ft. A design modification has been requested for this street and is addressed above.

**FINDING:** This criterion is met with approval of the block length design modification request for SW Orr Drive.

- 4. Where streets must cross water features identified in Title 3 of the Urban Growth Management Functional Plan (UGMFP), provide crossings at an average spacing of 800 to 1,200 feet, unless habitat quality or length of crossing prevents a full street connection.**

**ANALYSIS:** This project does not involve a street crossing of water features identified in Title 3 of the UGMFP.

**FINDING:** This standard does not apply.

- 5. Where full street connections over water features identified in Title 3 of the UGMFP cannot be constructed in centers, main streets and station communities (including direct connections from adjacent neighborhoods), or spacing of full street crossings exceeds 1,200 feet, provide bicycle and pedestrian**



**crossings at an average spacing of 530 feet, unless exceptional habitat quality or length of crossing prevents a connection.**

**ANALYSIS:** This project does not involve a street crossing of water features identified in Title 3 of the UGMFP.

**FINDING:** This standard does not apply.

6. **Pedestrian and Bicycle Connectivity. Paved bike and pedestrian accessways consistent with cross section standards in Figure 8-6 of the TSP shall be provided on public easements or right-of-way when full street connections are not possible, with spacing between connections of no more than 300 feet. Multi-use paths shall be built according to the Pedestrian and Bike Master Plans in the adopted TSP.**
7. **Exceptions. Streets, bike, and pedestrian connections need not be constructed when any of the following conditions exists:**
  - a. **Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided.**
  - b. **Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or**
  - c. **Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.**

**ANALYSIS:** The applicant's narrative states "Physical conditions make a street or bike and pedestrian accessway connection through the WTP site to the south impractical, and an exception pursuant to this standard is necessary and reasonable. A major driver of the proposed site design is preservation of the large kolk wetland, its associated VC, and surrounding trees and vegetation in the southern portion of the site. The proposed preservation of the wetland, VC, trees, and vegetation is shown in the Tree Protection Plans (Exhibit A, Sheets B-021 through B-023). Providing a street or accessway connection through the site would severely compromise this preservation and protection."

“In addition, a street or accessway connection through the WTP site is not feasible because: it would significantly reduce the security of the site; there is no existing transportation facility on the southern border of the site with which to connect; and, bisecting the WTP property would render the needed site layout infeasible and undevelopable.” (PAGE 98-99)

Staff concurs with this analysis and finds an exception to the bike and pedestrian connectivity standards is warranted.

**FINDING:** This criterion is met.

**C. Underground Utilities**

**All public and private underground utilities, including sanitary sewers and storm water drains, shall be constructed prior to the surfacing of streets. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.**

**ANALYSIS:** Public and private utilities are proposed to be located underground with the construction of streets and accessways through the site.

**FINDING:** This standard is met.

**D. Additional Setbacks**

**Generally additional setbacks apply when the width of a street right-of-way abutting a development is less than the standard width under the functional classifications in Section VI of the Community Development Plan. Additional setbacks are intended to provide unobstructed area for future street right-of-way dedication and improvements, in conformance with Section VI. Additional setbacks shall be measured at right angles from the centerline of the street.**

	<b>Classification</b>	<b>Additional Setback</b>
<b>1.</b>	<b>Principle Arterial (99W)</b>	<b>61 feet</b>
<b>2.</b>	<b>Arterial</b>	<b>37 feet</b>
<b>3.</b>	<b>Collector</b>	<b>32 feet</b>
<b>4.</b>	<b>Neighborhood Route</b>	<b>32 feet</b>

	<b>Classification</b>	<b>Additional Setback</b>
<b>5.</b>	<b>Local</b>	<b>26 feet</b>

**ANALYSIS:** The applicant will be dedicating right-of-way required for SW Orr Drive and SW 124<sup>th</sup> Avenue. No additional setback is required.

**FINDING:** This standard is met.

**16.106.040 - Design**

**Standard cross sections showing street design and pavement dimensions are located in the City of Sherwood's Engineering Design Manual.**

**A. Reserve Strips**

**Reserve strips or street plugs controlling access or extensions to streets are not allowed unless necessary for the protection of the public welfare or of substantial property rights. All reserve strips shall be dedicated to the appropriate jurisdiction that maintains the street.**

**ANALYSIS:** No reserve strips or street plugs are proposed.

**FINDING:** This standard does not apply.

**B. Alignment**

**All proposed streets shall, as far as practicable, be in alignment with existing streets. In no case shall the staggering of streets create a "T" intersection or a dangerous condition. Street offsets of less than one hundred (100) feet are not allowed.**

**ANALYSIS:** SW Orr Drive (City collector) will be constructed by the applicant and create a new intersection with SW 124<sup>th</sup> Ave. Two private driveways are proposed off SW Orr Drive, but no new street intersections will be completed except for that with SW 124<sup>th</sup> Ave.

Access spacing along SW 124<sup>th</sup> Ave is determined by Washington County. Washington County has provided comments (Exhibit R) that indicate SW Orr Drive will be aligned with SW Blake St to the east. Street staggering or offsets of less than 100 ft. are not proposed.

**FINDING:** This standard is met.

**C. Future Extension**

Where necessary to access or permit future subdivision or development of adjoining land, streets must extend to the boundary of the proposed development and provide the required roadway width. Dead-end streets less than 100' in length must comply with the Engineering Design Manual.

A durable sign must be installed at the applicant's expense. The sign is required to notify the public of the intent to construct future streets. The sign must read as follows: "This road will be extended with future development. For more information contact the City of Sherwood Engineering Department."

**ANALYSIS:** SW Orr Drive will be stubbed at the western edge of the project area and is required to be barricaded and signed.

**FINDING:** This standard is as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C10:** Prior to Approval of Engineering Public Improvement Plans, the plans shall provide for the stubbed road at the west end of the site (SW Orr Drive) to barricaded and signed in conformance with the City of Sherwood Engineering Design Manual.

**D. Intersection Angles**

Streets shall intersect as near to ninety (90) degree angles as practical, except where topography requires a lesser angle. In all cases, the applicant shall comply with the Engineering Design Manual.

**ANALYSIS:** As shown in the Transportation Circulation Plans (Exhibit A – Sheets B-028 and B-029) the proposed streets and driveways will run at 90 degree angles as far as practical.

**FINDING:** This standard is met.

**E. Cul-de-sacs**

1. All cul-de-sacs shall be used only when exceptional topographical constraints, existing development patterns, or compliance with other standards in this code preclude a street extension and circulation. A cul-de-sac shall not be more than two hundred (200) feet in length and shall not provide access to more than 25 dwelling units.

2. **All cul-de-sacs shall terminate with a turnaround in accordance with the specifications in the Engineering Design Manual. The radius of circular turnarounds may be larger when they contain a landscaped island, parking bay in their center, Tualatin Valley Fire and Rescue submits a written request, or an industrial use requires a larger turnaround for truck access.**
3. **Public easements, tracts, or right-of-way shall provide paved pedestrian and bicycle access ways at least 6 feet wide where a cul-de-sac or dead-end street is planned, to connect the ends of the streets together, connect to other streets, or connect to other existing or planned developments in accordance with the standards of this Chapter, the TSP, the Engineering Design Manual or other provisions identified in this Code for the preservation of trees.**

**ANALYSIS:** Cul-de-sacs are not proposed as part of this project.

**FINDING:** This standard does not apply.

**F. Grades and Curves**

**Grades shall be evaluated by the City Engineer and comply with the Engineering Design Manual.**

**ANALYSIS:** The City's engineering department will review the grades and curves of the site during the approval of the final engineering plans.

**FINDING:** This standard will be met.

**G. Streets Adjacent to Railroads**

**Streets adjacent to railroads shall run approximately parallel to the railroad and be separated by a distance suitable to allow landscaping and buffering between the street and railroad. Due consideration shall be given at cross streets for the minimum distance required for future grade separations and to provide sufficient depth to allow screening of the railroad.**

**ANALYSIS:** No streets associated with the development are adjacent to a railroad.

**FINDING:** This standard does not apply.

**H. Buffering of Major Streets**

**Where a development abuts Highway 99W, or an existing or proposed principal arterial, arterial or collector street, or**

**neighborhood route, adequate protection for residential properties must be provided, through and local traffic be separated, and traffic conflicts minimized. In addition, visual corridors pursuant to Section 16.142.040, and all applicable access provisions of Chapter 16.96, are to be met. Buffering may be achieved by: parallel access streets, lots of extra depth abutting the major street with frontage along another street, or other treatment suitable to meet the objectives of this Code.**

**ANALYSIS:** The applicant's narrative states "The proposed development abuts an existing arterial street (SW 124th Avenue) on most of its eastern frontage and abuts a collector a new collector street (SW Blake Street) on its northern frontage. The development is not adjacent to residential zoning or properties. SW 124th Avenue has been designed and constructed to serve as a through-traffic street, connecting to SW Tualatin-Sherwood Road to the north and SW Tonquin Road to the south. The TIA included in this application (Appendix F) shows and describes the regional, through-traffic character of this roadway. SW Blake Street is designed and will be constructed for local traffic. When fully built out west of the WTP site, the street will connect to other local roadways – SW Oregon Street and SW Dahlke Lane, as laid out in TEA planning and implementation work. Measures to minimize traffic conflicts include the provision of the following: an eastbound left-turn lane on SW Blake Street approaching SW 124th Avenue; medians along most of SW Blake Street; sidewalks along both the SW Blake Street and SW 124th Avenue frontages; and a marked crosswalk and ADA accessible curb ramps at the SW Blake Street/SW 124th Avenue intersection. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). (PAGE 102)

Staff concurs with this analysis and adds that the development site and streets do not abut a residential zone.

**FINDING:** This standard is met.

**I. Median Islands**

**As illustrated in the adopted Transportation System Plan, Chapter 8, median islands may be required on arterial or collector streets for the purpose of controlling access, providing pedestrian safety or for aesthetic purposes.**

**ANALYSIS:** A median island is proposed on SW Orr Drive where no turn lane is located. The island will be used for stormwater management and enhance overall street aesthetic.

**FINDING:** This standard is met.

**J. Transit Facilities**

Development along an existing or proposed transit route, as illustrated in Figure 7-2 in the TSP, is required to provide areas and facilities for bus turnouts, shelters, and other transit-related facilities to Tri-Met specifications. Transit facilities shall also meet the following requirements:

1. Locate buildings within 20 feet of or provide a pedestrian plaza at major transit stops.
2. Provide reasonably direct pedestrian connections between the transit stop and building entrances on the site.
3. Provide a transit passenger landing pad accessible to disabled persons (if not already existing to transit agency standards).
4. Provide an easement or dedication for a passenger shelter and underground utility connection from the new development to the transit amenity if requested by the public transit provider.
5. Provide lighting at a transit stop (if not already existing to transit agency standards).

**ANALYSIS:** The proposed development is not located along an existing or proposed transit route.

**FINDING:** This standard does not apply.

**K. Traffic Controls**

1. Pursuant to Section 16.106.080, or as otherwise required by the City Engineer, an application must include a traffic impact analysis to determine the number and types of traffic controls necessary to accommodate anticipated traffic flow.
2. For all other proposed developments including commercial, industrial or institutional uses with over an estimated 400 ADT, or as otherwise required by the City Engineer, the application must include a traffic impact analysis to determine the number and types of traffic controls necessary to accommodate anticipated traffic flow.

**L. Traffic Calming**

1. The following roadway design features, including internal circulation drives, may be required by the City in new construction in areas where traffic calming needs are anticipated:
  - a. Curb extensions (bulb-outs).
  - b. Traffic diverters/circles.
  - c. Alternative paving and painting patterns.

- d. Raised crosswalks, speed humps, and pedestrian refuges.
  - e. Other methods demonstrated as effective through peer reviewed Engineering studies.
2. With approval of the City Engineer, traffic calming measures such as speed humps and additional stop signs can be applied to mitigate traffic operations and/or safety problems on existing streets. They should not be applied with new street construction unless approved by the City Engineer and Tualatin Valley Fire & Rescue.

**ANALYSIS:** The development is not anticipated to result in over 400 average daily trips, however, the City Engineer has required a TIA for the application. The TIA concludes that the highest traffic usage will be during construction of the site, and that permanent traffic impacts during the long term operations will be minimal and not require any additional traffic mitigation measures.

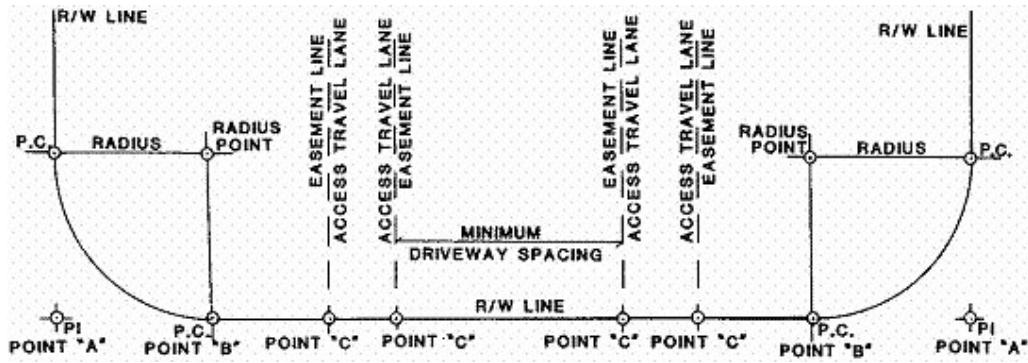
**FINDING:** This standard is met.

