

**CITY OF SHERWOOD  
HEARINGS OFFICER STAFF REPORT  
JULY 27, 2022**



*Home of the Tualatin River National Wildlife Refuge*

**CEDAR CREEK GARDENS  
41-LOT RESIDENTIAL SUBDIVISION  
LU 2021-023 SUB**

**To: Joe Turner, City of Sherwood Hearings Officer**

**From: Eric Rutledge, Associate Planner**

Pre-App Meeting: April 29, 2021  
App. Submitted: November 17, 2021  
App. Complete: May 17, 2022  
Hearing Date: August 3, 2022 (continued from 6/30/22 and 7/21/22)  
120-Day Deadline: September 14, 2022

**PROPOSAL:** The applicant is proposing a 41-lot residential subdivision on a 19.99-acre site zoned Medium Density Residential Low (MDRL). The development site is comprised of two lots (Tax Lots 3S1060000102 and 3S1060000107 and is mostly forested with the exception of two existing homes and various outbuildings. The northwest part of the site will support 8 lots, which will be accessed from the west via public streets within the Reserve at Cedar Creek Subdivision which is currently under construction. Two lots at the northeast corner of the site are proposed to take access from SW Brookman Road via a new shared driveway. The remainder of the 31 lots will obtain access SW Brookman Road to the south via a new interior public street system.

**STAFF RECOMMENDATION:** Staff recommends approval of LU 2021-023 SUB Cedar Creek Gardens, subject to the findings and Conditions of Approval described in this report. The recommendation is based on review of the applicable code standards and approval criteria, the applicant’s submittal, agency comments, and public testimony.

**I. BACKGROUND**

A. Applicant: Westwood Homes, LLC  
12700 NW Cornell Rd.  
Portland, OR 97140

Owner: Bissett, Louise Marie Rev Liv Trust  
(TL 102) 14140 SW Galbreath Dr.  
Sherwood, OR 97140

Owner: Wayne and Linda Chronister  
(TL 107) PO Box 1474  
Sherwood, OR 97140

- B. Site Address: 17033 SW Brookman Rd. and 16871 SW Brookman Rd.
- C. Zoning: Medium Density Residential Low (MDRL)
- D. Review Type: Type III Subdivision – between 11 and 50 lots
- E. 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 or before June 10, 2022 and July 14, 2022. Notice of the application was also published in a local newspaper (Tigard Times) on June 9, June 23, July 14, and July 28 2022. Due to an error in the recording for the June 30 hearing, the scheduled continuance hearing was moved from July 21 to August 3, 2022 and a full re-notice of the application in accordance in SZCDC § 16.72.020 was issued.
- F. Review Criteria: SZCDC Chapter 16.12 Residential Land Use Districts Chapter 16.58 Vision Clearance and Fence Standards; Chapter 16.60 Yard Requirements; Chapter 16.72 Procedures for Processing Development Permits; Chapter 16.92 Landscaping; Chapter 16.94 Off-Street Parking and Loading; Chapter 16.96 On-Site Circulation; 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 16.120 Subdivisions; Chapter 16.128 Land Division Design Standards; Chapter 16.134 Floodplain Overlay; Chapter 16.142 Parks, Trees, and Open Spaces; Chapter 16.144 Wetland, Habitat, Natural Areas; Chapter 16.156 Energy Conservation
- G. History and Background: The site is comprised of two tax lots on the north side of SW Brookman Rd totaling 19.99-acres. The property is zoned Medium Density Residential Zone (MDRL) and is within the Brookman Addition Concept Plan area. The long-term plan for SW Brookman Rd. including the preferred alignment was recently updated through the Brookman Concept Plan Refinement (Ord. 2021-001) (Exhibit D8).

The property is within the regional Urban Growth Boundary and was annexed into the City of Sherwood in 2017 (Ord. 2017-002). The property does not appear to be annexed to the Metro Service District or Clean Water Services District (Metromap online, June 2022). Due to its recent annexation, no land use decisions or building permits have been issued for the site from the City of Sherwood.

The property to the east is under construction as the Reserve at Cedar Creek Subdivision, a 59-lot single family development. The property to the east has not been annexed into the City and remains as large lot development with single-family residences.

The application was submitted on November 17, 2021 and is not subject to the City's new Residential Design Standards that were adopted by City Council on December 7, 2021.

- H. Existing Conditions: The site 19.99-acres and is mostly forested with the exception of the existing homes and outbuildings. Cedar Creek runs through the site, entering from the east and flowing north. Wetlands are located within the riparian corridors that transect the site.

Tax Lot 107 is an irregular shaped lot with two "flagpole" strips of land connecting to SW Brookman Rd in different locations. The northern flagpole connects to SW Brookman Rd. as it curves to the east to connect to SW Ladd Hill Rd. The southern flagpole connects to SW Brookman Rd. just east of Cedar Creek. Tax Lot 102 is a rectangular shaped lot with approximately 600 ft. of frontage on SW Brookman Rd.

An existing residence and associated out buildings are located in the northwest corner of the site, with a driveway culvert crossing of the Cedar Creek drainage to access the dwelling from SW Brookman Road. Another existing residence and associated outbuildings are located off the Brookman Road frontage near the south property line, at approximately the midpoint of the site along the roadway.

I. Surrounding Land Uses:

- West: Reserve at Cedar Creek Subdivision (under construction)
- South: Brookman Rd., large lots outside UGB, AF-20 zoning
- East: Large lots inside UGB but outside City boundary
- North: Cedar Creek, Abney Revard No. 2 Subdivision, Arbor Lane Subdivision

## II. AFFECTED AGENCY AND PUBLIC COMMENTS

A. Notice of the application was sent to affected agencies via email on April 14, 2022. The following responses were received:

1. City of Sherwood Engineering Department – the City of Sherwood Engineering Department provided comments dated June 13, 2022 (Exhibit B1). The engineering comments address requirements for water, storm sewer, sanitary sewer, and transportation design standards and specific Conditions of Approval and comments are included throughout the report under each applicable code section. The City’s Engineering Department has also issued two Design Modifications (Exhibit B2) for proposed modifications to the City’s access spacing standards.
2. Washington County Land Use and Transportation – Washington County provided comments included as Exhibits B3 and B4.
  - a. Naomi Vogel (Exhibit B3) – the comments provide transportation-related analysis and conditions. The applicant is required to dedicate the right-of-way for a future 5-lane arterial and pay a fee-in-lieu for half-street improvements. The comments state the County concurs with the findings in the applicant’s Transportation Impact Analysis (TIA) and supplemental sight distance analysis for the proposed private driveway off SW Brookman Rd. The comments state the required Design Exceptions to County road standards have been approved by the County Engineer, subject to final signature.
  - b. Bryan Robb (Exhibit B4) – the email states the site does not appear to be located in the Clean Water Services (CWS) boundary.
3. Clean Water Services (Exhibit B5) – CWS provided a memorandum dated June 17, 2022. CWS has also issued a Service Provider Letter dated April 20, 2022 (Exhibit A12). Development on the site is required to obtain CWS Storm Water Connection Permit Authorization and comply with CWS Design and Construction Standards.
4. Tualatin Valley Fire & Rescue (TVF&R) – TVF&R has issued a Service Provider for the proposed development (Exhibit A19). The Deputy Fire Marshal, Ty Darby, has also provided clarification on the turnaround requirements for the development via email (Exhibit B7). The communication states that a fire apparatus turn around is not required for the private driveway serving Lots 40 and 41.
5. Oregon Department of State Lands (DSL) – DSL provided a Wetland Land Use Notice Response dated June 9, 2022 (Exhibit B8) and an approved Wetland Delineation Report (concurrence letter) dated March 17, 2022 (Exhibit A14). The land use response indicates wetlands are located on the property and state and federal permits may be required.

The letter of concurrence confirms the location and extent of the on-site wetlands.

6. Oregon Department of Transportation (ODOT) – ODOT Regions 1 and 2 have provided comment on the application and has recommended the applicant pay a proportionate share contribution to the future signalized intersection of SW Brookman Rd. and Hwy 99W.
7. The following agencies acknowledged the application without stating any concerns: ODOT Outdoor Advertising Program and ODOT Rail.

B. Public Comments

1. Sherwood School District (Jim Rose) (Exhibit C1)
2. Lori Kaylor (Exhibit C2)
3. Varunee Buerkle (Exhibit C3)
4. Dave Sweeney (Exhibit C4)

### III. APPLICABLE CODE PROVISIONS

#### Chapter 16.72 PROCEDURES FOR PROCESSING DEVELOPMENT PERMITS

##### 16.72.10 – 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:

###### 3. Type III

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

- c. Subdivisions between 11—50 lots.

**ANALYSIS:** The proposal is for a 41-lot subdivision and the application is subject to the City's Type III land use review process. The application has been processed according to the Type III noticing and review procedures as required under SZCDC § 16.72.

**FINDING:** This standard is met.

#### Chapter 16.12 RESIDENTIAL LAND USE DISTRICTS

##### 16.12.010 - Purpose and Density Requirements

###### C. Medium Density Residential (MDRL)

The MDRL zoning district provides for single-family and two-family housing, manufactured housing and other related uses with a density of 5.6 to 8 dwelling units per acre. Minor land partitions shall be exempt from the minimum density requirements.

**ANALYSIS:** The applicant is proposing a 41-lot single-family detached residential subdivision at a density of approximately 6.13 dwelling units per acre.

Gross site area: 870,698 SF  
 Vegetated Corridor: -493,979 SF  
 Right-of-way dedication: -85,453 SF  
 Net site area: 291,266 or 6.69-acres\*

Minimum density 5.6 x 6.69 = 38 lots  
 Maximum density 8 x 6.69 = 53 lots

The proposal is for 41 lots which is between the permitted density of 38 to 53 lots.

*\*SZCDC § 16.10 defines density as the “number of dwelling units per net buildable acre”. Net buildable acre means an area measuring 43,560 SF after excluding present and future rights-of- way and environmentally constrained areas. Environmentally Constrained Land is defined as “Any portion of land located within the floodway, one hundred-year floodplain, wetlands and/or vegetated corridor as defined by Clean Water Services.”*

**FINDING:** This standard is met.

**16.12.20 - Allowed Residential Land Uses**

**A. Residential Land Uses**

The table below identifies the land uses that are allowed in the Residential Districts. The specific land use categories are described and defined in Chapter 16.10.

| Uses (Residential)                           | MDRL |
|--|------|
| Single-Family Attached or Detached Dwellings | P    |

Whereas P = Permitted

**ANALYSIS:** The application proposes 41-lots for the construction of single-family detached dwellings.

**FINDING:** This standard is met.

**16.12.30 Residential Land Use 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. (Variance and Adjustments)

**B. Development Standards**

Except as modified under Chapter 16.68 (Infill Development), Section 16.144.030 (Wetland, Habitat and Natural Areas) Chapter 16.44 (Townhomes), or as otherwise provided, required minimum lot areas, dimensions and setbacks shall be provided in the following table.

**C. Development Standards per Residential Zone**

| Development Standards by Residential District               | MDRL    | 10% Reduction Requested under §16.144.030.B.1 |
|---|---------|---|
| <b>Minimum Lot area (in square feet)</b>                    |         |   |
| Single-Family Detached                                      | 5,000   | 4,500   |
| <b>Minimum Lot width at front property line</b>             | 25 feet | -   |
| <b>Minimum Lot width at building line; Single-Lot Depth</b> | 50 feet | 45 feet                                       |
|   | 80 feet | -   |
| <b>Maximum Height (in feet)</b>                             | 30 or 2 | -   |
| <b>Front yard</b>   | 14 feet | -   |
| <b>Face of garage</b>                                       | 20 feet | -   |
| <b>Interior side yard; Single-Family Detached</b>           | 5 feet  | -   |
| <b>Corner lot street side; Single Family or</b>             | 15 feet | -   |
| <b>Rear yard:</b>   | 20 feet | -   |

**ANALYSIS:** The property is zoned MDRL and is subject to the development standards shown in the table above. The applicant is requesting a 10% reduction to the minimum lot area and minimum lot width at building line standards pursuant to SZCDC § 16.144.030.

As shown on the preliminary plat, all lots meet the development standards with the permitted reductions with the exception of Lot 3. Based on the preliminary plat, Lot 3 only has 16 ft. of width at the front property line.

Lots 40 and 41 meet the development standards of the MDRL zone as shown in the table below. The definitions used to support the findings are located in SZCDC § 16.10 and are included below for reference. Per the definition of “lot line, front”, Lot 40 has two front lot lines, the proposed access easement and SW Redfern Dr. Access is taken from SW Brookman Rd., therefore the space between SW Redfern Dr. and the future residence

shall be deemed a “corner lot street side” with a required 15 ft. setback.

Findings of compliance for Lots 40 and 41 can only be reached when the lots and homes are oriented east to west. Any other lot or building orientation would cause the lots to be out of compliance with the required development standards. E.g. if the front of the homes face north and the lots were oriented north to south, the lots would no longer have the required 80 ft. of lot depth. A Condition of Approval is provided below regarding lot and home orientation.

| <b>Development Standards by Residential District</b>                | <b>MDRL</b>    | <b>Lot 40</b>            | <b>Lot 41</b>     |
|---|----------------|--------------------------|-------------------|
| <b>Minimum Lot area (in square feet)<br/>Single-Family Detached</b> | <b>5,000</b>   | 8,648                    | 10,572            |
| <b>Minimum Lot width at front property line</b>                     | <b>25 feet</b> | 25 ft. (Access easement) | 25 ft. (Brookman) |
| <b>Minimum Lot width at building line; Single-Family</b>            | <b>50 feet</b> | 60 ft.                   | 60 ft.            |
| <b>Lot Depth</b>  | <b>80 feet</b> | 150 ft.                  | 115 ft.           |

Applicable definitions

**Lot Width:** *The horizontal distance between the side lot lines, ordinarily measured parallel to the front lot line, at the center of the lot, or, in the case of a corner lot, the horizontal distance between the front lot line and a side lot line.*

**Lot Depth:** *The average horizontal distance between the front and rear lot lines measured in the direction of the side lot lines.*

**Lot Line, Front:** *The line separating a lot from any street, provided that for corner lots, there shall be as many front lines as there are street frontages.*

**Street:** *A public or private road, easement or right-of-way that is created to provide access to one (1) or more lots, parcels, areas or tracts of land.*



### Width of Northern Flag Pole on Tax Lot 107

The subject property including Tax Lot 107 were annexed to the City of Sherwood in 2017 via Ordinance 2017-002 (Exhibit D5 – Final Documents for Annexation to Sherwood). The map within the annexation document (Exhibit D5 – Exhibit B – Sheet 3 of 6) shows the northern flag pole of Tax Lot 107 as being 50 ft. in width. However, the applicant has provided an unrecorded survey (Exhibit A32) that indicates the width of the flag pole is approximately 60 ft. in width. The applicant’s survey is based on the legal description of the property and is further supported two recorded surveys (Survey 23506 from 1989 - Exhibit D6 and Survey 33327 from 2018 - Exhibit D7) which indicate the width of the flag pole is approximately 60 ft. Both supporting surveys have been reviewed and accepted by the Washington County Surveyor.

The discrepancy between the annexation map and the legal description of the property was raised to the Washington County Cartography Department by the applicant in October 2021. Ted Foster, Senior Cartographer with Washington County, provide input on the discrepancy with the following statement:

*“the second course of the description includes the point of call reference “to the easterly extension of the north line of Deed Book 1182 Page 951; thence along said easterly extension and the north line of said Deed....”. The reference to the point of call controls over the distance given. In this case due to the point of call, the entirety of taxlot 107 is within the districts.”* (Exhibit B5 – email from Ted Foster dated October 13, 2021).

The email clarifies that the flag pole in question extends southward to the “north line of Deed Book 1182 Page 951” (aka Tax Lot 106). This “point of call reference” supersedes the 50 ft. shown in the annexation map. City of Sherwood Planning Department agrees that the legal description and recorded surveys provide the most reliable evidence of the annexation area being to the easterly extension of the northern line of Deed Book 1182 Page 951 (Tax Lot 106).

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

**CONDITION OF APPROVAL B1:** Prior to Final Plat approval, Lot 3 shall be modified to provide a minimum width at the front property line of 25 ft., while remaining in compliance with all of the remaining Development Standards.

**CONDITION OF APPROVAL E1:** Prior to issuance of building permits for each lot, the applicant shall provide a plot plan that demonstrates compliance with the setback and height requirements of the MDRL zone. Lots 40 and 41 shall be oriented in an east to west direction with the front of the homes facing east. The space between SW Redfern Dr. and the new residence on Lot 40 shall be deemed the corner lot street side and provide a 15 ft. setback, while remaining in compliance with all of the remaining Development Standards.

### **16.12.040 - 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, see Divisions V, VIII, IX.

**FINDING:** The application meets or is conditioned to meet all applicable community design standards as described in this report. This criterion is met.

#### **16.12.050 - Flood Plain**

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

**FINDING:** A portion of the subject site is located within a base flood zone as defined in SZCDC § 16.134.020. SZCDC § 16.134.020 applies to this application and is addressed in this report.

#### **16.58.10 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 plans submitted by the applicant do not show clear vision areas as required by this section.

**FINDING:** This standard is not met, but can be met as conditioned below.

**CONDITION OF APPROVAL B2:** Prior to Final Plat approval, revise the plat to include clear vision areas pursuant to SZCDC § 16.58.010.

**RECOMMENDED CONDITION OF APPROVAL B3:** Prior to Final Plat approval, revise the landscape plans to include clear vision areas pursuant to SZCDC § 16.58.010.

**Chapter 16.60 - YARD REQUIREMENTS**

**16.60.010 - Through Lots**

**On a through lot the front yard requirements of the zone in which such a lot is located shall apply to the street frontage where the lot receives vehicle access; except where access is from an alley, the front yard requirements shall apply to the street opposite the alley.**

**ANALYSIS:** Through lots are proposed for Lots 19 – 26 at the south end of the subdivision, between SW Brookman Rd. and “Street D”. All of the lots will take access from Street D and the front yard is oriented towards this street.

**FINDING:** This standard is met.

**16.60.20 - Corner Lots**

**On a corner lot, or a reversed corner lot of a block oblong in shape, the short street side may be used as the front of the lot provided:**

- A. The front yard setback shall not be less than twenty-five (25) feet; except where otherwise allowed by the applicable zoning district and subject to vision clearance requirements.**
- B. The side yard requirements on the long street side shall conform to the front yard requirement of the zone in which the building is located.**

**ANALYSIS:** Lots 23, 24, and 31 are corner lots located at the entrance to the subdivision along SW Brookman Rd. Access is proposed from the short side of the street due to intersection spacing requirements near the arterial roadway. The front setbacks are proposed in conformance with the MDRL zone as permitted in the standard above. The side yard setbacks are shown at 15 ft. which is greater than 14 ft. front setback required by the zone.

**FINDING:** This standard is met.

**16.60.30 - Yards**

- A. Except for landscaping, every part of a required yard (also referred to as minimum setback) shall be open and unobstructed from its lowest point to the sky, except that architectural features such as**

awnings, fire escapes, open stairways, chimneys, or accessory structures permitted in accordance with Chapter 16.50 (Accessory Structures) may be permitted when so placed as not to obstruct light and ventilation.

- B. Where a side or rear yard is not required, and a primary structure is not erected directly on the property line, a primary structure must be set back at least three (3) feet.

**ANALYSIS:** Yard requirements are reviewed and approved as part of the building permits for each lot.

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

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## **Chapter 16.120 - SUBDIVISIONS**

### **16.120.010 - Purpose**

Subdivision regulations are intended to promote the public health, safety and general welfare; lessen traffic congestion; provide adequate light and air; prevent overcrowding of land; and facilitate adequate water supply, sewage and drainage.

### **16.120.20 - General Subdivision Provisions**

- A. Approval of a subdivision occurs through a two-step process: the preliminary plat and the final plat.
  - 1. The preliminary plat shall be approved by the Approval Authority before the final plat can be submitted for approval consideration; and
  - 2. The final plat shall reflect all conditions of approval of the preliminary plat.

**ANALYSIS:** The applicant has submitted a preliminary plat application which is the subject of this review. The final plat will be reviewed as a separate land use application and shall reflect all of the conditions as required by this decision.

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

**CONDITION OF APPROVAL A9:** The preliminary plat approval is valid for two years from the date of the Notice of Decision. The final plat shall be approved by the City within two years of Notice of Decision, unless an extension is granted by the City prior to the two-year deadline.

- B. All subdivision proposals shall conform to all state regulations set forth in ORS Chapter 92, Subdivisions and Partitions.

**ANALYSIS:** State regulations set forth in ORS Chapter 92 are implemented through the City Municipal Code. The application meets or is conditioned to meet all applicable sections of the code as described in this report.

**FINDING:** This criterion is met.

- C. Future re-division**  
**When subdividing tracts into large lots, the Approval Authority shall require that the lots be of such size and shape as to facilitate future re-division in accordance with the requirements of the zoning district and this Division.**

**ANALYSIS:** The proposal represents full land division of the parent parcels and future re-division is not feasible under the current zoning.

**FINDING:** This standard is met.

- D. Future Partitioning**  
**When subdividing tracts into large lots which may be resubdivided, the City shall require that the lots be of a size and shape, and apply additional building site restrictions, to allow for the subsequent division of any parcel into lots of smaller size and the creation and extension of future streets.**

**ANALYSIS:** As described above, the proposal represents full land division of the parent parcels and future partitioning is not feasible under the current zoning.

**FINDING:** This standard is met.

- E. Lot averaging**  
**Lot size may be averaged to allow lots less than the minimum lot size allowed in the underlying zoning district subject to the following regulations:**
  - 1. The average lot area for all lots is not less than allowed by the underlying zoning district.**
  - 2. No lot created under this provision shall be less than 90 % of the minimum lot size allowed in the underlying zoning district.**
  - 3. The maximum lot size cannot be greater than 10 % of the minimum lot size.**

**ANALYSIS:** The applicant is proposing to reduce the minimum lot size by utilizing the exception standards allowed under SZCDC § 16.144.030(B)(1). Lot averaging utilizing the standards above is not requested.

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

**F. Required Setbacks**

**All required building setback lines as established by this Code, shall be shown in the preliminary subdivision plat.**

**ANALYSIS:** The applicant has submitted a Conceptual Building Setback Plan (Exhibit A30 – Sheet P3.1) that shows the proposed building setback for each home. Setbacks for the MDRL zone are provided in SZCDC § 16.12.030(C). The front, side, and rear lot lines are defined in SZCDC § 16.10. The setbacks conform to the requirements of the zone.

**FINDING:** This standard is met.

**G. Property Sales**

**No property shall be disposed of, transferred, or sold until required subdivision approvals are obtained, pursuant to this Code.**

**ANALYSIS:** The applicant’s narrative acknowledges that individual lots may not be disposed of, transferred, or sold until the final plat application is approved and the final subdivision plat is recorded.

**FINDING:** This standard is met.

**16.120.30 - Approval Procedure-Preliminary Plat**

**A. Approval Authority**

- 1. The approving authority for preliminary and final plats of subdivisions shall be in accordance with Section 16.72.010 of this Code.**
  - a. A subdivision application for 4-10 lots will follow a Type II review process.**
  - b. A subdivision application for 11-50 lots will follow a Type III review process.**
  - c. A subdivision application for over 50 lots will follow a Type IV review process.**
- 2. Approval of subdivisions is required in accordance with this Code before a plat for any such subdivision may be filed or recorded with County. Appeals to a decision may be filed pursuant to Chapter 16.76.**

**ANALYSIS:** The proposal is for a 41-lot subdivision and is being processed as a Type III application as required above. The applicant’s narrative acknowledges approval from the City is required prior to recording the plat with Washington County.

**FINDING:** This standard is met.

**B. Phased Development**

1. The Approval Authority may approve a time schedule for developing a subdivision in phases, but in no case shall the actual construction time period for any phase be greater than two years without reapplying for a preliminary plat.
2. The criteria for approving a phased subdivision review proposal are:
  - a. The public facilities shall be scheduled to be constructed in conjunction with or prior to each phase to ensure provision of public facilities prior to building occupancy;
  - b. The development and occupancy of any phase shall not be dependent on the use of temporary public facilities:
    - (1) For purposes of this subsection, a temporary public facility is an interim facility not constructed to the applicable City or district standard; and
    - (2) The phased development shall not result in requiring the City or other property owners to construct public facilities that were required as a part of the approval of the preliminary plat.
3. The application for phased development approval shall be reviewed concurrently with the preliminary plat application and the decision may be appealed in the same manner as the preliminary plat.

**APPLICANT RESPONSE:** The applicant is requesting approval for construction of the site in two phases, although no particular order for completion has yet been determined. Phase 1 will consist of Lots 1 – 8, located at the north east corner of the site. These lots are accessed independently from the remainder of the subdivision and will rely on improvements provided by others, and as such the exact timing of Phase 1 will depend on the completion of adjoining developments. Phase 2 will consist of Lots 9 – 41. Access to Phase 2 will occur directly from Brookman Road, and as such construction is not dependent on others. Phase 2 may occur prior to, concurrently with, or subsequent to Phase 1, depending on available access.

**ANALYSIS:** Based on the applicant response, the subdivision may or may not occur in phases. The application also does not specify a timeframe for each phase. The conditions of approval below require each phase to be completed as required by the standard above. The applicant's phasing plan is provided as Exhibit A29.

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

**CONDITION OF APPROVAL A10:** The construction time period of public improvements for each phase shall be no greater than two years without reapplying for a preliminary plat. The construction time period begins when an engineering compliance agreement is issued from the City's Engineering Department.

**CONDITION OF APPROVAL E2:** Prior to Issuance of Building Permits, the applicant will need to receive substantial completion of the public improvements from the Sherwood Engineering Department for the phase which contains the lot. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.

**CONDITION OF APPROVAL F1:** Prior to Final Acceptance of Public Improvements, all public improvements shown within the approved engineering plans shall be in place and approved by the City of Sherwood Engineering Department for the phase being accepted. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.

**CONDITION OF APPROVAL G1:** Prior to Grant of Occupancy, final acceptance of the constructed public improvements shall be obtained from the Engineering Department for the phase which contains the lot. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.

**16.120.40 - Approval Criteria: Preliminary Plat**

**No preliminary plat shall be approved unless:**

- A. Streets and roads conform to plats approved for adjoining properties as to widths, alignments, grades, and other standards, unless the City determines that the public interest is served by modifying streets or road patterns.**

**ANALYSIS:** The streets and roads conform to the plats approved for adjoining properties. The proposed subdivision will complete SW Yamel Terrace, a local road approved as part of the Reserve at Cedar Creek subdivision (SUB 19-02). An extension of SW Redfern Ln. is not permitted based on the Brookman Addition Concept Plan (Exhibit D8). The plan was adopted by City Council and incorporated into the City's Comprehensive Plan. Both plans indicate no future vehicle access is permitted from SW Redfern Dr.

**FINDING:** This standard is met.

- B. Streets and roads held for private use are clearly indicated on the plat and all reservations or restrictions relating to such private roads**



**and streets are set forth thereon.**

**ANALYSIS:** The applicant is proposing shared use driveways to serve Lots 2, 3, 19, 20, 39, 40, and 41. Reservations and restrictions for these private roads have not been addressed.

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

**RECOMMENDED CONDITION OF APPROVAL B4:** Prior to final plat approval, provide a Covenants, Conditions, & Restrictions (CC&R) document that describes the reservations, restrictions, and maintenance responsibilities for the shared private streets including Tract G and the easements serving Lots 2, 3, 19, 20, 39, 40, and 41.