**M. Vehicular Access Management**

All developments shall have legal access to a public road. Access onto public streets shall be permitted upon demonstration of compliance with the provisions of adopted street standards in the Engineering Design Manual.

- 1. **Measurement:** See the following access diagram where R/W = Right-of-Way; and P.I. = Point-of-Intersection where P.I. shall be located based upon a 90 degree angle of intersection between ultimate right-of-way lines.
  - a. Minimum right-of-way radius at intersections shall conform to City standards.
  - b. All minimum distances stated in the following sections shall be governed by sight distance requirements according to the Engineering Design Manual.
  - c. All minimum distances stated in the following sections shall be measured to the nearest easement line of the access or edge of travel lane of the access on both sides of the road.
  - d. All minimum distances between accesses shall be measured from existing or approved accesses on both sides of the road.
  - e. Minimum spacing between driveways shall be measured from Point "C" to Point "C" as shown below:





## 2. Roadway Access

No use will be permitted to have direct access to a street or road except as specified below. Access spacing shall be measured from existing or approved accesses on either side of a street or road. The lowest functional classification street available to the legal lot, including alleys within a public easement, shall take precedence for new access points.

### c. Collectors:

All commercial, industrial and institutional uses with one-hundred-fifty (150) feet or more of frontage will be permitted direct access to a Collector. Uses with less than one-hundred-fifty (150) feet of frontage shall not be permitted direct access to Collectors unless no other alternative exists.

Where joint access is available it shall be used, provided that such use is consistent with Section 16.96.040, Joint Access. No use will be permitted direct access to a Collector within one-hundred (100) feet of any present Point "A." Minimum spacing between driveways (Point "C" to Point "C") shall be one-hundred (100) feet. In all instances, access points near an intersection with a Collector or Arterial shall be located beyond the influence of standing queues of the intersection in accordance with AASHTO standards. This requirement may result in access spacing greater than one hundred (100) feet.

### d. Arterials and Highway 99W - Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Figure 1 of the Community Development Plan, Part II, shall be limited as follows:

- (1) Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W or arterials. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.**
- (2) Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses developed after the effective date of this Code shall be required to use the alternative ingress and egress. Alternatives include shared or crossover access agreement between properties, consolidated access points, or frontage or backage roads. When alternatives do not exist, access shall comply with the following standards:**

  - (a) Access to Highway 99W shall be consistent with ODOT standards and policies per OAR 734, Division 51, as follows: Direct access to an arterial or principal arterial will be permitted provided that Point 'A' of such access is more than six hundred (600) feet from any intersection Point 'A' or other access to that arterial (Point 'C').**
  - (b) The access to Highway 99W will be considered temporary until an alternative access to public right-of-ways is created. When the alternative access is available the temporary access to Highway 99W shall be closed.**



**FINDING:** These criteria are met.

**N. Private Streets**

1. The construction of a private street serving a single-family residential development is prohibited unless it provides principal access to two or fewer residential lots or parcels (i.e. flag lots).
2. Provisions shall be made to assure private responsibility for future access and maintenance through recorded easements. Unless otherwise specifically authorized, a private street shall comply with the same standards as a public street identified in the Community Development Code and the Transportation System Plan.
3. A private street shall be distinguished from public streets and reservations or restrictions relating to the private street shall be described in land division documents and deed records.
4. A private street shall also be signed differently from public streets and include the words "Private Street".

**ANALYSIS:** Private streets are not proposed as part of this development.

**FINDING:** These criteria do not apply.

**16.106.060 - Sidewalks**

**A. Required Improvements**

1. Except as otherwise provided, sidewalks shall be installed on both sides of a public street and in any special pedestrian way within new development.
2. For Highway 99W, arterials, or in special industrial districts, the City Manager or designee may approve a development without sidewalks if alternative pedestrian routes are available.
3. In the case of approved cul-de-sacs serving less than fifteen (15) dwelling units, sidewalks on one side only may be approved by the City Manager or designee.

**B. Design Standards**

1. **Arterial and Collector Streets**  
Arterial and collector streets shall have minimum six (6) or eight (8) foot wide sidewalks/multi-use paths, located as required by this Code. Residential areas shall have a minimum

of a six (6) foot wide sidewalk and commercial industrial areas shall have a minimum of an eight (8) foot wide sidewalk.

**2. Local Streets**

Local streets shall have minimum five (5) foot wide sidewalks, located as required by this Code.

**3. Handicapped Ramps**

Sidewalk handicapped ramps shall be provided at all intersections.

**ANALYSIS:** New sidewalks will be provided along both sides of SW Orr Drive and the west side of SW 124<sup>th</sup> Ave where the site abuts public right-of-way. As discussed in the design modification section above, 12-foot wide multi-use paths will be provided instead of a traditional 8 ft. sidewalk and 6 ft. bike lane. New ADA ramps will be provided at the new street intersection.

**FINDING:** These standards are met.

**C. Pedestrian and Bicycle Paths**

Provide bike and pedestrian connections on public easements or right-of-way when full street connections are not possible, with spacing between connections of no more than 330 feet except where prevented by topography, barriers such as railroads or highways, or environmental constraints such as rivers and streams.

**ANALYSIS:** Pedestrian and bicycle paths through the development site are not practical as discussed in the findings for SZCDC § 16.106.030(B)(6) – (7).

**FINDING:** This standard is not applicable.

**16.106.070 - Bike Lanes**

If shown in Figure 13 of the Transportation System Plan, bicycle lanes shall be installed in public rights-of-way, in accordance with City specifications. Bike lanes shall be installed on both sides of designated roads, should be separated from the road by a twelve-inch stripe or other means approved by Engineering Staff, and should be a minimum of five (5) feet wide.

**ANALYSIS:** The applicant will be providing a new 12-foot wide multi-use path on both sides of SW Orr Drive and the west side of SW 124<sup>th</sup> Ave.

**FINDING:** This standard is met.

**16.106.080 - Traffic Impact Analysis (TIA)**

**A. Purpose**

The purpose of this section is to implement Sections 660-012-0045(2)(b) and -0045(2)(e) of the State Transportation Planning Rule (TPR), which require the City to adopt performance standards and a process to apply conditions to land use proposals in order to minimize impacts on and protect transportation facilities. This section establishes requirements for when a traffic impact analysis (TIA) must be prepared and submitted; the analysis methods and content involved in a TIA; criteria used to review the TIA; and authority to attach conditions of approval to minimize the impacts of the proposal on transportation facilities.

This section refers to the TSP for performance standards for transportation facilities as well as for projects that may need to be constructed as mitigation measures for a proposal's projected impacts. This section also relies on the City's Engineering Design Manual to provide street design standards and construction specifications for improvements and projects that may be constructed as part of the proposal and mitigation measures approved for the proposal.

**B. Applicability**

A traffic impact analysis (TIA) shall be required to be submitted to the City with a land use application at the request of the City Engineer or if the proposal is expected to involve one (1) or more of the following:

1. An amendment to the Sherwood Comprehensive Plan or zoning map.
2. A new direct property approach road to Highway 99W is proposed.
3. The proposed development generates fifty (50) or more PM peak-hour trips on Highway 99W, or one hundred (100) PM peak-hour trips on the local transportation system.
4. An increase in use of any adjacent street or direct property approach road to Highway 99W by ten (10) vehicles or more per day that exceed the twenty thousand-pound gross vehicle weight.
5. The location of an existing or proposed access driveway does not meet minimum spacing or sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, thereby creating a safety hazard.

6. 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.

**C. Requirements**

The following are typical requirements that may be modified in coordination with Engineering Staff based on the specific application.

1. **Pre-application Conference.** The applicant shall meet with the City Engineer prior to submitting an application that requires a TIA. This meeting will be coordinated with Washington County and ODOT when an approach road to a County road or Highway 99W serves the property, so that the TIA will meet the requirements of all relevant agencies.
2. **Preparation.** The TIA shall be prepared by an Oregon Registered Professional Engineer qualified to perform traffic Engineering analysis and will be paid for by the applicant.
3. **Typical Average Daily Trips and Peak Hour Trips.** The latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE), shall be used to gauge PM peak hour vehicle trips, unless a specific trip generation study that is approved by the City Engineer indicates an alternative trip generation rate is appropriate.
4. **Intersection-level Analysis.** Intersection-level analysis shall occur at every intersection where the analysis shows that fifty (50) or more peak hour vehicle trips can be expected to result from the development.
5. **Transportation Planning Rule Compliance.** The requirements of OAR 660-012-0060 shall apply to those land use actions that significantly affect the transportation system, as defined by the Transportation Planning Rule.

**D. Study Area**

The following facilities shall be included in the study area for all TIAs:

1. All site-access points and intersections (signalized and unsignalized) adjacent to the proposed development site. If the site fronts an arterial or collector street, the analysis shall address all intersections and driveways along the site frontage and within the access spacing distances extending out from the boundary of the site frontage.
2. Roads and streets through and adjacent to the site.
3. All intersections needed for signal progression analysis.

4. In addition to these requirements, the City Engineer may require analysis of any additional intersections or roadway links that may be adversely affected as a result of the proposed development.

**E. Analysis Periods**

To adequately assess the impacts of a proposed land use action, the following study periods, or horizon years, should be addressed in the transportation impact analysis where applicable:

1. Existing Year.
2. Background Conditions in Project Completion Year. The conditions in the year in which the proposed land use action will be completed and occupied, but without the expected traffic from the proposed land use action. This analysis should account for all City-approved developments that are expected to be fully built out in the proposed land use action horizon year, as well as all planned transportation system improvements.
3. Full Buildout Conditions in Project Completion Year. The background condition plus traffic from the proposed land use action assuming full build-out and occupancy.
4. Phased Years of Completion. If the project involves construction or occupancy in phases, the applicant shall assess the expected roadway and intersection conditions resulting from major development phases. Phased years of analysis will be determined in coordination with City staff.
5. Twenty-Year or TSP Horizon Year. For planned unit developments, comprehensive plan amendments or zoning map amendments, the applicant shall assess the expected future roadway, intersection, and land use conditions as compared to approved comprehensive planning documents.

**F. Approval Criteria**

When a TIA is required, a proposal is subject to the following criteria, in addition to all criteria otherwise applicable to the underlying land use proposal:

1. The analysis complies with the requirements of 16.106.080.C;
2. The analysis demonstrates that adequate transportation facilities exist to serve the proposed development or identifies mitigation measures that resolve identified traffic safety problems in a manner that is satisfactory to the City Engineer and, when County or State highway facilities are affected, to Washington County and ODOT;



3. For affected non-highway facilities, the TIA demonstrates that mobility and other applicable performance standards established in the adopted City TSP have been met; and
4. Proposed public improvements are designed and will be constructed to the street standards specified in Section 16.106.010 and the Engineering Design Manual, and to the access standards in Section 16.106.040.
5. Proposed public improvements and mitigation measures will provide safe connections across adjacent right-of-way (e.g., protected crossings) when pedestrian or bicycle facilities are present or planned on the far side of the right-of-way.

**ANALYSIS:** At the request of the City Engineer, the applicant has provided a TIA in conformance with the requirements above. The study area included the adjacent streets and the following intersections:

- SW 124<sup>th</sup> Ave / SW Orr Drive
- SW 124<sup>th</sup> Ave / Tualatin-Sherwood Road
- SW 124<sup>th</sup> Ave / SW Tonquin Road

The applicant's narrative states "Given negligible impacts from projected WTP construction traffic and even fewer impacts from projected WTP operations traffic, permanent public improvements and mitigation related to traffic impacts are not warranted or recommended. The TIA (Exhibit F) does make recommendations regarding temporary traffic control measures including signing, lighting, traffic calming, and speed enforcement during construction to address safety and mobility.

Public improvements related to requirements aside from traffic impacts – for example the construction of the required new SW Blake Street and SW 124th Avenue frontage improvements – are designed to City standards (with the approval of Transportation Facilities Modifications and Engineering Design Modifications as needed) and provide safe connections across SW Blake Street with a marked crossing at the intersection of SW Blake Street/SW 124th Avenue. See the Transportation/Circulation Plans (Exhibit A, Sheets B-028 and B-029). (Applicant's Narrative – p. 113)

Staff concurs with this analysis. The applicant is responsible for providing street frontage improvements along the north and east property lines where adjacent to right-of-way. These improvements will include the new street intersection of SW Orr Drive and SW 124<sup>th</sup> Ave.

The City Engineer has also issued transportation comments and conditions (Exhibit Q) that incorporate the findings and recommendations of the TIA.

**FINDING:** This criterion is met.

**G. Conditions of Approval**

The City may deny, approve, or approve a development proposal with conditions needed to meet operations and safety standards and provide the necessary right-of-way and improvements to ensure consistency with the future planned transportation system. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on transportation facilities, pursuant to Section 16.106.090. Findings in the development approval shall indicate how the required improvements are directly related to and are roughly proportional to the impact of development.

**ANALYSIS:** A number of Conditions of Approval related to public infrastructure are required, as described in this report. The applicant is responsible for meeting all conditions of approval described in the Notice of Decision.

**FINDING:** This criterion is met.

**16.106.090 - Rough Proportionality**

**A. Purpose**

The purpose of this section is to ensure that required transportation facility improvements are roughly proportional to the potential impacts of the proposed development. The rough proportionality requirements of this section apply to both frontage and non-frontage improvements. A proportionality analysis will be conducted by the City Engineer for any proposed development that triggers transportation facility improvements pursuant to this chapter. The City Engineer will take into consideration any benefits that are estimated to accrue to the development property as a result of any required transportation facility improvements. A proportionality determination can be appealed pursuant to Chapter 16.76. The following general provisions apply whenever a proportionality analysis is conducted.