- C. The plat complies with applicable zoning district standards and design standards in Division II, and all provisions of Divisions IV, VI, VIII and IX. The subdivision complies with Chapter 16.128 (Land Division Design Standards).**

**ANALYSIS:** As described in this report, the proposal complies or is conditioned to comply with all applicable standards and provisions of the Sherwood Zoning and Community Development Code including Division II Land Use & Development, Division IV Planning Procedures, Division VI Public Infrastructure, and Division VIII Environmental Resources. The property does not contain historic resources and is not subject to Division IX Historic Resources.

**FINDING:** This criterion is met.

- D. Adequate water, sanitary sewer, and other public facilities exist to support the use of land proposed in the plat.**

**ANALYSIS:** The subject lots do not appear to be located in the Clean Water Services or Metro Service District. Annexation to both urban service boundaries is required prior to issuance of a grading permit on the site. As described in the City of Sherwood Engineering comments (Exhibit B1) and in the findings for Division VI Public Infrastructure below, there is adequate water, sanitary sewer, and other public facilities to support the use of land proposed in the plat.

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

**CONDITION OF APPROVAL D1:** Prior to Issuance of Grading Permit, the subject lots shall be annexed to the Clean Water Services and Metro Service District.

- E. Development of additional, contiguous property under the same**

**ownership can be accomplished in accordance with this Code.**

**ANALYSIS:** The proposal represents full platting of the subject site and development of additional contiguous property is not feasible.

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

**F. Adjoining land can either be developed independently or is provided access that will allow development in accordance with this Code.**

**ANALYSIS:** The applicant has provided a Conceptual Future Connectivity Plan (Exhibit A30 – Conceptual Future Connectivity Plan) that shows how adjoining land can be developed independently or is provided access from the proposed subdivision. The plan takes into account the environmentally constrained land within and surrounding the development site.

**FINDING:** This standard is met.

**G. Tree and woodland inventories have been submitted and approved as per Section 16.142.060.**

**ANALYSIS:** The applicant has provided a Tree Plan (Exhibit A15) from a Certified Arborist and a Preliminary Tree Preservation and Removal Plan (Exhibit A15 – Sheets P2.2 and P2.3). As described in SZCDC § 16.142.070 below, the proposal complies or is conditioned to comply with the applicable tree preservation and protection standards.

*Note –Section 16.142.060 relates to street trees and is a typo. The correct section that relates to tree and woodland inventories is Section 16.142.070.*

**FINDING:** This standard is met.

**H. The plat clearly shows the proposed lot numbers, setbacks, dedications and easements.**

**ANALYSIS:** The Preliminary Plat (Exhibit A15 – Sheet P1) shows the proposed lot numbers, setbacks, dedications, and easements.

**FINDING:** This standard is met.

**I. A minimum of five percent (5%) open space has been provided per Section 16.44.010.B.8 (Townhome-Standards) or Section 16.142.030 (Parks, Open Spaces and Trees-Single-Family Residential Subdivisions), if applicable.**

**ANALYSIS:** The minimum 5% open space requirement for single-family residential subdivisions has been met, as addressed in SZCDC § 16.142.030.

**FINDING:** This standard is met.

**16.120.60 - Improvement Agreement**

**A. Subdivision Agreement**

The subdivider shall either install required improvements and repair existing streets and other public facilities damaged in the development of the subdivision pursuant to the Division VI, or execute and file with the City an agreement specifying the period within which all required improvements and repairs shall be completed, and providing that if such work is not completed within the period specified, the City may complete the same and recover the full cost and expense thereof from the subdivider. Such agreement may also provide for the construction of the improvements in stages.

**B. Performance Security**

The subdivider is required to provide monetary assurance of full and faithful performance in the form of a bond, cash, or other security acceptable to the City in an amount equal to one hundred twenty-five percent (125%) of the estimated cost of the improvements.

**16.120.70 - Bond**

**A. Performance guarantee required. As required by Section 16.120.060, the subdivider shall file with the agreement an assurance of performance supported by one of the following:**

- 1. A surety bond executed by a surety company authorized to transact business in the state of Oregon which remains in force until the surety company is notified by the City in writing that it may be terminated or cash.**
- 2. Determination of sum. The assurance of performance shall be for a sum determined by the City Engineer as required to cover the cost of the improvements and repairs, including related engineering and incidental expenses.**
- 3. Itemized improvement estimate. The subdivider shall furnish to the City Engineer an itemized improvement estimate, certified by a registered civil engineer, to assist the City Engineer in calculating the amount of the performance assurance.**
- 4. When subdivider fails to perform. In the event the subdivider fails to carry out all provisions of the agreement and the City has un-reimbursed costs or expenses resulting from such failure, the City shall call on the bond, cash deposit for reimbursement.**

5. **Termination of performance guarantee. The subdivider shall not cause termination of nor allow expiration of said guarantee without having first secured written authorization from the City.**

**ANALYSIS:** The proposal includes new public improvements and the applicant is required to obtain an Engineering Compliance Agreement with the City of Sherwood Engineering Department that includes the assurances stated above.

**FINDING:** This standard is met.

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## **Chapter 16.128 - LAND DIVISION DESIGN STANDARDS**

### **16.128.10 - Blocks**

#### **A. Connectivity**

##### **1. Block Size**

**The length, width, and shape of blocks shall be designed to provide adequate building sites for the uses proposed, and for convenient access, circulation, traffic control and safety.**

**ANALYSIS:** Lots 1 – 8 will be served by an existing street and block approved as part of the Reserve at Cedar Creek Subdivision. Lots 40 – 41 will be served by a private driveway and will not create a new block due to the access restrictions on SW Redfern Dr. to the north and the environmentally constrained land to the south.

Lots 9 – 38 will be served by a new public street and block stemming off SW Brookman Rd. The proposed length and shape of the block responds to the environmental resources on the site and conforms to the Brookman Addition Concept Plan. The block will be stubbed to the east property line of the development site and will eventually connect back to SW Brookman Rd. as envisioned by the concept plan.

**FINDING:** This standard is met.

##### **2. Block Length**

**Block length standards shall be in accordance with Section 16.108.040. Generally, blocks shall not exceed five-hundred thirty (530) feet in length, except blocks adjacent to principal arterial, which shall not exceed one thousand eight hundred (1,800) feet. The extension of streets and the formation of blocks shall conform to the Local Street Network map contained in the Transportation System Plan.**

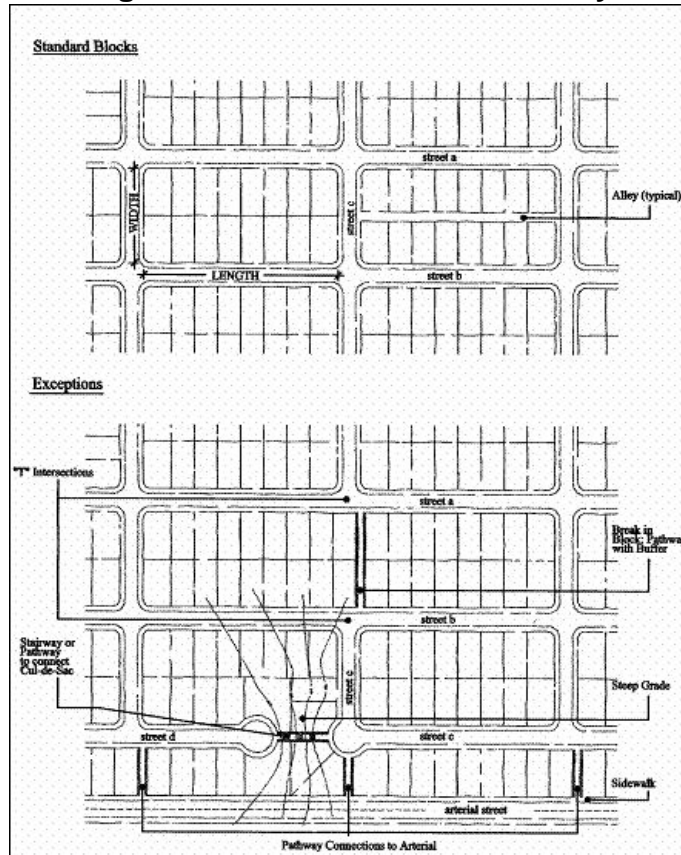
**ANALYSIS:** As described above, the subdivision will create a new public street block stemming from SW Brookman Rd (arterial). The length of the block will be

approximately 1,500 ft. when completed by the adjacent property to the east.

**FINDING:** This standard is met.

3. **Pedestrian and Bicycle Connectivity. Paved bike and pedestrian accessways shall be provided on public easements or right-of-way consistent with Figure 7.401.**

**Figure 7.401 — Block Connectivity**



**ANALYSIS:** The applicant is proposing a continuous pedestrian and bicycle system including streets, sidewalks, and trails. Two pedestrian and bicycle easement are proposed to break up the long block and provide adequate circulation. The easements will be located between Lots 15 / 16 and over the private driveway serving Lot 39.

**FINDING:** This standard is met.

- B. **Utilities Easements for sewers, drainage, water mains, electric lines, or other utilities shall be dedicated or provided for by deed. Easements shall be a minimum of ten (10) feet in width and centered on rear or side lot lines; except for tie-back easements, which shall be six (6) feet wide by twenty (20) feet long on side lot lines at the**

**change of direction.**

**ANALYSIS:** The development proposal will require an extension of public main line utilities throughout the site including sanitary sewer, storm sewer, water, and franchise utilities. Utilities will be located within the dedicated rights-of-way adjacent to individual lots and within an 8 ft. wide public utility easement along the frontage of each lot. The PUE easement is shown but not labeled on the preliminary plat (Exhibit A15 – Sheet P1).

**FINDING:** This standard is met.

**C. Drainages**

**Where a subdivision is traversed by a watercourse, drainage way, channel or street, drainage easements or rights-of-way shall be provided conforming substantially to the alignment and size of the drainage.**

**ANALYSIS:** The subdivision is traversed by Cedar Creek and its associated riparian areas and floodplain which are a significant water drainage way. The applicant is proposing to dedicate land within the drainage way to the City of Sherwood.

**FINDING:** This standard is met.

**16.128.020 - Pedestrian and Bicycle Ways**

**Pedestrian or bicycle ways may be required to connect cul-de-sacs, divide through an unusually long or oddly shaped block, or to otherwise provide adequate circulation.**

**ANALYSIS:** As described above, the applicant is proposing two bicycle and pedestrian easements to break up “Street B” and the new block being created as part of the subdivision. No additional easements are required.

**FINDING:** This standard is met.

**16.128.30 - Lots**

**A. Size and Shape**

**Lot size, width, shape, and orientation shall be appropriate for the location and topography of the subdivision or partition, and shall comply with applicable zoning district requirements, with the following exception:**

- 1. Lots in areas not served by public sewer or water supply shall conform to any special County Health Department standards.**

**ANALYSIS:** The lots proposed within the subdivision have been designed to conform the

abutting natural features and topography of the site. As described in this report, all of the proposed lots meet or are conditioned to meet the lot size and shape requirements.

**FINDING:** This standard is met.

**B. Access**

**All lots in a subdivision shall abut a public street, except as allowed for infill development under Chapter 16.68.**

**ANALYSIS:** As shown in the Preliminary Plat all lots in the subdivision abut a public street or a tract of land that is required as a buffer between a public street and the lot (e.g. the required visual corridor tracts adjacent between SW Brookman Rd. and Lots 19-26).

**FINDING:** This standard is met.

**C. Double Frontage**

**Double frontage and reversed frontage lots are prohibited except where essential to provide separation of residential development from railroads, traffic arteries, adjacent nonresidential uses, or to overcome specific topographical or orientation problems. A five (5) foot wide or greater easement for planting and screening may be required.**

**ANALYSIS:** Double frontage lots are proposed between SW Brookman Rd. and Street B. The lots are located on an arterial.

**FINDING:** This standard is met.

**D. Side Lot Lines Side lot lines shall, as far as practicable, run at right angles to the street upon which the lots face, except that on curved streets side lot lines shall be radial to the curve of the street.**

**ANALYSIS:** All side lot lines run at right angles to the street upon which the lots face. The new street system includes curves and side lot lines run radial to the curve of the street.

**FINDING:** The standard is met.

**E. Grading**

**Grading of building sites shall conform to the following standards, except when topography of physical conditions warrants special exceptions:**

- 1. Cut slopes shall not exceed one (1) and one-half (1 1/2) feet**

- horizontally to one (1) foot vertically.
2. **Fill slopes shall not exceed two (2) feet horizontally to one (1) foot vertically.**

**ANALYSIS:** The applicant's narrative states that the proposed grading conforms to the standards above. Final grade of the site and individual building lots will be reviewed through site grading and building permits.

**FINDING:** This standard is met.

## **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 proposal is for a residential subdivision, which does not require Site Plan review pursuant to SZCDC § 16.90.020. The sections of this chapter which pertain to Site Plan review are omitted. The sections applicable to subdivisions (e.g. open space landscaping) are addressed below.

**FINDING:** This standard is met.

### **16.92.20 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.
- 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 Preliminary Street Tree and Open Space Planting Plan (Exhibit A30 – Sheet L1 – L2) provides for new plantings in general conformance with these standards. The applicant is required to plant to CWS standards for sensitive areas. The remaining open space areas will be planted with a mix of trees, shrubs, and groundcover.

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

**RECOMMENDED CONDITION OF APPROVAL G2:** Prior to Issuance of occupancy, all open space landscaping not subject to CWS standards shall be installed in accordance with SZCDC § 16.92.020 and have an irrigation system.

\*\*\*

- 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:** The applicant has been conditioned to maintain landscaping at points of access in accordance with the clear vision requirements of SZCDC § 16.58.010.

**FINDING:** This standard is met.

\*\*\*

#### **16.92.40 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:** The landscape plans include installation and maintenance requirements for the open space landscaping in accordance with the standards above. An automatic irrigation system is proposed.

**FINDING:** This standard is met.

## **Chapter 16.94 OFF-STREET PARKING AND LOADING**

### **16.94.10 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.

\*\*\*

#### **D. 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.

\*\*\*

#### **16.94.20 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)

| Use  | Minimum Parking Standard | Maximum Permitted Parking Zone A <sup>1</sup> | Maximum Permitted Parking Zone B <sup>2</sup> |
|--|--------------------------|---|---|
| Single, two-family and manufactured home on lot <sup>3</sup> | 1 per dwelling unit      | None  | None  |

<sup>3</sup> If the street on which the house has direct access does not permit on-street parking or is less than twenty-eight (28) feet wide, two (2) off-street parking spaces are required per single-family residential unit. (includes single-family detached or attached, two-family dwelling or a manufactured home on an individual lot) If the abutting street is twenty-eight (28) feet or wider, one (1) standard (9 ft. x 20 ft.) parking space is required.

**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.

**ANALYSIS:** The proposal is for a 41-lot single family detached residential subdivision. Residential off-street parking spaces are required to be on the same lot as the residential use and cannot include garages or structures unless part of a multi-family development. The minimum garage setback is 20 ft. in the MDRL zone and will allow for a minimum driveway length of 20 ft. on each lot. Lots 40 and 41 will take access from SW Brookman Rd. which does not provide for on-street parking. Lots 40 and 41 require two off-street stalls each.

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

**RECOMMENDED CONDITION OF APPROVAL E4:** Prior to issuance of building permits, one off-street parking space per dwelling unit shall be provided. Garages cannot be counted as parking stalls. Each stall shall be a minimum of 20 ft. deep x 9 ft. wide. Lots 40 and 41 shall each have two (2) off-street stalls at the minimum required width and depth.

**RECOMMENDED CONDITION OF APPROVAL G3:** Prior to occupancy of each residence, one off-street parking space per dwelling unit shall be provided. Garages cannot be counted as parking stalls. Each stall shall be a minimum of 20 ft. deep x 9 ft. wide. Lots 40 and 41 shall each have two (2) off-street stalls at the minimum required width and depth.

\*\*\*

**Chapter 16.96 - ONSITE CIRCULATION**

**16.92.10 – 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.**

**ANALYSIS:** The proposed subdivision will provide a continuous pathway system throughout the development including sidewalks and community trails. The proposed community trail will connect to and extend the community trail approved as part of the Reserve at Cedar Creek subdivision. A trail crossing of Cedar Creek is not proposed for the northern portion of the site due to the length of the crossing and high cost of construction relative to the size of the overall project. The applicant has provided a 20 ft. trail easement for a future crossing at this location. New sidewalks are not proposed along the site frontage with SW Brookman Rd.

**FINDING:** This criterion is met.

**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.**

**ANALYSIS:** Pedestrian circulation plans are being reviewed and approved as part of this application. Changes to the proposed circulation shall be in accordance with chapter.

**FINDING:** This criterion is met.

**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.**

**ANALYSIS:** Joint pedestrian access to the individually platted lots is not proposed.

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

**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:** All lots will have a sidewalk or driveway connecting the front entrance to the public street.

**FINDING:** This standard is met.

**E. Maintenance of Required Improvements**

**Required ingress, egress and circulation improvements shall be kept clean and in good repair.**

**ANALYSIS:** Maintenance is required the owner or home owners associated. Maintenance violations can be addressed through code compliance.

**FINDING:** This criterion 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:** The site has frontage on SW Brookman Road which is classified as an arterial street under Washington County jurisdiction. Direct lot access to Brookman Rd. is not proposed. The applicant is proposing a new local public street to serve the development.

**FINDING:** These standards are met.

**16.96.20 Minimum - Residential standards**

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

**A. Driveways**

1. **Single-Family: One (1) driveway improved with hard surface pavement with a minimum width of ten (10) feet, not to exceed a grade of 14%. Permeable surfaces and planting strips between driveway ramps are encouraged in order to reduce stormwater runoff.**
2. **Two-Family: One (1) shared driveway improved with hard surface pavement with a minimum width of twenty (20) feet; or two (2) driveways improved with hard surface pavement with a minimum width of ten (10) feet each. Permeable surfaces and planting strips between driveway ramps are encouraged in order to reduce stormwater runoff.**



**ANALYSIS:** The applicant's narrative indicates each lot is planned to have a paved hard surface driveway which will be greater than 10 ft. in width and less than 14% grade. The applicant is proposing shared driveways to serve Lots 2, 3, 19, 20, 39, 40, and 41.

While shared driveways are proposed, all of the lots served will be single-family lots. Subsection (2) above applies to two-family development on the same lot (e.g duplex). The intent of the standard is to ensure adequate off-street parking space for each unit. Each of the proposed single-family lots is required to provide an off-street parking stall as conditioned below. Each lot will also connect to the public street via an individual or shared driveway.

As no parking is permitted on SW Brookman Rd., Lots 40 and 41 are required to have two off-street parking stalls each per Condition of Approval E4.

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

**CONDITION OF APPROVAL E3:** Prior to the issuance of building permits, each lot shall provide for a hard surface driveway with a minimum width of 10 ft. and grade not to exceed 14%.

\*\*\*

#### **16.96.40 - 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.**

**ANALYSIS:** All lots except Lots 40 and 41 will be served by new local residential streets subject to City standards. The two new access points to SW Brookman Rd., one for a local street and one for a private driveway, are subject to review and approval by Washington County. Site access is being reviewed through the subject application.

**FINDING:** This criterion is met.

##### **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.**

**ANALYSIS:** Joint access to private lots is not proposed. Each lot will have a single access point from a public or private street.

**FINDING:** This standard is met.

**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.**

**ANALYSIS:** The applicant is proposing shared use driveways to serve Lots 2, 3, 19, 20, 39, 40, and 41. Each lot will connect to the public street via an individual or shared driveway.

**FINDING:** These standards are met.

**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:** Maintenance is required the owner or home owners associated. Maintenance violations can be addressed through code compliance.

**FINDING:** This criterion is met.

**Chapter 16.134 - FLOODPLAIN (FP)**

## **OVERLAY**

### **16.134.010 - Generally**

**Special resource zones are established to provide for preservation, protection, and management of unique natural and environmental resources in the City that are deemed to require additional standards beyond those contained elsewhere in this Code. Special resource zones may be implemented as underlying or overlay zones depending on patterns of property ownership and the nature of the resource. A property or properties may be within more than one resource zone. In addition, the City may identify special resource areas and apply a PUD overlay zone in advance of any development in order to further protect said resources.**

**The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled, "The Flood Insurance Study for Washington County, Oregon and Incorporated Areas," (flood insurance study) dated October 19, 2018, with accompanying Flood Insurance Maps are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file with the Sherwood City Engineer at Sherwood City Hall.**

### **16.134.20 - Purpose**

**The purpose of this ordinance is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by complying with the provisions of this chapter.**

- A. The FP zoning district is an overlay district that controls and regulates flood hazard areas in order to protect the public health, safety and general welfare; to reduce potential flood damage losses; and to protect floodways and natural drainageways from encroachment by uses which may adversely affect water quality and water flow and subsequent upstream or downstream flood levels. The FP zone shall be applied to all areas within the base flood, and shall supplement the regulations of the underlying zoning district.**
- B. FP zoning districts are areas within the base flood as identified by the Federal Emergency Management Agency (FEMA) in a Flood Insurance Study (FIS) and in Flood Insurance Rate Maps (FIRM) published for the City and surrounding areas, or as otherwise identified in accordance with Section 16.134.020C. These FEMA documents are adopted by reference as part of this Code, and are on file at the City.**
- C. When base flood elevation data is not available from the FIS or FIRM, the City shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or**

other source, and standards developed by the FEMA, in order to administer the provisions of this Code.

- D.** In areas where a regulatory floodway has not been designated, and where the Flood Insurance Study indicates that it is possible to calculate a floodway, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

**ANALYSIS:** Cedar Creek runs through the site and a portion of the property is within the base flood zone. The application includes the latest National Flood Insurance Program Flood Insurance Rate Map (FIRM) for the site (Exhibit A18). The base flood zone is also shown on the plans. The Community Trail and a sanitary sewer line will be the only improvements within the flood zone. Storm outfalls will be located just outside the flood zone.

The applicant's narrative states "in order to install the trails, there is some fill necessary however that is being balanced with a slightly greater cut area. The total floodplain fill is 152 cubic yards and the total cut is 157 cubic yards resulting in a net cut of 5 cubic yards, which increases the floodplain storage capacity."

**FINDING:** A portion of the subject site is located within the base flood zone and this chapter applies.

#### **6.134.030 - Greenways**

The FP zoning districts overlaying the Rock Creek and Cedar Creek floodplains are designated greenways in accordance with Chapter 5 of the Community Development Plan. All development in these two floodplains shall be governed by the policies in Division V, Chapter 16.142 of this Code, in addition to the requirements of this Section and the Clean Water Services Design and Construction Standards R&O 07-20, or its replacement.

**ANALYSIS:** The entire floodplain is located within Tracts B and D and will be dedicated to the City. The floodplain will be used as a drainageway and community trail only.

**FINDING:** This standard is met.

#### **16.134.40 - Development Review and Floodplain Administrator Duties**

- A. The City Engineer is the designated local Floodplain Administrator and is responsible for maintaining local floodplain management records for the City.**
- B. Provided land is not required to be dedicated as per Section 16.134.030, a conditional use permit (CUP) is required before any use, construction, fill, or alteration of a floodplain, floodway, or watercourse, or any other development begins within any FP zone, except as provided in Section 16.134.050.**
- C. Application for a CUP for development in a floodplain shall conform to the requirements of Chapter 16.82 and may include, but is not limited to, plans and scale drawings showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, fill, storage of materials, and drainage facilities.**
- D. The following specific information is required in a floodplain CUP application and shall be certified and verified by a registered civil engineer or architect. The City shall maintain such certifications as part of the public record. All certifications shall be based on the as- built elevations of lowest building floors.**
  - 1. Elevations in relation to the current FIRM and FIS of the lowest floor (including basement) of all structures;**
  - 2. Elevations in relation to the current FIRM and FIS to which any structure has been flood proofed.**
  - 3. That the flood proofing methods for any structure meet the requirements of this section, Floodplain Structures.**
  - 4. Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development.**
  - 5. A base flood survey and impact study made by a registered civil engineer.**
  - 6. Proof all necessary notifications have been sent to, and permits have been obtained from, those federal, state, or other local government agencies for which prior approval of the proposed development is required.**
  - 7. Any other information required by this section, by any applicable federal regulations, or as otherwise determined by the City to be necessary for the full and proper review of the application.**
- E. The floodplain administrator shall review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 16.134.070.F are met.**

- F. Where base flood elevation data is provided through the Flood Insurance Study, FIRM or required under Section 16.134.020.C the local Floodplain Administrator shall:**
- 1. Obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and**
  - 2. If the structure has been floodproofed in accordance with Sections 16.134.090.A.3 and D.1.a, then obtain the elevation (in relation to mean sea level) to which the structure was floodproofed, and**
  - 3. Maintain all elevation and floodproofing certificates required under Section 16.134.040.D, and**
  - 4. Maintain for public inspection all records pertaining to the provisions of this ordinance.**
- G. Where elevation data is not available as per subsection D of this section, or from other sources as per Section 16.134.020.C, a floodplain CUP shall be reviewed using other relevant data, as determined by the City, such as historical information, high water marks, and other evidence of past flooding. The City may require utility structures and habitable building floor elevations, and building flood proofing, to be at least two feet above the probable base flood elevation, in such circumstances where more definitive flood data is not available.**
- H. The floodplain administrator shall:**
- 1. Notify adjacent communities, the Department of Land Conservation and Development and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration as required in Section 16.134.100.C.**
  - 2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.**
- I. The floodplain administrator shall make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59-76).**

- J. Variances to any standard within the floodplain overlay shall comply with the provisions of the Code of Federal Regulations (CFR) section 44 CFR 60.6(a)(1)—(7).

**16.134.50 - Permitted Uses**

In the FP zone the following uses are permitted outright, and do not require a CUP, provided that floodway flow, or floodplain capacity, will not be impeded, as determined by the City, and when greenway dedication is not required as per Section 16.134.030.

- A. Agricultural uses, provided that associated structures are not allowed, except for temporary building and boundary fences that do not impede the movement of floodwaters and flood-carried materials.
- B. Open space, park and recreational uses, and minor associated structures, if otherwise allowed in the underlying zoning district that do not impede the movement of floodwaters and flood-carried materials.
- C. Public streets and appurtenant structures, and above and underground utilities, subject to the provisions of Sections 16.134.080 and 16.134.090.
- D. Other accessory uses allowed in the underlying zoning district that do not involve structures, and will not, in the City's determination, materially alter the stability or storm drainage absorption capability of the floodplain.

**16.134.60 - Conditional Uses**

In the FP zone the following uses are permitted as conditional uses, subject to the provisions of this Section and Chapter 16.82, when greenway dedication is not required as per this Section.

Greenways:

- A. Any permitted or conditional use allowed in the underlying zoning district, when located in the flood fringe only, as specifically defined by this Code.

**16.134.70 - Prohibited Uses**

In the FP zone the following uses are expressly prohibited:

- A. The storage or processing of materials that are buoyant, flammable, contaminants, explosive, or otherwise potentially injurious to human, animal or plant life.
- B. Public and private sewerage treatment systems, including drainfields, septic tanks and individual package treatment plants.
- C. Any use or activity not permitted in the underlying zoning district.
- D. Any use or activity that, in the City's determination, will materially alter the stability or storm drainage absorption capability of the floodplain.

- E. Any use or activity that, in the City's determination, could create an immediate or potential hazard to the public health, safety and welfare, if located in the floodplain.
- F. Any use, activity, or encroachment located in the floodway, including fill, new construction, improvements to existing developments, or other development, except as otherwise allowed by Section 16.134.050 and unless certification by a registered professional engineer or architect is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the use, activity, or encroachment will not result in any increase to flood levels during the occurrence of the base flood discharge.
  - a. If paragraph F of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard provisions of Sections 16.134.080 and .090, or ASCE 24, whichever is more stringent.
- G. The storage of recreational vehicles. This is the most restrictive provision wherein.