**B. Mitigation of impacts due to increased demand for transportation facilities associated with the proposed development shall be provided in rough proportion to the transportation impacts of the proposed development. When applicable, anticipated impacts will be determined by the TIA in accordance with Section 16.106.080. When no TIA is required, anticipated impacts will be determined by the City Engineer.**

- C. The following shall be considered when determining proportional improvements:
1. Condition and capacity of existing facilities within the impact area in relation to City standards. The impact area is generally defined as the area within a one-half-mile radius of the proposed development. If a TIA is required, the impact area is the TIA study area.
  2. Existing vehicle, bicycle, pedestrian, and transit use within the impact area.
  3. The effect of increased demand on transportation facilities and other approved, but not yet constructed, development projects within the impact area that is associated with the proposed development.
  4. Applicable TSP goals, policies, and plans.
  5. Whether any route affected by increased transportation demand within the impact area is listed in any City program including school trip safety; neighborhood traffic management; capital improvement; system development improvement, or others.
  6. Accident history within the impact area.
  7. Potential increased safety risks to transportation facility users, including pedestrians and cyclists.
  8. Potential benefit the development property will receive as a result of the construction of any required transportation facility improvements.
  9. Other considerations as may be identified in the review process pursuant to Chapter 16.72.

**ANALYSIS:** All of the new or modified improvements required as part of the development will abut or directly benefit the proposed development. The required public improvements are roughly proportional to the scope and intensity of the development, as described in this report and the agency comments.

**FINDING:** These criteria are met.

## **Chapter 16.108 – IMPROVEMENT PLAN REVIEW**

### **16.108.010 – Preparation and Submission**

An improvement plan shall be prepared and stamped by a Registered Civil Engineer certifying compliance with City specifications. Two (2) sets of the plan shall be submitted to the City for review. An improvements plan shall be accompanied by a review fee as per this Section.

- A. Review Fee

Plan review fees are calculated as a percentage of the estimated total cost of improvements and are set by the "Schedule of Development and Business Fees" adopted by Resolution of the Council. This schedule is included herein for the purposes of information, but is deemed to be separate from and independent of this Code.

**B. Engineering Agreement**

A copy of an agreement or contract between the applicant and Registered Civil Engineer for:

1. Surveying sufficient to prepare construction plans.
2. Preparation of construction plans and specifications.
3. Construction staking, and adequate inspection.
4. Construction notes sufficient to develop accurate as-built plans.
5. Drawing of accurate as-built plans and submission of reproducible mylars for finals to the City.
6. Certificate stating that construction was completed in accordance with required plans and specifications.

**ANALYSIS:** The development project will include the construction of new public facilities and improvement plan review is required. All work impacting or creating public facilities requires an Engineering Compliance Agreement issued by the City of Sherwood Engineering Department.

**FINDING:** This criterion is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C11:** Prior to Approval of the Engineering Public Improvement Plans or Issuance of Building Permits, an Engineering Compliance Agreement shall be obtained from the City of Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL G7:** Prior to Receiving Occupancy, the subject development shall receive Final Acceptance of Public Improvements from the City of Sherwood Engineering Department.

**Chapter 16.110 – SANITARY SEWERS**

Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Provided, however, that when impractical to immediately connect to a trunk sewer system, the use of septic tanks may be approved, if sealed sewer laterals are installed for future connection and the temporary system meets all other applicable City, Clean Water Services, Washington County and State sewage disposal standards.

**16.110.020 - Design Standards**

**A. Capacity**

**Sanitary sewers shall be constructed, located, sized, and installed at standards consistent with this Code, the Sanitary Sewer Service Plan Map in the Sanitary Sewer Master Plan, and other applicable Clean Water Services and City standards, in order to adequately serve the proposed development and allow for future extensions.**

**B. Over-Sizing**

- 1. When sewer facilities will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.**
- 2. Reimbursement shall be in an amount estimated by the City to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the development, for a period of ten (10) years from the time of installation of the sewers. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.**

**ANALYSIS:** The City of Sherwood Engineering Comments (Exhibit Q) state “The subject property proposes to extend the public sanitary sewer from the existing public sanitary sewer located north of the site, to an approved point within SW Orr Drive. Any portion of the public sanitary sewer located outside the public right-of-way shall be placed within a public sanitary sewer easement dedicated to the City. The width of the easement shall be a minimum of 15-feet for the sanitary line alone. If public water and/or storm water utilize the same alignment, then increase the easement width by 5-feet for each additional public utility located within the easement alignment.”

The applicant’s narrative states “Sanitary sewers will be installed to serve the new development and will connect to existing sanitary sewer mains. The City will provide sanitary sewer service. The sewer main connecting the WTP to the existing system will extend through the TCC site north of the WTP site to SW Tualatin-Sherwood Road and extend west along the road to an existing manhole near the intersection with SW Oregon Street. The sanitary sewer service will provide wastewater disposal for the restrooms, kitchens, sinks and floor drains on the WTP site. In addition, the sewer will be capable of conveying controlled discharge from the overflow basins on the site. See the Site Utilities Plan Layout Area A and Sanitary Sewer Pipeline Plan and Profiles for subareas north of the WTP Site (Exhibit A, Sheet B-144, and B-154 through B-156). Additional Subarea Site Utilities Plans are available in the Technical Review Plan Set (Exhibit B, Sheets B-154 through B-167). (Applicant’s Narrative - p. 118-119)

See the City of Sherwood Engineering Comments (Exhibit Q) for full comments regarding sanitary sewer. The recommended conditions of approval in the Engineering Comments are included below. Additional details on the proposed system is provided in the applicant's narrative and plans.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C12:** Prior to Approval of Public Improvement Plans, public sanitary line shall be extended as needed, either east or west within SW Orr Drive to provide for private service laterals to the site. The applicant has provided design data that shows that extension of the public sanitary sewer line to the west end of SW Orr Drive is not required as the depth of cover and adverse grads preclude service connection to developable lots located west of the subject site.

**RECOMMENDED CONDITION OF APPROVAL C13:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public sanitary sewer beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL E4:** Prior to Issuance of a Plumbing Permit, the proposed development shall design the private sanitary sewer to be in compliance with the current Oregon Plumbing Specialty Code.

**RECOMMENDED CONDITION OF APPROVAL F4:** Prior to Final Acceptance of the Constructed Public Improvements, any public sanitary sewer facilities located on private property shall have a recorded public sanitary sewer easement encompassing the related public sanitary sewer improvements meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C29:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall extend an appropriately sized public sanitary sewer from the existing public sanitary sewer located north of the site, into SW Orr Drive. Extension of the public sanitary sewer within SW Orr Drive shall only be what is necessary to serve the subject site, meeting the approval of the Sherwood Engineering Department.

## **Chapter 16.112– WATER SUPPLY**

### **16.112.010 Required Improvements**

**Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development. All waterlines shall be connected to existing water mains or shall construct new mains appropriately sized and located in accordance with the Water System Master Plan.**

## **16.112.020 - Design Standards**

### **A. Capacity**

**Water lines providing potable water supply shall be sized, constructed, located and installed at standards consistent with this Code, the Water System Master Plan, the City's Design and Construction Manual, and with other applicable City standards and specifications, in order to adequately serve the proposed development and allow for future extensions.**

### **B. Fire Protection**

**All new development shall comply with the fire protection requirements of Chapter 16.116, the applicable portions of Chapter 7 of the Community Development Plan, and the Fire District.**

### **C. Over-Sizing**

- 1. When water mains will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.**
- 2. Reimbursement shall be in an amount estimated by the City to be the proportionate share of the cost of each connection made to the water mains by property owners outside the development, for a period of ten (10) years from the time of installation of the mains. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.**
- 3. When over-sizing is required in accordance with the Water System Master Plan, it shall be installed per the Water System Master Plan. Compensation for over-sizing may be provided through direct reimbursement, from the City, after mainlines have been accepted. Reimbursement of this nature would be utilized when the cost of over-sizing is for system wide improvements.**

**ANALYSIS:** The City of Sherwood Engineering Comments (Exhibit Q) state “The adjacent site development is constructing public water mainline extensions to the north property line of the subject site. These improvement consist of:

- a) A 16-inch water mainline extending south along SE Cipole Place and a public utility easement to the north property line of the subject property.
- b) A 12-inch water mainline extending south along SW 124<sup>th</sup> Avenue to the north property line of the subject property.

The subject property will connect to an existing 16-inch diameter public water line located just north of the subject site and extend it to an approved point within SW Orr Drive. The applicant shall then extend the 16-inch water line down SW Orr Drive ending at the western property line of the subject property.

The subject property will also connect to an existing 12-inch diameter public water line located within SW 124<sup>th</sup> Avenue at the north property of the subject site. The applicant will connect to this existing water mainline and extend it west along SW Orr Drive to intersect with the new 16-inch water main line. This is a looped system to provide for resiliency and redundancy.”

See the City of Sherwood Engineering Comments (Exhibit Q) for full comments regarding water. The recommended conditions of approval in the Engineering Comments are included below. Additional details on the proposed system is provided in the applicant’s narrative and plans.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C14:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to:

- a) Construct a new 16-inch diameter public water line from the existing public water line located north of the site within a utility easement, and extending it to an approved point within SW Orr Drive, then west along the SW Orr Drive alignment to the western property line of the subject site, meeting the approval of the City of Sherwood Engineering Department.
- b) Construct a new 12-inch diameter public water line from the existing public water line located in SW 124<sup>th</sup> Avenue at the north property line of the subject site, west along SW Orr Drive to the intersection with the new 16-inch water mainline, meeting the approval of the City of Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C15:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public water line beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C16:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide water service to supply domestic, irrigation and fire water (if required) to all lots of the subject development at a location meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C17:** Prior to Approval of the Engineering Public Improvement Plans, water flows calculations (domestic, irrigation



and fire) shall be provided by the developer to the City of Sherwood Public Works Department for review and approval.

**RECOMMENDED CONDITION OF APPROVAL C18:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for the installation of Reduced Pressure Backflow Assemblies meeting Sherwood Engineering Department standards.

**RECOMMENDED CONDITION OF APPROVAL C19:** Prior to Approval of the Engineering Public Improvement Plans, if on-site fire protection is to be installed, the proposed development shall design for the installation of backflow protection meeting Sherwood Engineering Department standards.

**RECOMMENDED CONDITION OF APPROVAL E5:** Prior to Issuance of a Plumbing Permit, the proposed development shall design for private water lines to be in compliance with the current Oregon Plumbing Specialty Code.

**RECOMMENDED CONDITION OF APPROVAL F5:** Prior to Final Acceptance of the Constructed Public Improvements, any public water facilities located on private property shall have a recorded public water line easement encompassing the related public water improvements meeting Sherwood Engineering standards.

#### **Chapter 16.114 – STORM WATER**

**Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage systems consistent with the Comprehensive Plan and the requirements of the Clean Water Services water quality regulations contained in their Design and Construction Standards R&O 04-9, or its replacement.**

##### **16.114.020 - Design Standards**

###### **A. Capacity**

**Storm water drainage systems shall be sized, constructed, located, and installed at standards consistent with this Code, the Storm Drainage Master Plan Map, attached as Exhibit E, Chapter 7 of the Community Development Plan, other applicable City standards, the Clean Water Services Design and Construction standards R&O 04-9 or its replacement, and hydrologic data and improvement plans submitted by the developer.**

###### **B. On-Site Source Control**

**Storm water detention and groundwater recharge improvements, including but not limited to such facilities as dry wells, detention ponds, and roof top ponds shall be constructed according to Clean Water Services Design and Construction Standards.**

**C. Conveyance System**

**The size, capacity and location of storm water sewers and other storm water conveyance improvements shall be adequate to serve the development and accommodate upstream and downstream flow. If an upstream area discharges through the property proposed for development, the drainage system shall provide capacity to the receive storm water discharge from the upstream area. If downstream drainage systems are not sufficient to receive an increase in storm water caused by new development, provisions shall be made by the developer to increase the downstream capacity or to provide detention such that the new development will not increase the storm water caused by the new development.**

**16.114.030 - Service Availability**

**Approval of construction plans for new storm water drainage facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing storm water drainage systems shall include certification by the City that existing or proposed drainage facilities are adequate to serve the development.**

**ANALYSIS:** The City of Sherwood Engineering Comments (Exhibit Q) state “There exists a 36-inch diameter culvert beneath SW Tualatin-Sherwood Road that serves the eastern half of the adjacent property and the northern portion of the subject property. There is another storm sewer within SW Tualatin-Sherwood Road that is used for street drainage only. The southern portion of the subject property flows south to existing wetlands. For this site development the existing 36-inch diameter storm sewer will provide public storm sewer for the subject property.

The development will be required to install water quality treatment and hydromodification for all new/modified impervious area meeting Clean Water Services standards. Separate water quality treatment and hydromodification facilities shall be provided for off-site (public) and on-site (private) impervious surface areas.

A preliminary stormwater report prepared by Murraysmith (dated August 2nd, 2020) was provided as part of the Land Use submittal. The report indicates that on-site (private) stormwater treatment and hydromodification facilities (treatment ponds and swales) will be provided meeting CWS design requirements.

Off-site (public) stormwater treatment and hydromodification facilities (street planter strip treatment facilities) will be provided meeting City and CWS design requirements.

Discharge of the combined outflow will occur through a public stormwater system constructed by the adjacent site development, located just north of the subject site.

The preliminary storm drainage report indicates that there are no deficiencies within the downstream conveyance system.”

City policy requires that prior to grading, a permit is obtained from the Building Department for all grading on the private portion of the site. The Engineering Department requires a grading permit for all areas graded as part of the public improvements. The Engineering permit for grading of the public improvements is reviewed, approved and released as part of the public improvement plans.

An erosion control plan and permit are required from the City of Sherwood Engineering Department for all public and private improvements. The erosion control permit is reviewed, approved and released as part of the public improvement plans. The proposed disturbance area for the subject development is greater than 5 acres in area therefore a DEQ NPDES 1200-C permit is required for this project.”

See the City of Sherwood Engineering Comments (Exhibit Q) for full comments regarding storm water. The recommended conditions of approval in the Engineering Comments are included below. Additional details on the proposed system is provided in the applicant’s narrative and plans.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL C20:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide for storm water runoff collection, conveyance, treatment and hydromodification for SW Orr Drive meeting the requirements of CWS and approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C21:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public storm sewer beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C22:** Prior to Approval of the Engineering Public Improvement Plans, a final storm drainage report in compliance with Clean Water Service standards shall be submitted meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C23:** Prior to Approval of the Engineering Public Improvement Plans, if the final storm drainage report indicates any downstream deficiencies, then the subject development shall either correct the downstream deficiencies or provide detention meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C24:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to supply storm sewer service to the subject development site meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL C25:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide storm water quality treatment and hydro modification in compliance with Clean Water Services' standards meeting the approval of the Sherwood Engineering Department for all new impervious area constructed/modified by the subject development including any required improvements within Washington County right-of-way

**RECOMMENDED CONDITION OF APPROVAL E6:** Prior to Issuance of a Plumbing Permit, the proposed development shall design for private storm water runoff within the subject property to be collected and conveyed in accordance with the current Oregon Plumbing Specialty Code.

**RECOMMENDED CONDITION OF APPROVAL F6:** Prior to Final Acceptance of the Constructed Public Improvements, any public storm sewer located on or across private property shall have a recorded public storm sewer easement encompassing the related public storm sewer improvements meeting Sherwood Engineering standards.

**RECOMMENDED CONDITION OF APPROVAL D3:** Prior to Grading Permit, the subject development shall submit a phased mass grading plan/erosion control plan meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITION OF APPROVAL D4:** Prior to Grading Permit, the subject development shall obtain a DEQ NPDES 1200-C permit.

**RECOMMENDED CONDITION OF APPROVAL D2:** Prior to Issuance of a Site Grading Permit (if blasting is desired), the applicant shall obtain a Blasting Permit from TVF&R and include it with any submittal to obtain a City issued Blasting Permit. The City Blasting Permit only covers the blasting process and does not replace the need to obtain a site grading permit.

**RECOMMENDED CONDITION OF APPROVAL C26:** Prior to Approval of the Engineering Public Improvement Plans, a Storm Water Connection Permit Authorization from Clean Water Services shall be obtained.

## **Chapter 16.116 - FIRE PROTECTION**

### **16.116.010 Required Improvements**

**When land is developed so that any commercial or industrial structure is further than two hundred and fifty (250) feet or any residential structure is further than**

five hundred (500) feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety.

**A. Capacity**

All fire protection facilities shall be approved by and meet the specifications of the Fire District, and shall be sized, constructed, located, and installed consistent with this Code, Chapter 7 of the Community Development Plan, and other applicable City standards, in order to adequately protect life and property in the proposed development.

**B. Fire Flow**

Standards published by the Insurance Services Office, entitled "Guide for Determination of Required Fire Flows" shall determine the capacity of facilities required to furnish an adequate fire flow. Fire protection facilities shall be adequate to convey quantities of water, as determined by ISO standards, to any outlet in the system, at no less than twenty (20) pounds per square inch residual pressure. Water supply for fire protection purposes shall be restricted to that available from the City water system. The location of hydrants shall be taken into account in determining whether an adequate water supply exists.

**C. Access to Facilities**

Whenever any hydrant or other appurtenance for use by the Fire District is required by this Chapter, adequate ingress and egress shall be provided. Access shall be in the form of an improved, permanently maintained roadway or open paved area, or any combination thereof, designed, constructed, and at all times maintained, to be clear and unobstructed. Widths, height clearances, ingress and egress shall be adequate for District firefighting equipment. The Fire District, may further prohibit vehicular parking along private accessways in order to keep them clear and unobstructed, and cause notice to that effect to be posted.

**D. Hydrants**

Hydrants located along private, accessways shall either have curbs painted yellow or otherwise marked prohibiting parking for a distance of at least fifteen (15) feet in either direction, or where curbs do not exist, markings shall be painted on the pavement, or signs erected, or both, given notice that parking is prohibited for at least fifteen (15) feet in either direction.

**ANALYSIS:** Tualatin Valley Fire and Rescue has issued a Service Provider Letter for the project which is included in the applicant submittal (Exhibit I). Issuance of the

Service Provider Letter indicates the plans submitted comply with fire code requirements. Changes to the plans would require re-review and approval.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G8:** Prior to Receiving Occupancy, the site shall conform to local fire code standards and obtain final approval from TVF&R. Any changes to the plans impacting fire code requirements require a revised Service Provider Letter from TVF&R.

## **Chapter 16.118 - PUBLIC AND PRIVATE UTILITIES**

### **16.118.010 Purpose**

**Public telecommunication conduits as well as conduits for franchise utilities including, but not limited to, electric power, telephone, natural gas, lighting, and cable television shall be installed to serve all newly created lots and developments in Sherwood.**

### **16.118.020 Standard**

- A. Installation of utilities shall be provided in public utility easements and shall be sized, constructed, located and installed consistent with this Code, Chapter 7 of the Community Development Code, and applicable utility company and City standards.**
- B. Public utility easements shall be a minimum of eight (8) feet in width unless a reduced width is specifically exempted by the City Engineer. An eight-foot wide public utility easement (PUE) shall be provided on private property along all public street frontages. This standard does not apply to developments within the Old Town Overlay.**
- C. Where necessary, in the judgment of the City Manager or his designee, to provide for orderly development of adjacent properties, public and franchise utilities shall be extended through the site to the edge of adjacent property(ies).**
- D. Franchise utility conduits shall be installed per the utility design and specification standards of the utility agency.**
- E. Public Telecommunication conduits and appurtenances shall be installed per the City of Sherwood telecommunication design standards.**
- F. Exceptions: Installation shall not be required if the development does not require any other street improvements. In those instances, the developer shall pay a fee in lieu that will finance installation when street or utility improvements in that location occur.**

### **16.118.030 - Underground Facilities**

**Except as otherwise provided, all utility facilities, including but not limited to, electric power, telephone, natural gas, lighting, cable television, and telecommunication cable, shall be placed underground, unless specifically authorized for above ground installation, because the points of connection to existing utilities make underground installation impractical, or for other reasons deemed acceptable by the City.**

### **16.118.040 - Exceptions**

**Surface-mounted transformers, surface-mounted connection boxes and meter cabinets, temporary utility service facilities during construction, high capacity electric and communication feeder lines, and utility transmission lines operating at fifty thousand (50,000) volts or more may be located above ground. The City reserves the right to approve location of all surface-mounted transformers.**

**ANALYSIS:** The applicant's supplemental submittal dated November 24, 2020 states "Utilities will be installed in public utility easements (PUEs), and PUEs at least 8 feet in width will be provided on the WTP property adjacent to the right-of-way for SW Orr Drive and SW 124<sup>th</sup> Avenue, as shown in the Site Utilities Plan Layout Area A drawing in the original application submittal (Exhibit A, Sheet B-144). One modification of the requirement to provide the PUE on WTP property adjacent to the right-of-way is a request to provide an 8-foot PUE under the multi-use path and back of walk on the section of SW 124<sup>th</sup> Avenue adjacent to the existing retaining wall near the southeast corner of the WTP site, where the applicant will provide frontage improvements if the County acquires the property between the WTP property and the 52-foot right-of-way dedication for SW 124<sup>th</sup> Avenue. This section of potential frontage improvement modification is a small portion of the total SW 124<sup>th</sup> Avenue frontage – roughly 100 feet of a more than 1,600-foot-long frontage. As noted in the Engineering Design Modification request included with this supplemental application submittal, there is no feasible way to provide the PUE outside of the road right-of-way without running it up a very steep slope or routing it under the existing retaining wall, which the County recently constructed as part of the SW 124<sup>th</sup> Avenue extension project. Locating the PUE under the retaining wall would require removal of the wall for utility installation, repair, or maintenance, which is highly costly and impractical as compared to disturbing some of the multi-use path and back of path (shoulder) for such work. City Engineering staff have been part of the discussions in which this modification was agreed upon, including the meeting between the County, City, and applicant held on October 8, 2020. (Exhibit P – Supplemental Submittal dated 11/24/20).

The applicant's narrative (p. 130) states all utilities will be installed underground and that franchise utilities including for Sherwood Broadband and PGE will be installed according to those agency standards.

Portland General Electrical provided comments which are included as Exhibit W. The comments state PGE has been working with the applicant on a preliminary design and the power source will be from a future PGE substation that will be constructed directly across 124<sup>th</sup> Ave from their site.

**FINDING:** These standards are as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL F7:** Prior to Acceptance of Public Improvements, the proposed development shall dedicate a minimum 8-foot wide PUE along the subject property frontage of all public right-of-way meeting the approval of the Sherwood Engineering Department unless otherwise approved by the City Engineer.

**RECOMMENDED CONDITION OF APPROVAL C27:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for Sherwood Broadband conduits and vaults along the subject property frontage of SW Orr Drive and SW 124<sup>th</sup> Avenue Place in areas where a PUE is dedicated meeting the approval of the Sherwood Engineering Department unless otherwise approved for a payment-in-lieu.

**RECOMMENDED CONDITION OF APPROVAL F8:** Prior to Acceptance of Public Improvements, the proposed development shall set all monumentation and record the survey with Washington Count Surveyor's Office.

## **Chapter 16.142 Parks, Trees and Open Space**

### **16.142.040 - Visual Corridors**

#### **A. Corridors Required**

**New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:**

	<u>Category</u>	<u>Width</u>
1.	Highway 99W	25 feet
2.	Arterial	15 feet
3.	Collector	10 feet

**In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.**



**ANALYSIS:** The northern property line of the subject site will front SW Orr Drive, a City collector, and requires a 10 ft. wide landscaped visual corridor. The eastern property line of the subject site will front SW 124<sup>th</sup> Ave, a County arterial, and requires a 15 ft. wide landscaped visual corridor. The applicant is proposing to provide both visual corridors with modified plantings for areas impacted by retaining walls and the PGE transmission lines. A Class A Variance has been requested and is addressed under SZCDC § 16.84.

**FINDING:** This standard is met.

**B. Landscape Materials**

**The required visual corridor areas shall be planted as specified by the review authority to provide a continuous visual and/or acoustical buffer between major streets and developed uses. Except as provided for above, fences and walls shall not be substituted for landscaping within the visual corridor. Uniformly planted, drought resistant street trees and ground cover, as specified in Section 16.142.060, shall be planted in the corridor by the developer. The improvements shall be included in the compliance agreement. In no case shall trees be removed from the required visual corridor.**

**ANALYSIS:** The Overall Landscape Plan (Exhibit A – Sheet B-030) shows a 10 ft. wide visual corridor along SW Orr Drive and a 15 ft. wide visual corridor along SW 124<sup>th</sup> Ave between the major streets and developed uses. The plantings will be a combination of groundcover, shrubs, and trees as appropriate given site constraints such as power line easements and retaining walls. Exceptions to the planting and wall standards is discussed under findings for the Class A Variance. The area south of the water treatment plant between the kolk pond and SW 124<sup>th</sup> Ave is wooded and will serve as the visual corridor.

**FINDING:** This standard is met by issuance of the Class A Variance.

**C. Establishment and Maintenance**

**Designated visual corridors shall be established as a portion of landscaping requirements pursuant to Chapter 16.92. To assure continuous maintenance of the visual corridors, the review authority may require that the development rights to the corridor areas be dedicated to the City or that restrictive covenants be recorded prior to the issuance of a building permit.**

**ANALYSIS:** Continuous maintenance of the visual corridors is required by the developer and future owners of the property.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A14:** Maintenance of the required 10 ft. wide landscaped visual corridor along SW Orr Drive and the 15 ft. wide corridor along SW 124<sup>th</sup> Ave is an ongoing responsibility of the developer and all future property owners.

**D. Required Yard**

**Visual corridors may be established in required yards, except that where the required visual corridor width exceeds the required yard width, the visual corridor requirement shall take precedence. In no case shall buildings be sited within the required visual corridor, with the exception of front porches on townhomes, as permitted in Section 16.44.010(E)(4)(c).**

**ANALYSIS:** The required yard setbacks are 20 ft. along both street frontages, which exceeds the required 10 ft. and 15 ft. wide visual corridors. No buildings are proposed in the setbacks or the visual corridors.