**ANALYSIS:** The base flood elevation data for the site is shown on the FIRM map included as (Exhibit A18). The base flood area is also shown on the applicant's plans. The Community Trail will be located in the floodplain in two locations including the crossing connection to the Reserve at Cedar Creek subdivision. A sanity sewer line will be installed under the trail crossing of the creek. Pedestrian trails and underground utilities are permitted uses as described in the standards above. No prohibited uses are proposed within the floodplain and no development is proposed that requires a CU permit.

The applicant submittal indicates that each residential structure built in the subdivision shall meet FEMA requirements for the ground finished floor elevation being 1.5-feet above the 100-year flood plain elevation.

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

**CONDITION OF APPROVAL G4:** Prior to Grant of Occupancy, for each residential structure constructed within the subdivision and abutting the Flood Plain corridor (Lots 1-18), a completed FEMA Elevation Certificate Form shall be submitted to the City for its records.

**16.134.80 - Floodplain Development**



**A. Floodplain Alterations**

**1. Floodplain Survey**

The floodplain, including the floodway and flood fringe areas, shall be surveyed by a registered land surveyor or civil engineer, and approved by the City, based on the findings of the flood insurance study and other available data. Such delineation shall be based on the current FIRM and FIS data and be field-located from recognized valid benchmarks.

**2. Grading Plan**

Alteration of the existing topography of floodplain areas may be made upon approval of a grading plan by the City. The plan shall include both existing and proposed topography and a plan for alternate drainage. Contour intervals for existing and proposed topography shall be included and shall be not more than one foot for ground slopes up to five percent (5%) and for areas immediately adjacent to a stream or drainage way, two feet for ground slopes between five and ten percent (5% to 10%), and five feet for greater slopes.

**3. Fill and Diked Lands**

a. Proposed floodplain fill or diked lands may be developed if a site plan for the area to be altered within the floodplain is prepared and certified by a registered civil engineer and approved by the Commission pursuant to the applicable provisions of this Code.

b. Vehicular access shall be provided from a street above the elevation of the base flood to any proposed fill or dike area if the area supports structures for human occupancy. Unoccupied fill or dike areas shall be provided with emergency vehicle access.

**4. Alteration Site Plan**

a. The certified site plan prepared by a registered civil engineer or architect for an altered floodplain area shall show that:

(1) Proposed improvements will not alter the flow of surface water during flooding such as to cause a compounding of flood hazards or changes in the direction or velocity of floodwater flow.

(2) No structure, fill, storage, impervious surface or other uses alone, or in combination with

existing or future uses, will materially reduce the capacity of the floodplain or increase in flood heights.

- (3) Proposed floodplain fill or diked areas will benefit the public health, safety and welfare and incorporate adequate erosion and storm drainage controls, such as pumps, dams and gates.
- (4) No serious environmental degradation shall occur to the natural features and existing ecological balance of upstream and downstream areas.
- (5) On-going maintenance of altered areas is provided so that flood-carrying capacity will not be diminished by future erosion, settling, or other factors.

- b. Applicants must obtain a conditional letter of map revision (CLOMR) from FEMA before any encroachment, including fill, new construction, substantial improvement, or other development, in the regulatory floodway is permitted. Applicants are responsible for preparing technical data to support the CLOMR application and paying any processing or application fees to FEMA.

**ANALYSIS:** Site grading and the final design of the community trail will be reviewed and approved prior to issuance of an engineering compliance agreement from the City of Sherwood. The developer is required to meet the standards above for any floodplain alteration. The applicant plans indicate a net cut of 5 cubic yards is proposed for the floodplain, resulting in greater storage capacity.

**FINDING:** This standard is met.

## 5. Subdivisions and Partitions

All proposed subdivisions or partitions including land within an FP zone must establish the boundaries of the base flood by survey and dedicate said land as per Section 16.134.030. The balance of the land and development must:

- a. Be designed to include adequate drainage to reduce exposure to flood damage, and have public sewer, gas, electrical and other utility systems so located and constructed to minimize potential flood damage, as determined by the City.

- b. Provide for each parcel or lot intended for structures, a building site which is at or above the base flood elevation, and meets all setback standards of the underlying zoning district.
- c. Where base flood elevation data is not provided, or is not available from an authoritative source, it shall be generated by the applicant for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five acres, whichever is less.

**ANALYSIS:** The base flood has been identified using recent FEMA maps and is identified on existing conditions plan. The land within the base flood zone is entirely within Tracts B and D and will be dedicated to the City in accordance with the requirement above.

As shown in the Conceptual Building Setback Plan (Exhibit A30 – Sheet P4) all lots are located out of the base flood and can accommodate a single-family residential structure. Condition of Approval G4 requires the applicant to submit a FEMA Elevation Certificate Form for each lot that abuts the flood corridor (Lots 1 – 18).

**FINDING:** The standards are met.

**16.134.90 - Floodplain Structures**

**Structures in the FP zone permitted in accordance with this section, shall be subject to the following conditions, in addition to the standards of the underlying zoning district:**

**A. Generally**

- 1. All structures, including utility equipment, and manufactured housing dwellings, shall be anchored to prevent lateral movement, floatation, or collapse during flood conditions, and shall be constructed of flood-resistant materials, to standards approved by the City, State Structural and Plumbing Specialty Codes and applicable building codes.
- 2. The lowest floor elevation of a structure designed for human occupancy must be at least one and one-half feet above the base flood elevation and the building site must comply with the provisions of Section 16.134.080.A.
- 3. The lower portions of all structures shall be flood proofed according to the provisions of the State Structural and Plumbing Specialty Code to an elevation of at least one and one-half feet above the base flood elevation.

4. The finished ground elevation of any under floor crawl space shall be above the grade elevation of an adjacent street, or natural or approved drainage way unless specifically approved by the City. A positive means of drainage from the low point of such crawl space shall be provided.
5. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

**B. Utilities**

1. Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities located within structures shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
2. Electrical service equipment, or other utility structures, shall be constructed at or above the base flood elevation. All openings in utility structures shall be sealed and locked.
3. Water supply and sanitary sewer systems (not prohibited under section 16.134.070.B shall be approved by the Washington County Health Department, and shall be designed to minimize or eliminate the infiltration of floodwaters into the systems, or any discharge from systems into floodwaters.
  - a. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with Washington County Health Authority and Oregon Department of Environmental Quality.

**C. Residential Structures**

1. All residential structures shall have the lowest floor, including basement, elevated to at least one and one-half feet above the base flood elevation.
2. Fully enclosed areas below the lowest floor that are subject to flooding are not permitted unless they are designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered engineer or architect, or must meet or exceed the following minimum criteria:
  - a. A minimum of two openings having a total net area of not less than one square inch for every square

- foot of enclosed area subject to flooding shall be provided.
- b. The bottom of all openings shall be no higher than one foot above grade.
  - c. Openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic entry and exit of floodwaters.
3. Shall be constructed with materials resistant to flood damage.

**ANALYSIS:** A new underground sanitary sewer line and community trail will be located in the floodplain. Private sewer lines require a plumbing permit from Washington County. Public sewer lines require review and approval by the City of Sherwood and/or Clean Water Services. No residential structures are proposed in the floodplain.

**FINDING:** These standards are met.

\*\*\*

## Chapter 16.142 Parks, Trees and Open Space

### 16.142.010 - Purpose

This Chapter is intended to assure the provision of a system of public and private recreation and open space areas and facilities consistent with this Code and applicable portions of Chapter 5 of the Community Development Plan Part 2. The standards of this section do not supersede the open space requirements of a Planned Unit Development, found in Chapter 16.40 - Planned Unit Development (PUD).

### 16.142.30 - Single-Family or Duplex Residential Subdivisions

- A. A minimum of five percent (5%) of the net buildable site (after exclusion of public right-of-way and environmentally constrained areas) shall be maintained as "open space". Open space must include usable areas such as public parks, swimming and wading pools, grass areas for picnics and recreational play, walking paths, and other like space. The following may not be used to calculate open space:
  1. Required yards or setbacks.
  2. Required visual corridors.
  3. Required sensitive areas and buffers.
  4. Any area required to meet a standard found elsewhere in this code.

**ANALYSIS:** The proposal is for a single-family residential subdivision and 5% of the

net buildable site is required as open space.

|                                 |                   |
|---------------------------------|-------------------|
| Gross site area:                | 870,698 SF        |
| Vegetated Corridor:             | -493,979 SF       |
| <u>Right-of-way dedication:</u> | <u>-85,453 SF</u> |
| Net site area:                  | 291,266           |

$291,266 \text{ SF} \times 0.05 = 14,563 \text{ SF of open space required}$

The applicant's narrative states that a total of 54,453 SF of open space is provided within Tracts B, D, H, and I which equates to 18.7% of the net buildable area. Tract H cannot count as open space as it is required sensitive area by CWS. The Conceptual Open Space Plan also indicates Tracts E and F (visual corridors) are active open space areas. Per the standard above, sensitive areas and visual corridors cannot be counted towards the 5% open space requirement. The applicant is conditioned to provide a corrected open space percentage prior to final plat approval.

The proposed trail system will provide approximately 0.33 lineal miles of active open space area. The application does not indicate whether seating areas are proposed along the trail to provide rest and scenic opportunities. The applicant is conditioned to provide seating areas in the pocket parks adjacent to the trails.

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

**CONDITION OF APPROVAL B5:** Prior to Final Plat approval, revise the open space plan and provide a final usable open space percentage after removing Tracts H, E, and F from the calculations. The final percentage shall exceed 5% of the net buildable site.

**CONDITION OF APPROVAL B6:** Prior to Final Plat approval, provide a final open space improvement plan that provides seating opportunities for the pocket parks adjacent to the pedestrian trail, including Tract I.

- B. Enhanced streetscapes such as "boulevard treatments" in excess of the minimum public street requirements may count toward a maximum of 10,000 square feet of the open space requirement.**
  - 1. Example: if a 52-foot-wide right-of-way [ROW] is required for a 1,000 foot-long street and a 62-foot wide ROW with 5-foot additional plantings/meandering pathway is provided on each side of the street, the additional 10-foot-wide area x 1,000 linear feet, or 10,000 square feet, counts toward the open space requirement.**

**ANALYSIS:** Enhanced streetscapes are not proposed.

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

- C. The open space shall be conveyed in accordance with one of the following methods:**
- 1. By dedication to the City as public open space (if acceptable to the City). Open space proposed for dedication to the City must be acceptable to the City Manager or the Manager's designee with regard to the size, shape, location, improvement, environmental condition, and budgetary and maintenance abilities;**
  - 2. By leasing or conveying title (including beneficial ownership) to a corporation, homeowners' association or other legal entity, with the City retaining the development rights to the open space. The terms of such lease or other instrument of conveyance must include provisions (e.g., maintenance, property tax payment, etc.) suitable to the City.**

**ANALYSIS:** The City accepts ownership of the sensitive areas as defined by CWS within open space Tracts B, D, and H. The remaining open space including the pocket parks adjacent to the trail and Tract I shall be owned by the future homeowners association (HOA). Maintenance of the trail and other usable open space area is the responsibility of the future HOA. The table and conditions below provide full details on open space ownership and maintenance responsibilities.

| <b>Tract</b>                     | <b>Use</b>                       | <b>Ownership</b> | <b>Maintenance</b> |
|----------------------------------|----------------------------------|------------------|--------------------|
| Tract A                          | Storm Facility                   | City             | City               |
| Tract B                          | Environmentally Constrained Land | City             | City               |
| Tract B<br>(new tracts required) | Open Space                       | HOA              | HOA                |
| Tract C                          | Storm Facility                   | City             | City               |

|                                  |                                  |      |      |
|----------------------------------|----------------------------------|------|------|
| Tract D                          | Environmentally Constrained Land | City | City |
| Tract D<br>(new tracts required) | Open Space                       | HOA  | HOA  |
| Tract E                          | Visual Corridor (Brookman Rd.)   | HOA  | HOA  |
| Tract F                          | Visual Corridor (Brookman Rd.)   | HOA  | HOA  |
| Tract G                          | Private Street                   | HOA  | HOA  |
| Tract H                          | Environmentally Constrained Land | City | City |
| Tract I                          | Open Space                       | HOA  | HOA  |

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

**CONDITION OF APPROVAL B7:** Prior to final plat approval, the plat shall be revised to remove non-environmentally constrained land from Tracts B and D. The area removed shall be provided in separate tracts to be owned and maintained by the HOA. Environmentally constrained land is defined by SZCDC § 16.10

**CONDITION OF APPROVAL A11:** Tracts A, B, C, D, and H shall be dedicated to the City of Sherwood for permanent ownership and maintenance. Tracts B and D shall be dedicated after removing land not defined as environmentally constrained in SZCDC § 16.10.

**CONDITION OF APPROVAL A12:** Tracts E, F, G, I, and the non-constrained land within Tracts B and D shall be permanently owned and maintained by the HOA.

**CONDITION OF APPROVAL B8:** Prior to final plat approval, provide draft CC&Rs that describe ownership and maintenance responsibilities for Tracts E,



F, G, I, and the non-constrained land within Tracts B and D. Maintenance responsibilities shall include the community trail.

**CONDITION OF APPROVAL G12:** Prior to occupancy, the community trail and open space plantings and improvements shall be installed by the developer in accordance with the final landscaping and open space improvement plans.

**D. The density of a single-family residential subdivision shall be calculated based on the net buildable site prior to exclusion of open space per this Section.**

**1. Example: a 40,000 square foot net buildable site would be required to maintain 2,000 square feet (5%) of open space square feet. but would calculate density based on 40,000 square feet.**

**ANALYSIS:** The density was calculated prior to removing the open space from the net buildable site.

**FINDING:** This criterion is met.

**E. If a proposed residential subdivision contains or is adjacent to a site identified as "parks" on the Acquisition Map of the Parks Master Plan (2006) or has been identified for acquisition by the Sherwood Parks and Recreation Board, establishment of open space shall occur in the designated areas if the subdivision contains the park site, or immediately adjacent to the parks site if the subdivision is adjacent to it.**

**ANALYSIS:** The 2006 Parks Master Plan was recently replaced by the 2021 Parks Master Plan. Both plans identify the Cedar Creek corridor as a planned open space area for habitat and active recreation (e.g. trails). The applicant is proposing large open space tracts including a pedestrian trail system for the Cedar Creek corridor and its tributaries.