**FINDING:** This standard is met.

**16.142.050 - Park Reservation**

**Areas designated on the Natural Resources and Recreation Plan Map, in Chapter 5 of the Community Development Plan, which have not been dedicated pursuant to Section 16.142.030 or 16.134.020, may be required to be reserved upon the recommendation of the City Parks Board, for purchase by the City within a period of time not to exceed three (3) years.**

**ANALYSIS:** The subject site was recently annexed into the City and is not covered on the Natural Resources and Recreation Plan Map. No parks or open space dedications are proposed or required.

**FINDING:** This standard is met.

**16.142.060: STREET TREES**

- A. Installation of Street Trees on New or Redeveloped Property.**  
**Trees are required to be planted to the following specifications along public streets abutting or within any new development or re-development. Planting of such trees shall be a condition of development approval. The City shall be subject to the same standards for any developments involving City-owned property, or**

when constructing or reconstructing City streets. After installing street trees, the property owner shall be responsible for maintaining the street trees on the owner's property or within the right-of-way adjacent to the owner's property.

1. **Location:** Trees shall be planted within the planter strip along a newly created or improved streets. In the event that a planter strip is not required or available, the trees shall be planted on private property within the front yard setback area or within public street right-of-way between front property lines and street curb lines or as required by the City.
2. **Size:** Trees shall have a minimum trunk diameter of two (2) caliper inches, which is measured six inches above the soil line, and a minimum height of six (6) feet when planted.
3. **Types:** Developments shall include a variety of street trees. The trees planted shall be chosen from those listed in 16.142.080 of this Code.
4. **Required Street Trees and Spacing:**
  - a. The minimum spacing is based on the maximum canopy spread identified in the recommended street tree list in section 16.142.080 with the intent of providing a continuous canopy without openings between the trees. For example, if a tree has a canopy of forty (40) feet, the spacing between trees is forty (40) feet. If the tree is not on the list, the mature canopy width must be provided to the planning department by a certified arborist.
  - b. All new developments shall provide adequate tree planting along all public streets. The number and spacing of trees shall be determined based on the type of tree and the spacing standards described in a. above and considering driveways, street light locations and utility connections. Unless exempt per c. below, trees shall not be spaced more than forty (40) feet apart in any development.
  - c. A new development may exceed the forty-foot spacing requirement under section b. above, under the following circumstances:
    - (1) Installing the tree would interfere with existing utility lines and no substitute tree is appropriate for the site; or
    - (2) There is not adequate space in which to plant a street tree due to driveway or street light locations, vision clearance or utility connections,

provided the driveways, street light or utilities could not be reasonably located elsewhere so as to accommodate adequate room for street trees; and

- (3) The street trees are spaced as close as possible given the site limitations in (1) and (2) above.
- (4) The location of street trees in an ODOT or Washington County right-of-way may require approval, respectively, by ODOT or Washington County and are subject to the relevant state or county standards.
- (5) For arterial and collector streets, the City may require planted medians in lieu of paved twelve-foot wide center turning lanes, planted with trees to the specifications of this subsection.

**ANALYSIS:** The development site will have frontage on two public streets – SW Orr Drive and SW 124<sup>th</sup> Ave. The applicant’s narrative (p. 135) states street trees are proposed within the planter strips of SW Orr Drive and SW 124<sup>th</sup> Ave, with the exception of areas subject to the PGE easement. The applicant is proposing four different types of street trees selected from the City’s Recommended Street Tree list, including:

- Thornless honeylocust
- Black tupelo
- Green vase zelkova
- Pin oak

The narrative indicates the trees will be a minimum of 2” caliper and a minimum height of 6 ft. at time of planting.

**FINDING:** These criteria can be met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL B5:** Prior to Final Site Plan approval, provide a street tree planting plan in conformance with SZCDC § 16.142.060 that includes all right-of-way receiving frontage improvements along the north and east property lines, as modified by the PGE agreement and applicable City of Sherwood Design Modifications.

#### **16.142.070 Trees on Property Subject to Certain Land Use Applications**

##### **A. Generally**

**The purpose of this Section is to establish processes and standards which will minimize cutting or destruction of trees and woodlands**

within the City. This Section is intended to help protect the scenic beauty of the City; to retain a livable environment through the beneficial effect of trees on air pollution, heat and glare, sound, water quality, and surface water and erosion control; to encourage the retention and planting of tree species native to the Willamette Valley and Western Oregon; to provide an attractive visual contrast to the urban environment, and to sustain a wide variety and distribution of viable trees and woodlands in the community over time.

**B. Applicability**

All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.

**C. Inventory**

1. To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:
  - a. Tree size (in DBH and canopy area)
  - b. Tree species
  - c. The condition of the tree with notes as applicable explaining the assessment
  - d. The location of the tree on the site
  - e. The location of the tree relative to the planned improvements
  - f. Assessment of whether the tree must be removed to accommodate the development
  - g. Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.
2. In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.
3. Definitions for the inventory purposes of this Section
  - a. A tree is a living woody plant having a trunk diameter as specified below at Diameter at Breast Height (DBH). Trees planted for commercial agricultural purposes, and/or those subject to farm forest deferral, such as nut

and fruit orchards and Christmas tree farms, are excluded from this definition and from regulation under this Section, as are any living woody plants under six (6) inches at DBH. All trees six (6) inches or greater shall be inventoried.

- b. A woodland is a biological community dominated by trees covering a land area of 20,000 square feet or greater at a density of at least fifty (50) trees per every 20,000 square feet with at least fifty percent (50%) of those trees of any species having a six (6) inches or greater at DBH. Woodlands planted for commercial agricultural purposes and/or subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition, and from regulation under this Section.
- c. A large stature tree is over 20 feet tall and wide with a minimum trunk diameter of 30 inches at DBH.

**ANALYSIS:** The proposed development is being processed as a Type IV land use application is subject to the tree inventory requirements. The applicant has submitted a Tree Inventory and Habitat Assessment that inventories and describes the vegetation on the site (Exhibit D).

The report states "...the subject property is largely forested and contains Oregon oak woodland and Douglas fir plant communities. These communities occur in both distinct patches, as well as areas where the two communities are comingled. Areas with sparse to no tree cover also occur on the subject parcel, occurring in areas of past and/or ongoing disturbance. (Exhibit D – p.3)

Tree and habitat protection on the site is focused around the large kolk pond wetland. The area between the wetland and SW Orr Drive will be cleared of vegetation and developed as the water treatment plant. New landscaping including street trees will be installed in these newly developed areas.

A significant portion of the property surrounding the kolk pond (Wetland G) will remain undisturbed or will be restored as part of the development. The Tree Protection Overall Plan (Exhibit A – Sheet B-021) shows the areas of tree preservation.

**FINDING:** These criteria are met.

#### **D. Retention requirements**

1. **Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.**

**ANALYSIS:** Trees are proposed for removal at the north end of the site to accommodate the development including buildings, parking, and walkways. The tree canopy requirements will be met as required by subsection (D)(3) below.

**FINDING:** This standard is met.

3. **Required Tree Canopy - Non-Residential and Multi-family Developments**

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 30 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation  $\pi r^2$  to calculate the expected square footage of each tree. The expected mature canopy is counted for each tree even if there is an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required landscaping trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the required canopy cover. A certified arborist or other qualified professional shall provide an estimated tree canopy for all proposed trees to the planning department for review as a part of the land use review process.

	Residential (single family & two family developments)	Old Town & Infill developments	Commercial, Industrial, Institutional Public and Multi-family
<b>Canopy Requirement</b>	40%	N/A	30%
<b>Counted Toward the Canopy Requirement</b>			
<b>Street trees included in canopy requirement</b>	Yes	N/A	No
<b>Landscaping requirements included in canopy requirement</b>	N/A	N/A	Yes
<b>Existing trees onsite</b>	Yes x2	N/A	Yes x2

	Residential (single family & two family developments)	Old Town & Infill developments	Commercial, Industrial, Institutional Public and Multi-family
Planting new trees onsite	Yes	N/A	Yes
<b>Mature Canopy in Square Feet Equation <math>\pi r^2</math> or <math>(3.14159 * \text{radius}^2)</math> (This is the calculation to measure the square footage of a circle.  The Mature Canopy is given in diameter. In gardening and horticulture reference books, therefore to get the radius you must divide the diameter in half.</b>			
<b>Canopy Calculation Example: Pin Oak</b> <b>Mature canopy = 35'</b> <b><math>(3.14159 * 17.52) = 962</math> square feet</b>			

**ANALYSIS:** The proposal is for an industrial development and a 30% tree canopy is required over the net development site. Figure 3 of the Tree Inventory and Habitat Assessment report (Exhibit D) provides details on the canopy calculations for the site.

Net Development Site	34.29 Acres
Required Canopy	10.29 Acres (30%)
Canopy Provided	15.07 acres (43%)

The net developable site is 34.29 acres which requires a minimum of 10.29 acres of tree canopy. The applicant is proposing to preserve approximately 5.49 acres of tree canopy and plant 4.09 acres of new tree canopy. Because preserved trees count as double canopy, the final acreage of tree canopy provided is 15.07 acres or approximately 43% net development site.

Approximately 43% tree canopy is proposed which exceeds the minimum requirement of 30%.

**FINDING:** This standard is met.

4. **The City may determine that, regardless of D.1 through D.3, that certain trees or woodlands may be required to be retained. The basis for such a decision shall include; specific findings that retention of said trees or woodlands furthers the purposes and goals of this Section, is feasible and practical both within the context of the proposed land use plan and relative to other policies and standards of the City Comprehensive Plan, and are:**
  - a. **Within a Significant Natural Area, 100-year floodplain, City greenway, jurisdictional wetland or other existing or**



- future public park or natural area designated by the City Comprehensive Plan, or
- b. A landscape or natural feature as per applicable policies of the City Comprehensive Plan, or are necessary to keep other identified trees or woodlands on or near the site from being damaged or destroyed due to windfall, erosion, disease or other natural processes, or
- c. Necessary for soil stability and the control of erosion, for managing and preserving surface or groundwater quantities or quality, or for the maintenance of a natural drainageway, as per Clean Water Services stormwater management plans and standards of the City Comprehensive Plan, or
- d. Necessary in required buffers between otherwise incompatible land uses, or from natural areas, wetlands and greenways, or
- e. Otherwise merit retention because of unusual size, size of the tree stand, historic association or species type, habitat or wildlife preservation considerations, or some combination thereof, as determined by the City.

**ANALYSIS:** The proposed site layout has been intentionally designed to preserve the large kolk pond wetland and surrounding sensitive habitat. The development will preserve or restore the vegetation on a significant portion of the property as shown in the Tree Protection Overall Pan (Exhibit A – Sheet B-021). No other areas of the site require tree protection.

**FINDING:** This criterion is met.

- 5. **Tree retention requirements for properties located within the Old Town Overlay or projects subject to the infill standards of Chapter 16.68 are only subject to retention requirements identified in D.4. above.**

**ANALYSIS:** The site is not located within the Old Town Overlay District.

**FINDING:** This criterion does not apply.

- 6. **The Notice of Decision issued for the land use applications subject to this Section shall indicate which trees and woodlands will be retained as per subsection D of this Section, which may be removed or shall be retained as per subsection**

**D of this Section and any limitations or conditions attached thereto.**

**ANALYSIS:** Tree and woodland protection are required as described in the Tree Inventory and Habitat Assessment by David Evans and Associates dated July 2020.

**FINDING:** This criterion is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A12:** Tree and woodland protection are required in conformance with the Tree and Habitat Assessment Report by David Evans and Associates dated July 2020.

- 7. All trees, woodlands, and vegetation located on any private property accepted for dedication to the City for public parks and open space, greenways, Significant Natural Areas, wetlands, floodplains, or for storm water management or for other purposes, as a condition of a land use approval, shall be retained outright, irrespective of size, species, condition or other factors. Removal of any such trees, woodlands, and vegetation prior to actual dedication of the property to the City shall be cause for reconsideration of the land use plan approval.**

**ANALYSIS:** No areas are proposed for dedication to the City.

**FINDING:** This criterion does not apply.

- E. Tree Preservation Incentive**  
Retention of existing native trees on site which are in good health can be used to achieve the required mature canopy requirement of the development. The expected mature canopy can be calculated twice for existing trees. For example, if one existing tree with an expected mature canopy of 10 feet (78.5 square feet) is retained it will count as twice the existing canopy (157 square feet).

**ANALYSIS:** As described above, the applicant is proposing to preserve approximately 5.49 acres of tree canopy. The preservation incentive has been applied to these areas.

**FINDING:** This criterion applies and is included in the tree canopy calculations above.

- G. Tree Protection During Development**

**The applicant shall prepare and submit a final Tree and Woodland Plan prior to issuance of any construction permits, illustrating how identified trees and woodlands will be retained, removed or protected as per the Notice of Decision. Such plan shall specify how trees and woodlands will be protected from damage or destruction by construction activities, including protective fencing, selective pruning and root treatments, excavation techniques, temporary drainage systems, and like methods. At a minimum, trees to be protected shall have the area within the drip line of the tree protected from grading, stockpiling, and all other construction related activity unless specifically reviewed and recommended by a certified arborist or other qualified professional. Any work within the dripline of the tree shall be supervised by the project arborist or other qualified professional onsite during construction.**

**ANALYSIS:** The applicant has provided a Tree Inventory and Habitat Assessment Report (Exhibit D) that describes tree and woodland protection requirements. Condition of Approval A12 requires conformance with the tree protection requirements described in the report.