Figure 7 of the 2021 Parks Master Plan shows the location of the three (3) planned parks within the Brookman Addition. No parks are planned within or adjacent to the subject site. The plan states that the locations were purposefully chosen to ensure all residences would be within a three-block walk of a local neighborhood park.

The City's Parks and Recreation Advisory Board met on June 6, 2022 to discuss making a recommendation to City Council regarding acquiring the northern flag pole portion of Tax Lot 107 as a public park. The advisory board discussed the issue but did not make a recommendation to council regarding the land.

Figure 1 of the Brookman Addition Concept Plan (2009) shows a neighborhood park adjacent to Cedar Creek at the southern end of Redfern Dr. While the standard above does not apply to Concept Plans, the applicant is proposing an 8,860 SF open space tract including an extension of the existing community trail within the area identified for a future park. The remaining land towards Cedar Creek will be preserved as sensitive habitat and maintained by the City.

**FINDING:** A new public park is not required. This standard is met.

- F. If the proposed residential subdivision does not contain or is not adjacent to a site identified on the Parks Master Plan map or otherwise identified for acquisition by the Parks and Recreation Board, the applicant may elect to convey off-site park/open space.**

**ANALYSIS:** The applicant is proposing open space for habitat and active recreation. Constrained land will be owned and maintained by the City. All other open space areas including the trails and usable open space will be owned and maintained by the HOA.

**FINDING:** This standard is met.

- G. This standard does not apply to a residential partition provided that a development may not use phasing or series partitions to avoid the minimum open space requirement. A partition of land that was part of an approved partition within the previous five (5) years shall be required to provide the minimum five percent (5%) open space in accordance with subsection (A) above.**

**ANALYSIS:** A residential partition is not proposed.

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

- H. The value of the open space conveyed under Subsection (A) above may be eligible for Parks System Development Charges (SDCs) credits based on the methodology identified in the most current *Parks and Recreation System Development Charges Methodology Report*.**

**ANALYSIS:** The value of open space conveyed under Subsection (A) may be eligible for Park SDC credits as determined by the City Engineer.

**FINDING:** This standard is met.

**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.

**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.

**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.

**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 subject site has frontage along SW Brookman Rd. which is identified as an arterial street in the City's TSP. A 15 ft. wide landscaped visual corridor is required along this site frontage. The applicant is proposing to dedicate the visual corridor to the HOA in Tracts E and F and the City in Tract H. The tree plan indicates that most of the existing mature trees within the visual corridor will be retained through site development. The applicant is required to comply with the tree preservation plan per Condition of Approval D2. Any areas of the visual corridor that do not provide a continuous visual buffer between Brookman Rd. and the proposed subdivision are required to be planted in accordance with the standards above.

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

**CONDITION OF APPROVAL G5:** Prior to occupancy, a continuous visual buffer between Brookman Rd. and the proposed subdivision shall be established through preserving existing native trees in good condition or planting new trees and landscaping in accordance with SZCDC § 16.142.040.

**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 is not shown on the Natural Resources and Recreation Plan map as it was adopted prior to the Brookman Addition Concept Plan. The proposed subdivision will preserve the Cedar Creek corridor as open space in accordance with the 2021 Parks Master Plan and Brookman Addition Concept Plan.

**FINDING:** This standard is met.

**16.142.60 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 applicant is proposing Silver Linden, American Linden, Pyramidal Hornbeam, and Tulip Trees as the street trees in the subdivision. All of the proposed trees are on the City's Street Tree List with the exception of the tulip tree.

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

**RECOMMENDED CONDITION OF APPROVAL B9:** Prior to final plat approval, a detailed street tree plan that complies with the size and spacing standards of SZCDC § 16.142.060 shall be submitted to the City. The proposed tulip trees shall be replaced with a tree on the City's Street Tree List.

#### **16.142.70 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.

**FINDING:** The application is for a Type III subdivision and this chapter applies. As described in the analysis and findings below, the development preserves trees and woodlands in accordance with this chapter.

**FINDING:** This standard is met.

**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.**

**FINDING:** This applicant has provided a Tree Plan by from a Certified Arborist (Todd Prager, Teragan & Associates) (Exhibit A15) and a Preliminary Tree Preservation and Removal Plan (Exhibit A30 – Sheets P2.2 – 2.3). The Tree Plan is an inventory of all on-site trees including details such as tree location, health, and treatment recommendation. The Tree Plan also provides tree protection requirements for trees that will be retained through site development. Trees near areas of development call for arborist oversight during construction.

**FINDING:** This standard is 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.**

**FINDING:** This applicant's narrative states that the trees proposed for removal are necessary to accommodate the development including utility installation, earthwork, and grading necessary for street construction, proper drainage, and future home construction. While tree removal is proposed, the 40% tree canopy required by Section D2 below will be met through preservation of existing on-site trees. Additional trees required by the code, such as street trees and open space plantings, will still be required resulting in a final tree canopy of 56.8% over the net development site.



In reviewing the Tree Plan, staff has identified seven (7) mature Douglas fir trees that are in fair to good condition and may be able to be preserved through site development. All of the trees are located in the northern flag pole of Tax Lot 107 that connects to SW Brookman Rd. The trees listed below are located in the approximate yard areas of Lots 40 and 41 and/or in the open spaces adjacent to Lots 40 and 41.

- 6602 16", 29" DBH (co-dominant) Douglas fir, Good condition
- 6603 37" DBH, Douglas fir, Good condition
- 8202 18" DBH, Douglas fir, Fair condition
- 8211 13" DBH, Douglas fir, Good condition
- 8212 16" DBH, Douglas fir, Good condition
- 8271 32" DBH, Douglas fir, Good condition
- 8284 28" DBH, Douglas fir, Good condition

Staff recommends the applicant voluntarily preserve the seven trees listed above or provide a response for each tree and whether or not the tree can be preserved through site development. Any additional trees that can be preserved should be identified for protection through a Condition of Approval and added to the overall tree canopy provided for the site.

**FINDING:** This standard is met.

**2. Required Tree Canopy - Residential Developments (Single Family Attached, Single Family Detached and Two - Family)**  
Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 40 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 canopy for each tree. The expected mature canopy is counted for each tree regardless of an overlap of multiple tree canopies. The canopy requirement can be achieved by retaining existing trees or planting new trees. Required street 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 needed canopy cover. A certified arborist or other qualified professional shall provide the estimated tree canopy of the proposed trees to the planning department for review.

**FINDING:** This applicant's narrative states that the trees proposed for removal are necessary to accommodate the development including utility installation, earthwork, and grading necessary for street construction, proper drainage, and future home construction. The development satisfies section D2 as discussed below.

**FINDING:** This standard is met.

|  |               |
|--|---------------|
| <b>Residential (single family &amp; two family developments)</b> |               |
| <b>Canopy Requirement</b>  | <b>40%</b>    |
| <b>Counted Toward the Canopy Requirement</b>                     |               |
| <b>Street trees included in canopy requirement</b>               | <b>Yes</b>    |
| <b>Landscaping requirements included in canopy requirement</b>   | <b>N/A</b>    |
| <b>Existing trees onsite</b>                                     | <b>Yes x2</b> |
| <b>Planting new trees onsite</b>                                 | <b>Yes</b>    |

**Mature Canopy in Square Feet Equation  $\pi r^2$  or  $(3.14159 * \text{radius}^2)$  (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.**

**Canopy Calculation Example: Pin**

**Oak Mature canopy = 35'**

**$(3.14159 * 17.52) = 962$  square feet**

**ANALYSIS:** The applicant is proposing to meet the minimum 40% tree canopy through preserving existing on-site trees. Trees located within environmentally constrained land are not counted towards meeting the minimum canopy requirement because environmentally constrained land is not part of the net site area calculation.

|                                    |                   |
|------------------------------------|-------------------|
| <i>Net site area</i>               | <i>291,266 SF</i> |
| <i>Minimum required 40% canopy</i> | <i>116,506 SF</i> |

The applicant is proposing to preserve 877 on-site trees including 83 in non-environmentally constrained land. The 83 trees result in 60,182 SF of tree canopy. Preserving existing mature tree on-site counts as double canopy pursuant to section (7) below. The total on-site canopy through preserved trees is 121,624 SF. An additional 43,960 SF are proposed through street trees and new plantings in open space areas.

|                                      |                            |
|--------------------------------------|----------------------------|
| <i>Total on-site canopy proposed</i> | <i>165,584 SF or 56.8%</i> |
|--------------------------------------|----------------------------|

Overall tree preservation and removal count:

|                                   |             |
|-----------------------------------|-------------|
| <i>Total trees on-site</i>        | 1,579       |
| <i>Trees proposed for removal</i> | 702 (45.5%) |
| <i>Trees proposed to remain</i>   | 877 (55.5%) |

**FINDING:** The applicant is proposing a final tree canopy of 56.8% of the net site area. 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:** Cedar Creek and two unnamed tributaries flow through development

site. On-site trees within the environmentally constrained areas of Cedar Creek (wetland, floodplain, vegetative corridor) will be preserved with the exception of dead or hazardous trees identified by the arborist, and those located near the Community Trail and other crossings of the sensitive area. The applicant's plans and narrative demonstrate that on-site trees will be preserved to the extent feasible and practical within the context of the proposed development.

Of special concern are the trees located in the northern flagpole adjacent to the existing Arbor Lane Subdivision. The trees located at the western end of the flagpole and closest to Cedar Creek will be preserved in an open space tract (Tract I) unless impacted by utility or trail construction. Trees are proposed for removal in the middle part of the flagpole to accommodate earthwork and utilities for two new lots and residences. The trees towards the east end of the flagpole will be preserved as part of a wetland and its associated buffer. While mature trees will be removed within this strip of land, trees will also be preserved in appropriate locations based on site conditions.

While the proposed tree removal appears warranted based on the location of development within the northern flag pole, staff has identified seven (7) additional trees in the area that may be able to be preserved. Staff recommends the applicant voluntarily preserve the seven trees listed above or provide a response for each tree explaining why the tree cannot be preserved through site development.

**FINDING:** These standards are 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 subject site is not located in the Old Town Overlay or subject to the final standards.

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

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:** The Notice of Decision will include Exhibit A15 Tree Plan and any

modifications to the plan as may be required by the Hearing Authority.

**FINDING:** This standard is met.

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:** Trees within the tracts dedicated to the City will be retained. Trees within the proposed storm water facilities will be removed and replanted in accordance with CWS standards.

**FINDING:** This section is met.

- 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:** The tree canopy incentive outlined in this section was applied to the calculations under SZCDC § 16.142.070(D)(2) above.

**FINDING:** This criterion is met.

- F. **Additional Preservation Incentives**

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**ANALYSIS:** Additional preservation incentives are not proposed.

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

- 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:** This applicant has provided a Tree Plan by from a Certified Arborist (Todd Prager, Teragan & Associates) and a Preliminary Tree Preservation and Removal Plan.

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

**RECOMMENDED CONDITION OF APPROVAL D2:** Prior to Issuance of a Grading Permit, the applicant shall submit a final Tree Report and Final Tree Preservation and Removal Plan reflecting any required changes in the land use approval. All on-site trees shall be protected through site development in accordance with the Tree Plan and Final Tree Preservation and Removal Plan. The applicant shall obtain approval from adjacent property owners prior to any off-site tree removal.

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## **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:** A summary of the wetland, habitat, and natural areas found on the site is provided below. The proposal complies or is conditioned to comply with the applicable

environmental regulations for each resource as described in the findings for this chapter and as provided in the individual jurisdictional agency comments and conditions.

City's Wetland Inventory – the subject site was annexed to the City in 2017 and is not included in the Wetland Inventory. The applicant has provided a CWS Site Assessment and DSL Concurrence letter that show and confirm the extent of existing wetlands on the site. Applicable wetland standards are addressed below.

Comprehensive Plan Natural Resource Inventory – The Cedar Creek floodplain is identified as a major natural resource in Chapter 5 of the City's Community Development Plan and is identified for preservation in the Brookman Addition Concept Plan. As described below and throughout this report, the Cedar Creek floodplain will be dedicated to the City and protected as a permanent natural resource.

Regionally Significant Fish and Wildlife Habitat Area – the subject site contains Class A Upland Habitat and Class I and II Riparian Habitat based on data provided in Metromap. The applicable standards for habitat protection have been met as described below.

**FINDING:** This chapter applies and compliance with specific requirements 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**

- c. **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 applicant's CWS Service Provider Letter and CWS Site Assessment provide details on the location, functional value, and proposed development of on-site wetlands. The applicant is proposing to fill 6,567 SF of wetland with an additional 26,360 square feet of impact to the 50-foot vegetative corridor buffer surrounding the wetland.

The standards above require the applicant to develop or enhance an area of wetland that is equal to the area and functional value of the wetlands removed. The applicant is proposing to purchase wetland mitigation bank credits within the Tualatin River Drainage Basin. The proposed impacts to the wetland 50 ft. buffer will be mitigated on-site at a ratio of 1:1.6.

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

**CONDITION OF APPROVAL D3:** Prior to tree removal and issuance of a grading permit, the proposed development shall obtain a US Army Corps of Engineers/Oregon Department of State Lands joint permit for the filling of the wetlands and provide evidence of a wetland mitigation bank credit equal to the amount of wetland permanently filled on the site.

- 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).**
  - 2. **The facility will comply with applicable requirements of**



- the zone.
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.
  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.
  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:** Cedar Creek is identified as a major natural resource in the City's Comprehensive Plan. The applicant's CWS Site Assessment provides an assessment of the significance and value of the habitat. As discussed above, the Cedar Creek floodplain and on-site wetlands and their buffers will be preserved through site development and dedicated to the City for long-term maintenance and stewardship. Approximately 6,600 SF of wetland will be permanently filled but will be enhanced at a 1:1 ratio within the Tualatin River basin. Impacts are also proposed to the wetland buffer area and will be mitigated on-site at a ratio of 1:1.6. The applicant's narrative acknowledges the standards above regarding excavation and storage of topsoil.