**FINDING:** This criterion is met by Condition of Approval A12.

## **Chapter 16.144 - WETLAND, HABITAT AND NATURAL AREAS\***

### **16.144.010 - Generally**

**Unless otherwise permitted, residential, commercial, industrial, and institutional uses in the City shall comply with the following wetland, habitat and natural area standards if applicable to the site as identified on the City's Wetland Inventory, the Comprehensive Plan Natural Resource Inventory, the Regionally Significant Fish and Wildlife Habitat Area map adopted by Metro, and by reference into this Code and the Comprehensive Plan. Where the applicability of a standard overlaps, the more stringent regulation shall apply.**

**ANALYSIS:** The applicant's narrative states "The WTP site does not include resources identified in the City's Wetland Inventory or Comprehensive Plan Natural Resource Inventory because, in part, the site was annexed only recently to the city (in December 2019). Six wetland areas (Wetlands A, B, D, E, F, and G) were delineated on the WTP site; an additional wetland (Wetland C) was delineated on the TCC site to the north in a proposed easement area in which the WTP project proposes to construct a stormwater outfall (ditch). These wetlands and their buffers are addressed in a Sensitive Areas and Vegetated Corridors Site Assessment included in this application (Exhibit H) and are shown in Figure 6.

Metro's Regionally Significant Fish and Wildlife Habitat mapping indicates Class B Upland Wildlife Habitat and Class I Riparian Wildlife Habitat on the WTP site, as depicted in Figure 7". (Applicant's Narrative – p. 154).

Note - Figures 6 is included on page 155 and Figure 7 is included on page 156 of the applicant's narrative.

**FINDING:** Wetland and habitat areas regulated by this chapter are located on the site and this chapter applies. Compliance with the applicable regulations is addressed below.

#### **16.144.20 Standards**

- A. The applicant shall identify and describe the significance and functional value of wetlands on the site and protect those wetlands from adverse effects of the development. A facility complies with this standard if it complies with the criteria of subsections A.1.a and A.1.b, below:**
- 1. The facility will not reduce the area of wetlands on the site, and development will be separated from such wetlands by an area determined by the Clean Water Services Design and Construction Standards R&O 00-7 or its replacement provided Section 16.140.090 does not require more than the requested setback.**
    - a. A natural condition such as topography, soil, vegetation or other feature isolates the area of development from the wetland.**
    - b. Impact mitigation measures will be designed, implemented, and monitored to provide effective protection against harm to the wetland from sedimentation, erosion, loss of surface or ground water supply, or physical trespass.**
    - c. A lesser setback complies with federal and state permits, or standards that will apply to state and federal permits, if required.**
  - 2. If existing wetlands are proposed to be eliminated by the facility, the applicant shall demonstrate that the project can, and will develop or enhance an area of wetland on the site or in the same drainage basin that is at least equal to the area and functional value of wetlands eliminated.**

**ANALYSIS:** The application includes a Tree Inventory and Habitat Assessment (Exhibit D), a Sensitive Areas and Vegetated Corridors Site Assessment Report (Exhibit H), and

a CWS Service Provider Letter (Exhibit O) that provides details on the on-site wetlands and their protection and mitigation requirements.

The applicant has also provided wetland delineation concurrence letters from Oregon DSL dated March 29, 2017 and April 17, 2018 (Exhibit D). The letters are valid for a period of 5-years from date of issuance. The applicant also provided a DSL permit (#60102RF) for removal / fill of wetlands (Exhibit N), however, the permit does not include the attachments referenced and expired on May 7, 2019. The DSL land use notification response did not address any potential current, pending, or expired permits for the site. The applicant is conditioned below to obtain any required DSL permits.

A US Army Corp of Engineers (#NWP-2015-0041) that covers the entire Willamette Water Supply System project, including the treatment plant in Sherwood and is valid until November 2028. The permit includes specific conditions of approval related to the project development. A final signed copy of the permit has not been provided.

Regarding development impacts to the on-site wetlands, the applicant's narrative states "Wetlands will be reduced only as necessary for development of this critical water infrastructure facility. The proposed development was intentionally designed to be tightly clustered in the northern portion of the site. In doing so, Wetlands A, B, D, E, and F are removed, as pictured in Figure 6. However, these wetlands are the smaller and isolated wetlands on the site per Table 3, including one wetland of marginal condition. Avoiding these wetlands would render the site undevelopable for the WTP. Further, in developing on the land where these wetlands are located, the WTP project is able, in turn, to preserve the large Wetland G, its VC, and adjacent natural areas. The width of Wetland G's VC and, thus, the minimum distance that proposed development must be set back from Wetland G is consistent with CWS Design and Construction Standards R&O 00-7. As addressed in Section 6 of the Site Assessment (Exhibit H), mitigation for impacts to Wetlands A, B, D, E, and F was determined as part of the USACE and DSL permit process (USACE permit ID: NWP-2015- 0041 and DSL permit ID: 60102RF Modified, Exhibit N). The mitigation includes purchase of mitigation bank credits, which are designed to offset the loss of wetland functions, values, and acreage. USACE and DSL approved the mitigation credit purchase as acceptable mitigation under applicable federal and state statutes, which is documented in the respective permit authorizations." (Applicant's Narrative Page 158).

Staff concurs with this analysis and finds the standards have been met as conditioned below.

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A13:** The developer shall comply with conditions described in the CWS Memorandum dated November 13, 2020 and all applicable CWS Design and Construction Standards (R&O 19-5).

**RECOMMENDED CONDITION OF APPROVAL D5:** Prior to site disturbance, the applicant shall submit a valid DSL removal / fill permit for the development.

**RECOMMENDED CONDITION OF APPROVAL D6:** Prior to site disturbance, the applicant shall submit a final signed copy of the USACE Permit #NWP-2015-0041.

**RECOMMENDED CONDITIONS OF APPROVAL C28:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for vegetative corridor enhancements in compliance with the conditions imposed by Clean Water Services meeting the approval of the Sherwood Engineering Department.

**RECOMMENDED CONDITIONS OF APPROVAL F9:** Prior to Acceptance of the Constructed Public Improvements, the proposed development shall provide an access easement to the City of Sherwood and CWS over each natural resource area.

- B. The applicant shall provide appropriate plans and text that identify and describe the significance and functional value of natural features on the site (if identified in the Community Development Plan, Part 2) and protect those features from impacts of the development or mitigate adverse effects that will occur. A facility complies with this standard if:**
- 1. The site does not contain an endangered or threatened plant or animal species or a critical habitat for such species identified by Federal or State government (and does not contain significant natural features identified in the Community Development Plan, Part 2, Natural Resources and Recreation Plan).**

**ANALYSIS:** The site does contain any known endangered or threatened plant or animal species and the development will comply with local, state, and federal environmental regulations as described in this report.

**FINDING:** This standard is met.

- 2. The facility will comply with applicable requirements of the zone.**

**ANALYSIS:** The development complies or is conditioned to comply with the applicable requirements of the EI zone.

**FINDING:** This standard is met.

3. **The applicant will excavate and store topsoil separate from subsurface soil, and shall replace the topsoil over disturbed areas of the site not covered by buildings or pavement or provide other appropriate medium for re-vegetation of those areas, such as yard debris compost.**

**ANALYSIS:** The applicant has provided erosion control details on Exhibit A – Sheet B-108). The site is required to comply all applicable stormwater and erosion control standards of the City, CWS, and DEQ.

**FINDING:** This standard is met.

4. **The applicant will retain significant vegetation in areas that will not be covered by buildings or pavement or disturbed by excavation for the facility; will replant areas disturbed by the development and not covered by buildings or pavement with native species vegetation unless other vegetation is needed to buffer the facility; will protect disturbed areas and adjoining habitat from potential erosion until replanted vegetation is established; and will provide a plan or plans identifying each area and its proposed use.**

**ANALYSIS:** The development will be located at the north end of the site in order to retain the kolk pond wetland and associated trees and vegetation. The applicant's narrative (p. 160) states areas not developed with structures, paving, or gravel will be replanted with vegetation as shown in the Overall Plan and Planting Legends (Exhibits A – Sheets B-017 and B-028 – B-030).

**FINDING:** This standard is met.

5. **Development associated with the facility will be set back from the edge of a significant natural area by an area determined by the Clean Water Services Design and Construction standards R&O 00-7 or its replacement, provided Section 16.140.090A does not require more than the requested setback. Lack of adverse effect can be demonstrated by showing the same sort of evidence as in subsection A.1 above.**

**ANALYSIS:** The width of vegetated corridor surrounding Wetland G will comply with CWS Design and Construction Standards R&O 00-07. A small portion of this area will be encroached upon for the forest platform and will be mitigated by expanding the vegetated corridor by 2,215 SF to the northeast.

**FINDING:** This standard is met.

- C. When the Regionally Significant Fish and Wildlife Habitat map indicates there are resources on the site or within 50 feet of the site, the applicant shall provide plans that show the location of resources on the property. If resources are determined to be located on the property, the plans shall show the value of environmentally sensitive areas using the methodologies described in Sections 1 and 2 below. The Metro Regionally Significant Fish and Wildlife Habitat map shall be the basis for determining the location and value of environmentally sensitive habitat areas. In order to specify the exact locations on site, the following methodology shall be used to determine the appropriate boundaries and habitat values:**

**ANALYSIS:** The Metro Regionally Significant Fish and Wildlife map indicates riparian and upland habitat is located on the site (Applicant's Transmittal dated 9/11/20 – Figure 7).

**FINDING:** Regionally significant habitat is located on the site and this section applies.

- 1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:**
  - a. Located the Water Feature that is the basis for identifying riparian habitat.**
    - 1. Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.**
    - 2. Locate all flood areas within 100 feet of the property.**
    - 3. Locate all wetlands within 150 feet of the property based on the Local Wetland Inventory map and on the Metro 2002 Wetland Inventory map (available from the Metro Data Resource Center, 600 NE Grand Ave., Portland, OR 97232). Identified wetlands shall be further delineated consistent with methods currently accepted by**



the Oregon Division of State Lands and the US Army Corps of Engineers.

- b. Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas or are within 100 feet of flood areas. Vegetative cover status shall be as identified on the Metro Vegetative Cover map. In the event of a discrepancy between the Metro Vegetative Cover map and the existing site conditions, document the actual vegetative cover based on the following definitions along with a 2002 aerial photograph of the property;
  - 1. Low structure vegetation or open soils — Areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream (low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, crop-lands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger).
  - 2. Woody vegetation — Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown-closure) located within 300 feet of a surface stream.
  - 3. Forest canopy — Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.
- c. Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% (using the Clean Water Services Vegetated Corridor methodology); and
- d. Identify the riparian habitat classes applicable to all areas on the property using Table 8-1 below:

Distance in feet from Water Feature	Development/Vegetation Status			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody vegetation (shrub and scatted forest canopy)	Forest Canopy (closed to open forest canopy)
<b>Surface Streams</b>				
0-50	Class II	Class I	Class I	Class I
50-100		Class II	Class I	Class I
100-150		Class II if slope >25%	Class II if slope >25%	Class II
150-200		Class II if slope >25%	Class II if slope >25%	Class II if slope >25%
<b>Wetlands (Wetland feature itself is a Class I Riparian Area)</b>				
0-100			Class I	Class I
100-150				Class II
<b>Flood Areas (undeveloped portion of a flood area is a Class I Riparian area)</b>				
0-100			Class II	Class II

**ANALYSIS:** The applicant's narrative (p. 157-158), Tree Inventory and Habitat Assessment (Exhibit D) which includes a DSL concurrence letter, CWS Site Assessment Report (Exhibit H) describe inventory and describe the habitat as required above.

The applicant's narrative states also states "As previously noted, streams are not present within or proximate to the WTP site. Similarly, flood areas are not present.

Therefore, riparian areas within the WTP site consist of the delineated wetlands and their associated VCs shown in Figure 6. Based on the above table, all delineated wetlands on the WTP site and their associated VCs are Class I Riparian Areas. This is because the wetlands are automatically classified as Class I and the CWS VCs are all less than 100 feet wide and contain woody vegetation and/or forest canopy. (Applicant's Narrative - p. 163)

**FINDING:** This standard is met.

2. **Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the HCA map. The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover map may be adjusted to more precisely indicate the drip line of the trees within the canopied area.**

**ANALYSIS:** The applicant's narrative states "The woodland tree inventory canopy layer, derived from Lidar canopy data, was used to conduct this analysis. All tree canopy outside of riparian areas (i.e., wetlands and CWS VC) was considered to be upland habitat. Metro's mapping designated this habitat as Class B; however, as described in Section 2 of the Tree Inventory and Habitat Report (Exhibit D), this habitat is fairly unique within the region due to the presence of Oregon oak woodland and large conifer trees. Thus, it is recommended that this habitat be rated Class A Upland Habitat." (Applicant's Narrative - p. 164)

**FINDING:** This standard is met.

## **Chapter 16.146 - Noise**

### **16.146.010 - Generally**

**All otherwise permitted commercial, industrial, and institutional uses in the City shall comply with the noise standards contained in OAR 340-35-035. The City may require proof of compliance with OAR 340-35-035 in the form of copies of all applicable State permits or certification by a professional acoustical engineer that the proposed uses will not cause noise in excess of State standards.**

### **16.146.020 - Noise Sensitive Uses**

**When proposed commercial and industrial uses do not adjoin land exclusively in commercial or industrial zones, or when said uses adjoin special care,**

institutional, or parks and recreational facilities, or other uses that are, in the City's determination, sensitive to noise impacts, then:

- A. The applicant shall submit to the City a noise level study prepared by a professional acoustical engineer. Said study shall define noise levels at the boundaries of the site in all directions.
- B. The applicant shall show that the use will not exceed the noise standards contained in OAR 340-35-035, based on accepted noise modeling procedures and worst case assumptions when all noise sources on the site are operating simultaneously.
- C. If the use exceeds applicable noise standards as per subsection B of this Section, then the applicant shall submit a noise mitigation program prepared by a professional acoustical engineer that shows how and when the use will come into compliance with said standards.

**ANALYSIS:** The applicant's narrative states "In nearly all cases, operations equipment is located within structures or enclosures and, thus, will emit minimal noise that would be detectable outdoors on the WTP site or from adjacent public rights-of-way. Noise associated with equipment is generally limited by equipment specifications to a maximum of 80 dBA, as measured 3 feet from the equipment, in order to meet OSHA guidelines and to protect employees working on the site full-time.

Outdoor noise-generating equipment will generally be limited to:

- Standby generators, expected to operate infrequently to support their own annual testing (barring any disruption to normal, primary power being supplied by a new regional substation located immediately across SW 124th Avenue from the WTP site);
- Standard vehicular traffic associated with on-site staff, delivery and hauling of items such as chemicals and dewatered solids; and
- Temporary operation of external, portable equipment like that used on a standard commercial or residential property (e.g. air compression, water hoses).

These operations-related noises are anticipated to comply with OAR 340-35-035 standards." (Applicant's Narrative – p. 165).

Staff concurs with this analysis and finds the noise standards have been met. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

**Chapter 16.148 - Vibrations**

**16.148.010 - Vibrations**

**All otherwise permitted commercial, industrial, and institutional uses shall not cause discernible vibrations that exceed a peak of 0.002 gravity at the property line of the originating use, except for vibrations that last five (5) minutes or less per day, based on a certification by a professional engineer.**

**ANALYSIS:** The applicants narrative states the treatment plant operations will not exceed a peak of 0.002 gravity at the property line, except for vibrations that last five (5) minutes or less (Applicant's Narrative – P. 167). The vibrations will be certified by a professional engineer. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

### **Chapter 16.150 - Air Quality**

#### **16.150.010 – Air Quality**

**All otherwise permitted commercial, industrial, and institutional uses shall comply with applicable State air quality rules and statutes:**

- A. All such uses shall comply with standards for dust emissions as per OAR 340-21-060.**
- B. Incinerators, if otherwise permitted by Section 16.140.020, shall comply with the standards set forth in OAR 340-25-850 through 340-25-905.**
- C. Uses for which a State Air Contaminant Discharge Permit is required as per OAR 340-20-140 through 340-20-160 shall comply with the standards of OAR 340-220 through 340-20-276.**

**ANALYSIS:** The applicant's narrative states the treatment plant operations will not generate dust. Specifically, the MDS and microsand solids will be managed in indoor or enclosed spaces and will not generate dust emissions. Incinerators are also not proposed.

A State Air Contaminant Discharge Permit will be required for the plant's emergency generators. The applicant is coordinating with Oregon DEQ and permits will be obtained prior to plant operations beginning in 2025. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A15:** The applicant shall obtain and maintain a State Air Contaminant Discharge Permit for the emergency generations and all other uses requiring such a permit on the site.

## **Chapter 16.152 - Odors**

### **16.152.010 - Odors**

**All otherwise permitted commercial, industrial, and institutional uses shall incorporate the best practicable design and operating measures so that odors produced by the use are not discernible at any point beyond the boundaries of the development site.**

**ANALYSIS:** The applicant's narrative states the water treatment plant's operations involve very few potential odor sources. Acceptable odor levels will be accomplished by enclosing process areas and adherence to standard design practices. (Applicant's Narrative – p. 169). Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

## **Chapter 16.154 - Heat and Glare**

### **16.154.010 – Heat and Glare**

**Except for exterior lighting, all otherwise permitted commercial, industrial, and institutional uses shall conduct any operations producing excessive heat or glare entirely within enclosed buildings. Exterior lighting shall be directed away from adjoining properties, and the use shall not cause such glare or lights to shine off site in excess of one-half (0.5) foot candle when adjoining properties are zoned for residential uses.**

**ANALYSIS:** The applicant's narrative states ““WTP operations do not produce heat that would be detectible at the property lines. In terms of lighting, exterior lighting other than street lighting is distant from adjoining properties to the west and south (by more than 400 feet and 700 feet, respectively), as shown in the lighting layout in the Photometric Site Plan (Exhibit A, Sheet B-098). Adjoining properties are not zoned residential. Regardless, lighting levels will not exceed 0.5 foot candles on the adjoining western and southern property lines. While the Photometric Site Plan does not include subarea plans for the WTP western and southern property lines, the lighting levels are 0 foot candles well before ever reaching these property lines. See Photometric Site Plan Area A7 and Area A8 (Exhibit B, Sheets B-105 and 106).” (Applicant's Narrative - p. 170)

Staff concurs with this analysis.

**FINDING:** This standard is met.

## **Chapter 16.156 - Energy Conservation**

### **16.156.020 Standards**

- A. Building Orientation - The maximum number of buildings feasible shall receive sunlight sufficient for using solar energy systems for space, water or industrial process heating or cooling. Buildings and vegetation shall be sited with respect to each other and the topography of the site so that unobstructed sunlight reaches the south wall of the greatest possible number of buildings between the hours of 9:00 AM and 3:00 PM, Pacific Standard Time on December 21st.**
- B. Wind - The cooling effects of prevailing summer breezes and shading vegetation shall be accounted for in site design. The extent solar access to adjacent sites is not impaired vegetation shall be used to moderate prevailing winter wind on the site.**

**ANALYSIS:** The applicant's narrative states "As shown in the Overall Site Plan (Exhibit A, Sheet B-017) and Building Elevations (Exhibit A, Sheets B-079 and B-080), one of the buildings primarily occupied during operations – the Administration Building – and its windows are oriented for southern, eastern, and western exposure. A photovoltaic solar energy system will be installed on part of the Administration Building roof. The Planting Overall Plan and Planting Legends (Exhibit A, Sheets B-030 and B-042 through B-045) show deciduous trees around the perimeter of the Administration Building, which provide some shade when leafed in the summer and allow for solar exposure when leafless in the winter.

The Planting Overall Plan, Planting Legends, and Planting Details (Exhibit A, Sheets B-030 and B-042 through B-045) show deciduous trees around the perimeter of the Administration Building, the primarily human-occupied building on the WTP site. The trees will provide some shade when leafed in the summer; the number and size of the trees will not impair cooling breezes from reaching the building in the summer. Solar access to the building will not be impaired, including by leafless trees, in the winter." (Applicant's Narrative – p. 171)

**FINDING:** This standard is met.

#### IV. CONDITIONS OF APPROVAL

Based upon review of the applicant's submittal information, review of the code, agency comments and consideration of the applicant's submittal, staff finds that the proposed site plan does not fully comply with the standards but can be conditioned to comply. **Therefore, staff recommends approval of application LU 2020-019 CUP / SP / VAR "Willamette Water Supply System – Water Treatment Plant" subject to the following conditions of approval:**

##### **A. General Conditions**

1. Compliance with the Conditions of Approval is the responsibility of the developer or its successor in interest.
2. The development shall substantially comply with the submitted preliminary plans and narrative except as indicated in the conditions of the Notice of Decision. Additional development or change of use may require a new development application and approval.
3. The developer is responsible for all costs associated with any remaining public facility improvements and shall assure the construction of all public streets and utilities within and adjacent to the plat as required by these conditions of approval, to the plans, standards, and specifications of the City of Sherwood.
4. This approval is valid for a period of two (2) years from the date of the decision notice. Extensions may be granted by the City as afforded by the Sherwood Zoning and Community Development Code.
5. The continual operation of the property shall comply with the applicable requirements of the Sherwood Zoning and Community Development Code and Municipal Code.
6. This approval does not negate the need to obtain permits, as appropriate from other local, state or federal agencies even if not specifically required by this decision.
7. All new utilities to be installed for the development of the subject property shall be underground.
8. Retaining walls within public easements or the public right-of-way shall require engineering approval.
9. The Conditional Use permit shall be void after two (2) years unless substantial construction, in the City's determination, has taken place.
10. Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits.
11. The site shall conform to all local building and fire code regulations, in addition to any applicable state and federal regulations, for hazardous materials storage on the site.
12. Tree and woodland protection are required in conformance with the Tree and Habitat Assessment Report by David Evans and Associates dated July 2020.



13. The developer shall comply with conditions described in the CWS Memorandum dated November 13, 2020 and all applicable CWS Design and Construction Standards (R&O 19-5).
14. Maintenance of the required 10 ft. wide landscaped visual corridor along SW Orr Drive and the 15 ft. wide corridor along SW 124<sup>th</sup> Ave is an ongoing responsibility of the developer and all future property owners.
15. The applicant shall obtain and maintain a State Air Contaminant Discharge Permit for the emergency generators and all other uses requiring such a permit on the site.

**B. Prior to Final Site Plan Approval**

1. Prior to Final Site Plan approval, provide tree canopy calculations for the parking lot landscaping. The trees provided shall meet the requirements for 47 parking stalls.
2. Prior to Final Site Plan approval, revise the Transportation Circulation Plans to show the parallel parking stalls along Road A east of the Plant Maintenance and Chemical Facilities buildings to be sized and marked based on the dimensional standards of SZCDC § 16.94.020(B). Parallel parking stalls shall be a minimum of 24 ft. length x 9 ft. width.
3. Prior to Final Site Plan approval, revise the Transportation Circulation Plans to show the proposed markings for the 20 ft. x 180 ft. uncovered unloading area located east of the Chemical Facilities building.
4. Prior to Final Site Plan approval, revise the plans to show a minimum 6 ft. tall site obscuring fence around the long-term outdoor storage area. The fence shall be installed prior to the area being used for permanent outdoor storage.
5. Prior to Final Site Plan approval, provide a street tree planting plan in conformance with SZCDC § 16.142.060 that includes all right-of-way receiving frontage improvements along the north and east property lines, as modified by the PGE agreement and applicable City of Sherwood Design Modifications.

**C. Prior to Approval of the Engineering Public Improvement Plans**

1. Prior to Approval of Engineering Public Improvement Plans, applicant shall have dedicated 52-feet of right-of-way along the west side of SW 124th Avenue in conformance with requirements delineated in the stated in a letter from County dated November 13th, 2020 which has listed conditions which are incorporated into the Engineering Conditions of Approval comments in their entirety (see attached County letter as Exhibit A to the Engineering Comments).
2. Prior to Approval of Engineering Public Improvement Plans, applicant shall have dedicated 76-foot right-of-way for SW Orr Drive in conformance with the proposed section submitted as a Design Modification Request, reviewed and approved by the City Engineer (see attached Exhibit B).
3. Prior to Approval of Engineering Public Improvement Plans, construction plans shall include City required frontage improvements along SW 124th Avenue consistent with City standards as follows:

- a) An 12-foot wide concrete sidewalk & ADA ramps (if needed)
- b) A 5-foot wide planter strip, measured between street side face of curb and street side edge of sidewalk.
- c) Street trees, with approved root barrier
- d) Planter strip ground cover plantings
- e) Planter strip irrigation system, including controller, electronically controlled valves, piping and sprinkler heads
- f) Street lighting system

These frontage improvements shall commence at the north property line intersecting SW 124th Avenue right-of-way, and end at the point as defined by conditions set per County letter dated November 13th, 2020 (see attached County letter as Exhibit A to the Engineering Comments).

4. Prior to Approval of Engineering Public Improvement Plans, construction plans shall include public road frontage improvements for SW Orr Drive conforming with City standards as follows:
  - g) 12-foot wide concrete sidewalks with ADA ramps at the intersection of SW Orr Drive and SW 124th Avenue.
  - h) 5-foot wide planter strips, measured between street side face of curb and street side edge of sidewalk.
  - i) Street trees, with approved root barrier
  - j) Planter strip ground cover plantings
  - k) Planter strip irrigation system, including controller, electronically controlled valves, piping and sprinkler heads
  - l) Street lighting system

These frontage improvements shall commence at the intersecting SW Orr Drive and SW 124th Avenue, and end at the west property line of the site development.