**FINDING:** These standards are 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:**

- 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 scattered 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                                     |

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 subject site contains Class A Upland Habitat and Class I and II Riparian Habitat based on data provided on Metromap (Exhibit D4). The CWS Site Assessment and separate Tree Plan provide an assessment of the on-site riparian and upland habitat in accordance with the standards above. A majority of the riparian habitat will be preserved and permanently protected through site development. Mature trees within the upland habitat are proposed to be removed to accommodate the proposed 41-lots.

The applicant is proposing to protect Regionally Significant Habitat above what is regulated by the City's floodplain and wetland standards in order to obtain an exception to the lot size standards. The exception requirements are addressed below.

**FINDING:** These standards are met.

#### **16.144.030 - Exceptions to Standards**

**In order to protect environmentally sensitive areas that are not also governed by floodplain, wetland and Clean Water Services vegetated corridor regulations, the City allows flexibility of the specific standards in exchange for the specified amount of protection inventoried environmentally sensitive areas as defined in this code.**

##### **A Process**

**The flexibility of standards is only applicable when reviewed and approved as part of a land use application and shall require no additional fee or permit provided criteria is addressed. In the absence of a land use application, review may be processed as a Type 1 administrative interpretation.**

**ANALYSIS:** An exception to the lot size standard is being requested as part of the Type III land use application.

**FINDINGS:** This standard is met.

##### **B. Standards modified**

- 1. Lot size — Notwithstanding density transfers permitted through Chapter 16.40, when a development contains inventoried regionally significant fish and wildlife habitats as defined in Section 16.144.020 above, lot sizes may be reduced up to ten percent (10%) below the minimum lot size of the zone when an equal amount of inventoried resource above and beyond that already required to be protected is**

**held in a public or private open space tract or otherwise protected from further development.**

**ANALYSIS:** The applicant is proposing to protect additional sensitive habitat beyond the required floodplain, wetland, and Clean Water Services protection requirements. As shown in Exhibit D4, the site contains Regionally Significant Fish and Wildlife Habitat. Significant habitat that does not require protection elsewhere in the code can be counted towards the exception standard.

The minimum lot size in the MDRL zone is 5,000 ft. The applicant is proposing to reduce the lot size and lot width at building by up to 10% to allow a new minimum of 4,500 SF (lot size) and 45 ft. wide (lot width at building line). The narrative and plans demonstrate the total reduction in lot size for the 11 lots being reduced is 2,485 SF. The applicant is proposing greater than 50,000 SF of additional habitat protection outside of environmentally constrained areas.

**FINDING:** This standard is met.

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## **Chapter 16.156 - Energy Conservation**

### **16.156.20 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:** Street alignment within the subdivision is required to follow the flow of Cedar Creek and its tributaries. The required setbacks of the MDRL zone will allow sunlight to reach each building. The surrounding open space trees and new street tree plantings will provide shade during the summer and a wind break during winter.

**FINDING:** These standards are met.

## **Chapter 16.106 - TRANSPORTATION FACILITIES**

**16.106.10 - 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.**

| <b>Type of Street</b> | <b>ROW Width</b> | <b>Number of Lanes</b> | <b>Minimum Land Width</b> | <b>On Street Parking Width</b> | <b>Bike Lane Width</b> | <b>Sidewalk Width</b> | <b>Landscape Strip (exclusive of curb)</b> | <b>Median Width</b>    |
|-----------------------|------------------|------------------------|---------------------------|--------------------------------|------------------------|-----------------------|--|------------------------|
| <b>Local</b>          | <b>52'</b>       | <b>2</b>               | <b>14'</b>                | <b>8' on one side only</b>     | <b>None</b>            | <b>6'</b>             | <b>5' with 1' buffer</b>                   | <b>None</b>            |
| <b>Arterial</b>       | <b>60-102'</b>   | <b>2-5</b>             | <b>12'</b>                | <b>Limited</b>                 | <b>6'</b>              | <b>6-8'</b>           | <b>5'</b>                                  | <b>14' if required</b> |

**ANALYSIS:** The applicant has provided an Overall Street Plan (Exhibit A30 – Sheet P5.0) and Typical Street Sections (Exhibit A30 – Sheet P5.1). The applicant has provided a Transportation Impact Analysis (TIA) that projects the development will generate 32 AM peak hour, 41 PM peak hour, and 426 average weekday trips. The applicant is proposing to construct the private streets and all local public streets. A fee-in-lieu of construction is proposed for SW Brookman Rd.

Lots 1 to 8 are proposed to take access from the approved public streets within the Reserve at Cedar Creek Subdivision (currently under construction). Lots 40 and 41 are proposed to take access from SW Brookman Road via a new private, shared driveway. The remainder of the 31 lots are proposed to take access from a new local street system stemming from SW Brookman Road. A total of two new intersections are proposed with SW Brookman Rd., one local public street and one private driveway.

The following public streets will be created or modified as part of the development:

- SW Brookman Road                      *County Arterial*
- SW Yamel Terrace                      *City local residential*
- Street A                                      *City local residential*
- Street B                                      *City local residential*

The following private streets are also proposed as part of the development:

- *Tract G*                                      *Private street*
- *Easement on Lots 2-3*                      *Private shared driveway*
- *Easement on Lot 41*                      *Private shared driveway*

The applicant has received final approval for the following modifications to City engineering standards for public streets:

- Design modification from City for exceeding the allowed intersection spacing for Street B (local) (Exhibit B2)
- Design modification from City for reducing the minimum intersection spacing required for Street A (local) (Exhibit B2)

The applicant requested an additional modification to the public utility easement location along “Street B”, however, the modification was not approved by the City’s Engineering Department (Exhibit A25).

The applicant has applied for but has not received final approval for the following exceptions to County engineering standards for public streets:

- Design exception from County for a new local street intersection with an arterial roadway (Exhibit A26)
- Design exception from County for private driveway intersection with an arterial roadway (Exhibit A27)
- Sight Distance for left-turn in movement to private driveway from SW Brookman Rd. (Exhibit A31)

With the exceptions noted above, all public and private streets are proposed to comply with the applicable standards of the City code and TSP. The applicant is required to obtain the required exceptions from the County prior to issuance of a grading permit. Full findings for this chapter are provided below and in the agency comments.

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

**CONDITION OF APPROVAL D4:** Prior to issuance of a grading permit, the applicant shall obtain final design exceptions from Washington County for the new local street

intersection with SW Brookman Rd., the private driveway intersection with SW Brookman Rd., and the sight distance for the left-turn movement into the private driveway from SW Brookman Rd.

**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.

**ANALYSIS:** Final street names have not been proposed by the applicant.

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

**CONDITION OF APPROVAL B10:** Prior to final plat approval, all the name of all new public and private streets shall be provided on the plat. Public street names shall conform to the naming standards in SZCDC § 16.106.010.

**16.106.20 - 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.

**ANALYSIS:** The City of Sherwood Engineering comments and Washington County Land Use and Transportation comments provide complete transportation improvement analysis and conditions. A summary of the analysis is included below. All conditions of approval have been included into the staff report for clarity and ease of reference.

SW Brookman Rd. – the south property line abuts SW Brookman Rd. which is classified as a County arterial. A right-of-way dedication of 33 ft. and an 8 ft. PUE dedication is required along the entire site frontage. The new right-of-way width in front of the subject site will be 53 ft. to centerline. As described in the engineering comments, a fee-in-lieu of construction for half street improvements along the site frontage with Brookman Rd. is required.

SW Yamel Terrace – approximately 3/4 of the street is being constructed as part of the Reserve at Cedar Creek subdivision. The applicant is required to dedicate the remaining right-of-way and complete the improvements to local residential street standards (52 ft. wide right-of-way).

Streets A and B – The applicant is required to dedicate right-of-way and construct improvements to local residential street standards (52 ft. wide right-of-way).

**FINDING:** These criteria is met as conditioned below.

**CONDITION OF APPROVAL F2:** Prior to Acceptance of Constructed Public Improvements, applicant will comply with all the requirements and conditions of the WACO letter dated June 30, 2022.

**CONDITION OF APPROVAL C1:** Prior to Issuance of the Engineering Compliance Agreement, the following payments shall be made to the City, and distributed into the appropriate fund accounts (either WACO TDT or City transportation SDC) as determined by the applicant.

1. Brookman Road frontage right-of-way land dedication.
  - a. WACO is requiring a 33-foot wide right-of-way dedication along the frontage of SW Brookman Road.
  - b. Right-of-Way land valuation shall be credit eligible against either WACO TDT fees (100%), or the City transportation SDC fees (100%), or a combination of the two for right-of-way dedication in excess of a city half street local street section (26 feet).
2. SW Sunset Boulevard/SW Woodhaven Drive TIA mitigation item A
  - a. A proportionate share cost of \$19,480.52 for a signalized intersection improvements.
  - b. Mitigation item A is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$19,480.52.
3. SW Sunset Boulevard/SW Timbrel Lane TIA mitigation item B

- a. A proportionate share cost of \$14,516.13 for a mini-roundabout intersection improvement.
  - b. Mitigation item B is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$14,516.13.
4. SW Ladd Hill Road/SW Main Street/SW Sunset Boulevard mitigation item C
- a. A proportionate share cost of \$8,650.52 for a signalized intersection improvement.
  - b. Mitigation item C is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$8,650.52.
5. SW Baker Road/SW Murdock Road/SW Sunset Boulevard mitigation item D
- a. A proportionate share cost of \$26,627.22 for addition of turn lane intersection improvements.
  - b. Mitigation item D is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$26,627.22
6. SW Brookman Road/SW Highway 99
- a. A proportionate share cost of \$30,941.88 (41 lots at \$754.68/lot) for signalized intersection improvements.
  - b. This mitigation item is credit eligible at 100% for WACO TDT fees.

**CONDITION OF APPROVAL C2:** Prior to Issuance of the Engineering Compliance Agreement, SW Brookman Road Frontage Improvements shall be installed to meet a 5-lane arterial class street meeting Washington County and City of Sherwood standards unless a Fee In-Lieu-Of Construction Payment is made. Fee-in-lieu will consist of the following: 14-feet of street widening at local street thickness, curb and gutter, 6-foot width of sidewalk, 2 catch basins, street lighting, street trees and storm water quality and hydromodification facilities (\$1.50/sf) – since none of this is above the local street section, it is not credit eligible. Any payment in-lieu required by Washington County in excess of the payment above will be at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees.

**CONDITION OF APPROVAL A13:** WACO Transportation Development Tax (TDT) credit eligible offsets will be based on requirements and limitations established by WACO Ordinance Mo. 691A, as modified by Ordinances 729, 741, 746-A, 751 and 793-A, and as described in WACO’s *Countywide Transportation Development Tax Procedures Manual*, dated July 2019. City Transportation SDC credit eligible off-sets will be based on requirements and limitations established by City of Sherwood Municipal Code Chapter 15.16 – System Development Charges and Chapter 15.20 – Park and Recreation System Development Charges on New Development.

**CONDITION OF APPROVAL B11:** Prior to Final Approval of Plat, applicant shall show a 33-foot wide right-of-way dedication to WACO along the SW Brookman Road

frontage, meeting WACO's standards for half of a 5-lane arterial right-of-way section width of 53-feet as measured from the existing right-of-way centerline.

**CONDITION OF APPROVAL B12:** Prior to Final Approval of Plat, applicant shall show right-of-way dedication to establish a 26-foot wide right-of-way along the SW Brookman Road street frontage for Lot 41 and Tract H meeting the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL B13:** Prior to Final Approval of Plat, show clear vision easements on all corner lots fronting public streets. The clear vision easement shall be to the City of Sherwood and conform with MC Section 16.58.010.

**CONDITION OF APPROVAL B14:** Prior to Final Approval of Plat, applicant shall show a minimum 8-foot wide public utility easement (PUE) on private property along all public street frontages unless otherwise approved by the City Engineer.

**CONDITION OF APPROVAL B15:** Prior to Final Approval of Plat, all proposed private street tracts shall comply with all the standards stated in the City MC Section 16.118.050 (Private Streets).

**CONDITION OF APPROVAL C3:** Prior to Final Approval of Engineering Plans, applicant shall submit a separate design modification request for each non-conforming public infrastructure design element, to the City Engineer for review and approval.

**CONDITION OF APPROVAL C4:** Prior to Final Approval of Engineering Plans, the interior street system providing access to the subject development shall be designed to meet the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL C5:** Prior to Final Approval of Engineering Plans, street widening improvements along SW Brookman Road along the frontage of Lot 41 and Tract 'H' shall be designed to meet a standard residential street section with street light (mast arm and luminaire on power pole acceptable) meeting the approval of the City of Sherwood Engineering Department. A Washington County permit is also required for the driveway connection to SW Brookman Road.

**CONDITION OF APPROVAL C6:** Prior to Final Approval of Engineering Plans, the street lighting design shall include a photometric analysis report for review and approval by City Engineering. City lighting standards require Westbrook fixtures on all internal streets to the subdivision. Street lighting for SW Brookman Road frontage shall conform to WACO standards.

**CONDITION OF APPROVAL F3:** Prior to Final Acceptance of Constructed Public Improvements, connection of the development area to the public transportation improvements being constructed by the adjacent Reserve at Cedar Creek Subdivision, will not be permitted until such time as the public transportation improvements being constructed by the Reserve at Cedar Creek Subdivision have been constructed, have

received final inspection approval, and have been accepted as public infrastructure by the City or as otherwise approved by the Sherwood Engineering Department. Until that time, a minimum 10-foot physical separation between the Cedar Creek Gardens site development public transportation infrastructure improvements and the adjacent Reserve at Cedar Creek Subdivision public transportation infrastructure improvements shall be maintained, unless otherwise approved by the City Engineer.

**CONDITION OF APPROVAL F4:** Prior to Final Acceptance of Constructed Public Improvements, all private streets shall comply with all the standards stated in the City MC Section 16.118.050 (Private Streets).