5. Prior to Approval of Engineering Public Improvement Plans, the applicant shall submit a separate design modification request form for any additional nonconforming public infrastructure design element(s) that were not submitted under the Land Use process, to the City Engineer for review and approval.
6. Prior to Approval of Engineering Public Improvement Plans, engineering plans shall show a pavement section conforming to the City standard for a collector road, or as recommended by a geotechnical pavement design based on local site soils conditions which shall be submitted to the City as part of the plan review process. The design life of the geotechnical pavement design shall be 25-years.
7. Prior to Approval of the Engineering Public Improvement Plans, a photometric analysis shall be performed that encompasses the entire length of the SW Orr Drive including the intersection with SW 124th Avenue, and the site frontage along SW 124th Avenue.
8. Prior to Approval of Engineering Public Improvement Plans, the street lighting plans for SW Orr Drive and SW 124th Avenue shall show PGE Option "B" Cobra Head street lighting systems.
9. Prior to Approval of Engineering Public Improvement Plans, the applicant shall either record any slopes easements necessary to support the SW Orr Drive section/alignment, or provide proof of recorded slope easements by the adjacent

- property owner necessary to support the SW Orr Drive section/alignment. Slope easements shall be based on a 2 horizontal to 1 vertical finish slope grade.
10. Prior to Approval of Engineering Public Improvement Plans, the plans shall provide for the stubbed road at the west end of the site (SW Orr Drive) to be barricaded and signed in conformance with the City of Sherwood Engineering Design Manual.
  11. Prior to Approval of the Engineering Public Improvement Plans or Issuance of Building Permits, an Engineering Compliance Agreement shall be obtained from the City of Sherwood Engineering Department.
  12. Prior to Approval of Public Improvement Plans, public sanitary line shall be extended as needed, either east or west within SW Orr Drive to provide for private service laterals to the site. The applicant has provided design data that shows that extension of the public sanitary sewer line to the west end of SW Orr Drive is not required as the depth of cover and adverse grades preclude service connection to developable lots located west of the subject site.
  13. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public sanitary sewer beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.
  14. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to:
    - a. Construct a new 16-inch diameter public water line from the existing public water line located north of the site within a utility easement, and extending it to an approved point within SW Orr Drive, then west along the SW Orr Drive alignment to the western property line of the subject site, meeting the approval of the City of Sherwood Engineering Department.
    - b. Construct a new 12-inch diameter public water line from the existing public water line located in SW 124<sup>th</sup> Avenue at the north property line of the subject site, west along SW Orr Drive to the intersection with the new 16-inch water mainline, meeting the approval of the City of Sherwood Engineering Department.
  15. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public water line beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.
  16. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide water service to supply domestic, irrigation and fire water (if required) to all lots of the subject development at a location meeting the approval of the Sherwood Engineering Department.
  17. Prior to Approval of the Engineering Public Improvement Plans, water flows calculations (domestic, irrigation and fire) shall be provided by the developer to the City of Sherwood Public Works Department for review and approval.

18. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for the installation of Reduced Pressure Backflow Assemblies meeting Sherwood Engineering Department standards.
19. Prior to Approval of the Engineering Public Improvement Plans, if on-site fire protection is to be installed, the proposed development shall design for the installation of backflow protection meeting Sherwood Engineering Department standards.
20. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide for storm water runoff collection, conveyance, treatment and hydromodification for SW Orr Drive meeting the requirements of CWS and approval of the Sherwood Engineering Department.
21. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for any public storm sewer beneath any retaining wall to be installed within a sleeve meeting the approval of the Sherwood Engineering Department.
22. Prior to Approval of the Engineering Public Improvement Plans, a final storm drainage report in compliance with Clean Water Service standards shall be submitted meeting the approval of the Sherwood Engineering Department.
23. Prior to Approval of the Engineering Public Improvement Plans, if the final storm drainage report indicates any downstream deficiencies, then the subject development shall either correct the downstream deficiencies or provide detention meeting the approval of the Sherwood Engineering Department.
24. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to supply storm sewer service to the subject development site meeting the approval of the Sherwood Engineering Department.
25. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide storm water quality treatment and hydro modification in compliance with Clean Water Services' standards meeting the approval of the Sherwood Engineering Department for all new impervious area constructed/modified by the subject development including any required improvements within Washington County right-of-way
26. Prior to Approval of the Engineering Public Improvement Plans, a Storm Water Connection Permit Authorization from Clean Water Services shall be obtained.
27. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for Sherwood Broadband conduits and vaults along the subject property frontage of SW Orr Drive and SW 124<sup>th</sup> Avenue Place in areas where a PUE is dedicated meeting the approval of the Sherwood Engineering Department unless otherwise approved for a payment-in-lieu.
28. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design for vegetative corridor enhancements in compliance with the conditions imposed by Clean Water Services meeting the approval of the Sherwood Engineering Department.
29. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall extend an appropriately sized public sanitary sewer from the existing public sanitary sewer located north of the site, into SW Orr Drive.

Extension of the public sanitary sewer within SW Orr Dive shall only be what is necessary to serve the subject site, meeting the approval of the Sherwood Engineering Department.

**D. Prior to Issuance of a Grading Permit**

1. (WASHINGTON COUNTY CONDITION) Prior to the Issuance of a Grading Permit by the City of Sherwood, the applicant shall obtain a Washington County Facility Permit for the Construction of the Following Public Improvements on SW 124<sup>th</sup> Ave:
  - B. Submit the following to Washington County Public Assurance Staff (503-846-3843):
    1. Completed "Design Option" form.
    2. \$20,000.00 Administration Deposit.

*NOTE: The Administration Deposit is a cost-recovery account used to pay for County services provided to the developer, including plan review and approval, field inspections, as-built approval, and project administration. The Administration Deposit amount noted above is an estimate of what it will cost to provide these services. If, during the project, the Administration Deposit account falls below County approved level, additional funds will be requested to cover the estimated time left on the project (at then-current rates per the adopted Washington County Fee Schedule). If there are any unspent funds at project close out, they will be refunded to the applicant. Any point of contact with County staff can be a chargeable cost. If project plans are not complete or do not comply with County standards and codes, costs will be higher. There is a charge to cover the cost of every field inspection. Costs for enforcement actions will also be charged to the applicant.*

3. Copy of the City's Notice of Decision (NOD) and the County's letter dated November 13, 2020.
4. Engineering plans, Geotech/Pavement report and Sight Distance Analysis via ProjectDox for construction of the following public improvements to County standards:
  - a. Closure of all existing access from the subject tax lot to SW 124th Avenue.
  - b. Construction access from SW 124th Avenue. Include sight distance analysis, traffic control plan and truck turning templates per County Engineer requirements.
  - c. SW Orr Street connection to SW 124th Avenue (stop-controlled) aligned with SW Blake Street, including adequate street illumination, to County standard. The access shall be constructed to permit future signalization of the intersection, including streetlight conduit, signal conduit(s) and interconnect conduit.

- d. Half-street improvement for a 5-lane Arterial with turn lanes along the site's frontage of SW 124<sup>th</sup> Avenue to County standards. The half-street improvement shall include half-width pavement for a left-turn lane, dual through lanes, curb/gutter, a 12 foot multi-use path with a 5 foot planter strip and continuous street lighting.

*NOTE: The outside travel lane shall be a minimum of 15 feet. Street trees shall meet City standards.*

- e. Half-street improvement for a 5-lane Arterial along the site's frontage of SW 124<sup>th</sup> Avenue to County standards if the County can acquire the right-of-way from Tax Lot 851 that fronts the applicant's tax lot by February 1, 2021. The half-street shall include half-width pavement for a left-turn lane, dual through lanes, curb/gutter, a 12 foot multi-use path with a 5 foot planter strip and continuous street lighting. The planter strip that fronts the retaining wall shall be reduced to 3 feet.

*NOTE: The outside travel lane shall be a minimum of 15 feet. Street trees/shrubs shall meet City standards.*

- 5. The following shall be recorded with Washington County Survey Division (Contact John Kidd @ 503.846.7932 if dedication is via document or the Survey Division at 503.846.8723 if dedication is via a plat):
  - c. Dedication of additional right-of-way to provide 52 feet from the centerline of SW 124<sup>th</sup> Avenue, including adequate corner radius at the intersection with SW Orr Street.
  - d. Dedication of an 8 foot PUE along the site's frontage of SW 124<sup>th</sup> Avenue.
- 2. Prior to Issuance of a Site Grading Permit (if blasting is desired), the applicant shall obtain a Blasting Permit from TVF&R and include it with any submittal to obtain a City issued Blasting Permit. The City Blasting Permit only covers the blasting process and does not replace the need to obtain a site grading permit.
- 3. Prior to Grading Permit, the subject development shall submit a phased mass grading plan/erosion control plan meeting the approval of the Sherwood Engineering Department.
- 4. Prior to Grading Permit, the subject development shall obtain a DEQ NPDES 1200-C permit.
- 5. Prior to site disturbance, the applicant shall submit a valid DSL removal / fill permit for the development.

6. Prior to site disturbance, the applicant shall submit a final signed copy of the USACE Permit #NWP-2015-0041.

**E. Prior to Issuance of Building Permits**

1. Prior to Issuance of Building Permits, obtain Final Site Plan Approval from the Planning Department.
2. The applicant shall adhere to the Encroachment Agreement between the applicant and PGE.
3. Prior to Issuance of any Site Grading Permit, the applicant shall obtain and submit a copy of an issued County Facility Permit, to the City as part of any Site Grading Permit submittal.
4. Prior to Issuance of a Plumbing Permit, the proposed development shall design the private sanitary sewer to be in compliance with the current Oregon Plumbing Specialty Code.
5. Prior to Issuance of a Plumbing Permit, the proposed development shall design for private water lines to be in compliance with the current Oregon Plumbing Specialty Code.
6. Prior to Issuance of a Plumbing Permit, the proposed development shall design for private storm water runoff within the subject property to be collected and conveyed in accordance with the current Oregon Plumbing Specialty Code.

**F. Prior to Acceptance of Public Improvements**

1. Prior to Final Acceptance of Constructed Public Improvements, applicant shall record an 8-foot wide public utility easement (PUE) along all public street frontages, and provide proof that PUE has been recorded by adjacent land owner along the north side of SW Orr Drive. The PUE shall be located adjacent to and outside the public street right-of-way.
2. Prior to Acceptance of Constructed Public Improvements, the applicant shall record an 8-foot wide PUE along the north side of the SW Orr Drive alignment that lays within the subject site.
3. Prior to Acceptance of Constructed Public Improvements, the applicant shall provide proof of a recorded PUE along the north right-of-way line of SW Orr Drive.
4. Prior to Final Acceptance of the Constructed Public Improvements, any public sanitary sewer facilities located on private property shall have a recorded public sanitary sewer easement encompassing the related public sanitary sewer improvements meeting the approval of the Sherwood Engineering Department.
5. Prior to Final Acceptance of the Constructed Public Improvements, any public water facilities located on private property shall have a recorded public water line easement encompassing the related public water improvements meeting Sherwood Engineering standards.
6. Prior to Final Acceptance of the Constructed Public Improvements, any public storm sewer located on or across private property shall have a recorded public storm sewer easement encompassing the related public storm sewer improvements meeting Sherwood Engineering standards.

7. to Acceptance of Public Improvements, the proposed development shall dedicate a minimum 8-foot wide PUE along the subject property frontage of all public right-of-way meeting the approval of the Sherwood Engineering Department unless otherwise approved by the City Engineer.
8. Prior to Acceptance of Public Improvements, the proposed development shall set all monumentation and record the survey with Washington Count Surveyor's Office.
9. Prior to Acceptance of the Constructed Public Improvements, the proposed development shall provide an access easement to the City of Sherwood and CWS over each natural resource area.

**G. Prior to Receiving Occupancy**

1. Prior to Final Occupancy, the clear vision areas shall be established at each required intersection.
2. Prior to Receiving Occupancy, all landscaping must be installed and have an irrigation system in accordance with SZCDC § 16.92.040(C).
3. Prior to Receiving Occupancy, all parking, loading or maneuvering areas including ADA and loading stalls shall be clearly marked and signed. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.
4. Prior to Receiving Occupancy, bicycle parking shall be installed in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6' for each bicycle.
5. Prior to Receiving Occupancy, where a pedestrian pathway crosses a parking area, driveway, or street, it shall be clearly marked with contrasting paving materials or a raised crosswalk.
6. WASHINGTON COUNTY CONDITION) Prior to issuance of occupancy from the City of Sherwood:
  - A. All public improvements required on SW 124<sup>th</sup> Avenue and the intersection of SW Orr Street/SW 124<sup>th</sup> Avenue shall be completed and accepted by Washington County.
  - B. Provide Final Sight Distance Certification for the intersection of SW Orr Street/124<sup>th</sup> Avenue.
7. Prior to Receiving Occupancy, the subject development shall receive Final Acceptance of Public Improvements from the City of Sherwood Engineering Department.
8. Prior to Receiving Occupancy, the site shall conform to local fire code standards and obtain final approval from TVF&R. Any changes to the plans impacting fire code requirements require a revised Service Provider Letter from TVF&R.



## **V. EXHIBITS\***

*\*The complete application materials are available in the paper project file at City Hall.*

### **Applicant Transmittal Dated September 11, 2020 including property ownership documents, written narrative, etc.**

- A.** Plan Set
- B.** Technical Review Plan Set
- C.** Pre-Application Notes
- D.** Tree Inventory and Habitat Assessment
- E.** Construction Management Plan
- F.** Traffic Impact Analysis
- G.** Stormwater Report
- H.** Response to Clean Water Services Comments and Clean Water Services Site Assessment
- I.** Tualatin Valley Fire & Rescue Service Provider
- J.** Clean Water Services Sensitive Area Certification Form
- K.** Neighborhood Meeting Documentation
- L.** Geotechnical Report
- M.** Radio Facility Sample Image
- N.** US Army Corps of Engineers and Oregon Department of State Lands Permit
- O.** Supplemental Submittal Dated 10/2/20
  - Clean Water Services Service Provider Letter
  - Statement Regarding Trammel Crowe Company's Off-Site Utilities
- P.** Supplemental Submittal dated 11/24/20
  - Engineering Design Modification Requests
  - Supplemental Code Responses
  - Street Cross Sections

### **Agency Comments**

- Q.** City of Sherwood Engineering Comments, amended December 8, 2020
- R.** Washington County Land Use & Transportation Comments, amended December 8, 2020
- S.** Tualatin Valley Fire & Rescue Comments
- T.** Clean Water Services
- U.** Pride Disposal Comments
- V.** Oregon Land Use of State Lands Comments
- W.** Portland General Electric Comments

### **Supplemental Memo**

- X.** Supplemental Staff Memo dated December 8, 2020