**CONDITION OF APPROVAL F5:** Prior to Final Acceptance of Constructed Public Improvements, all conditions and requirements listing in a letter submitted by WACO, dated June 30, 2022 shall be complied with.

**CONDITION OF APPROVAL D6:** Prior to Issuance of a Grading Permit for Phase II (phased portion requiring direct access to an arterial) the applicant shall obtain a Washington County Facility permit as required by the Condition I of the Washington County comments dated June 30, 2022.

**CONDITION OF APPROVAL B16:** Prior to final plat approval, the applicant shall dedicate right-of-way for Brookman Rd. and meet all other requirements of Condition II of the Washington County comments dated June 30, 2022.

**CONDITION OF APPROVAL G6:** Prior to occupancy, the applicant shall pay a fee-in-lieu of construction for SW Brookman Rd. as required by Condition III of the Washington County comments dated June 30, 2022.

**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.**

**ANALYSIS:** The subject property has frontage on Brookman Rd. which is an existing arterial street. The developer is required to dedicate right-of-way to obtain a 53-foot width to centerline per the Washington County conditions of approval. A fee-in-lieu of improvements is also required.

**FINDING:** This standard is met.

**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.

**ANALYSIS:** As shown in the Typical Street Cross Section drawings, no pavement widths will exceed 40 ft.

**FINDING:** This standard is met.

**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:** The applicant is constructing or paying a fee-in-lieu of construction for all required transportation improvements.

**FINDING:** These standards 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.

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:** As discussed above, the applicant has applied for the required City and County exceptions to engineering standards. The City design modifications have been approved and the applicant has been conditioned to obtain the required County exceptions. Other modifications to the transportation standards described in the development code are not proposed based on the permitted exceptions to standards in SZCDC § 16.106.030(B)(7). Therefore additional modifications under this section are not required.

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

#### **16.106.30 - 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 proposed location of the public street system complies with the locational requirements in the City's Transportation System Plan and Brookman Addition Concept Plan. The proposed street system also conforms to the significant natural resources located on the site, preserving the Cedar Creek corridor by reducing the transportation system's impact on the resource. The design of the public streets will be reviewed for full compliance with City engineering standards after land use approval.

**FINDING:** This standard 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).**

**ANALYSIS:** The Local Street Connectivity Map (Figure 18) of the City of Sherwood Transportation System Plan shows conceptual street connections, including those along SW Brookman Road. The applicant has provided a Conceptual Future Connectivity Plan (Exhibit A30) that shows how the property to the east can be developed by extending Street B proposed within the Cedar Creek Gardens subdivision. A new local street intersection with SW Brookman Rd. can be provided in the general location identified in the City's TSP.

**FINDING:** This standard is met.

- 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 applicant is proposing to construct new transportation facilities that conform to the City's TSP. Street B will be stubbed to the east property line to provide access to the property to the east. No additional street stubs are required by on the Figure 18 and the location of environmentally constrained land.

**FINDING:** This standard 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 new triangular shaped block created by the subdivision will be approximately 1,500 ft. in length when completed by the adjacent property to the east. The block is adjacent to SW Brookman Rd., an arterial street.

**FINDING:** This standard is met.

- 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:** "Water feature" is defined as "all rivers, streams (regardless of whether they carry year-round flow, i.e., including intermittent streams), springs which feed streams and wetlands and have year-round flow, Flood Management Areas, wetlands, and all other bodies of open water." The site contains multiple water features associated with Cedar Creek.

Brookman Rd. crosses Cedar Creek and its unnamed tributaries at the south end of the site. The only proposed street crossing on the subject site is for Street B. The distance between Brookman Rd. and Street B is approximately 550 ft., meeting the standard above. A street connecting between the proposed subdivision and the Reserve at Cedar Creek to the west is not feasible due to the length of the necessary Cedar Creek stream crossing. The proposed design instead proposes a new street crossing over a small tributary at the east end of the site. This proposed design also conforms to the Brookman Addition Concept Plan.

**FINDING:** This standard is met.

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:** The site is not located within a center, main street, or station community. The proposed spacing of the crossing between Brookman Rd. and Street B is 550 ft.

**FINDING:** This standard is met.

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.**

**ANALYSIS:** The proposed street system provides street connections as required by the standards above when crossing designated water features. In order to provide convenient access to the community trail, two pedestrian easements between Street B and the trail are proposed.

**FINDING:** This standard is met.

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 site contains the Cedar Creek floodway and two unnamed tributaries to the east. The proposed street system has been designed to limit crossings of the water features and preserve open space and habitat. Both the physical and topographical constraints on the site make street connections impracticable and undesirable.

**FINDING:** This exception standard 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. The application has

been conditioned to install utilities underground.

**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.

|    | Classification           | Additional Setback |
|----|--------------------------|--------------------|
| 1. | Principle Arterial (99W) | 61 feet            |
| 2. | Arterial                 | 37 feet            |
| 3. | Collector                | 32 feet            |
| 4. | Neighborhood Route       | 32 feet            |
| 5. | Local                    | 26 feet            |

**ANALYSIS:** Dedication of 33 ft. of right-of-way to Washington County along the site frontage with SW Brookman Road is shown on the submitted plan set, creating a right- of-way meeting or exceeding the required standard. All other streets will be improved to their full standards by the developer and do not require additional setbacks or dedications.

**FINDING:** This standard is met.

**16.106.40 - 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:** As shown on the submitted plan set, there are no public street off-sets or staggering. A new T intersection is required due to the location of the on-site natural resources.

**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:** The northern terminus of Street B at the east property line will be stubbed for future extension. The southern terminus of Street B at the east property line will be a permanent dead end without future extension. The dead end is greater than 100 ft. in length. The applicant will be required to design signage for the northern terminus as part of the engineering design review.

**FINDING:** This standard is met.

**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:** New public street intersections are designed at 90 degrees.

**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:** A cul-de-sac will be created at the southern end of Street B at the east property line. The cul-de-sac is proposed between 100 – 200 ft. in length. A pedestrian connection is not proposed due to the presence of a Cedar Creek tributary. A new 12 ft. wide multi-use path will be provided just to the south of the street with future construction of SW Brookman Rd.

**FINDING:** This standard is met.

### **F. Grades and Curves**

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

**ANALYSIS:** All street grades within the development have been designed in accordance with the applicable City standards. The City's engineering department will review the grades and curves of the site during approval of the final engineering plans.

**FINDING:** This standard is 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 subject site abuts SW Brookman Road, a County arterial street. All lots within the development are buffered from SW Brookman Road by the 15-foot landscaped visual corridor required SZCDC § 16.142.040, and/or a natural resource area.

**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:** Frontage improvements along SW Brookman Road are not proposed to include a median, and County staff have not indicated that a median island would be required as part of this development.

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

**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 City's TSP identifies SW Brookman Road as a potential corridor for future transit enhancements. However, the street is not currently served by transit. In addition, the site frontage on SW Brookman Rd. is constrained by sensitive habitat. As such it is not a preferred location for transit enhancement improvements. The applicant is providing a pedestrian pathway to SW Brookman Rd. which can provide access to future transit improvements on the street. Transit enhancements are not practicable at this time and are not required.

**FINDING:** This standard is met.

**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.

**ANALYSIS:** The applicant has provided a TIA that analyzes the required traffic controls at the proposed intersections. Turn lanes and signals were not warranted at either intersection.

**FINDING:** This standard is met.

**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:** No specific or new traffic calming measures have been identified as required or proposed for this development.

**FINDING:** This standard is met.

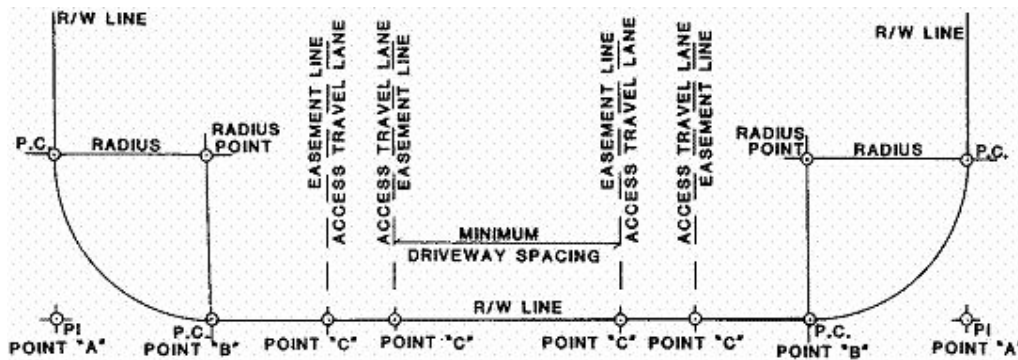
**M. Vehicular Access Management**

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.

### a. Local Streets:

Minimum right-of-way radius is fifteen (15) feet. Access will not be permitted within ten (10) feet of Point "B," if no radius exists, access will not be permitted within twenty-five (25) feet of Point "A." Access points near an intersection with a Neighborhood Route, 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 ten (10) 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

do 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 intersection Point 'A' or other access to that arterial (Point 'C').

any

(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

alternative created.

available the temporary access to Highway  
99W shall be closed.

(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, neighborhood route collector streets, including frontage or backage roads, consistent with the Transportation Plan Map and Chapter 6 of the Community Development Plan.

3. **Exceptions to Access Criteria for City-Owned Streets**
  - a. **Alternate points of access may be allowed if an access management plan which maintains the classified function and integrity of the applicable facility is submitted to and approved by the City Engineer as the access management plan must be included as part of the land use submittal or an application for modification as described in § 16.106.020 E. (Transportation Facilities Modifications).**
  - b. **Access in the Old Town (OT) Overlay Zone**  
**Access points in the OT Overlay Zone shown in an adopted plan such as the Transportation System Plan, are not subject to the access spacing standards and do not need a variance. However, the applicant shall submit a partial access management plan for approval by the City Engineer. The approved plan shall be implemented as a condition of development approval.**

**ANALYSIS:** Access for new local residential streets is regulated by the City of Sherwood. The proposed local streets meet the City's design and access policy as described in the findings above. The applicant has applied for three modifications to the City's engineering design manual regarding intersection spacing. The design exceptions have been approved and are included as Exhibit B2.

Access for SW Brookman Rd. is regulated by Washington County standards. The applicant has applied for three exceptions to County access standards regarding access. The County comments state that the design exceptions for the direct driveway and local street access to an arterial have been approved subject to final signature by the County Engineer. The comments also state the County agrees with the findings of the sight distance analysis related to the design exception for the left turn in to the private driveway from SW Brookman Rd. The applicant has been conditioned to obtain all of the final signed design exceptions from the County prior to issuance of a grading permit.

**FINDING:** These standards 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:** The applicant is proposing to use private streets to serve Lots 2, 3, 19, 20, 39, 40, and 41. Each private street will serve a maximum of two single family lots.

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

**CONDITION OF APPROVAL G7:** Prior to occupancy private streets shall be signed differently from public streets and include the words "Private Street".

**16.106.60 - 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.

**ANALYSIS:** As shown on the submitted plan set, sidewalks meeting city local street standards will be provided along both sides of the local public streets. Street improvements are not proposed along subject site's frontage of SW Brookman Road, however, the planned right-of-way dedication will provide adequate area for a

sidewalks at the time of improvements.

**FINDING:** This standard is met.

**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:** SW Brookman Road is classified as a County Arterial and the planned right-of-way dedication will provide adequate area for a sidewalk within the proposed street section. Local streets are provided with a six-foot wide sidewalk as shown in the plans.

**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:** A connected system of sidewalks and off-street community trails will provide pedestrian and bicycle circulation throughout the subdivision. A crossing of Cedar Creek is provided in order to connect the proposed subdivision with the Reserve at Cedar Creek and larger Middlebrook Subdivision to the west. Connections are provided as feasible given the site's topography and environmental constraints.

**FINDING:** This standard is met.

**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:** Figure 13 of the City of Sherwood Transportation System Plan (TSP), identifies that bicycle lanes are required along SW Brookman Road. SW Brookman Road is under the jurisdiction of Washington County. The planned right-of-way dedication will provide adequate area for a bike lane within the proposed street section.

**FINDING:** This standard is met.

**16.106.80 - 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:** A Transportation Impact Analysis (TIA) has been submitted with this application. The TIA addresses the requirements of SZCDC § 16.106.080 as well as applicable Washington County and ODOT review requirements. Transportation impact findings and conditions have been incorporated into the responses of this chapter.

**FINDING:** This standard 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.

**16.106.90 - 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:** The applicant's TIA indicates a total of 426 daily trips will be added to the transportation system as a result of the development. Approximately 65% of the trips will travel to and from the north, including 45% to and from Hwy 99. The remaining 35% will be to and from the south.

The applicant is proposing to construct the new local streets and private drives required to serve the development and pay a proportionate share impact fee to four intersections (Sunset at Woodhaven, Sunset at Timbrel, Sunset at Main, and Sunset at Murdock). The applicant has also been conditioned to pay a fee-in-lieu for Brookman Rd. frontage improvements along the subject property and a proportionate share impact fee for the future signalized intersection of Brookman Rd. and Hwy 99W.

The off-site mitigation fees are based on the project's proportionate impact based on trips generated from the proposed development as set forth in the applicant's TIA. The Brookman Rd. right-of-way dedication and fee-in-lieu are required only along the subject site frontage and are based on the City and County design for Brookman Rd. in the adopted TSP's.

As indicated in the City of Sherwood Engineering comments, the four off-site mitigation fees identified in the TIA are 100% creditable against City SDC and County TDT fees. The proportionate share mitigation fee for Brookman Rd. / Hwy 99 is 100% County TDT creditable. The right-of-way dedication and fee-in-lieu for SW Brookman Rd. above that required by a local street standard is Washington County TDT creditable.

All public street improvements and/or fee-in-lieu of improvements are required to a local standard with credit being issued for fees above a local standard. In

addition, all off-site mitigation fees are based on the proportionate impact of the proposed development based on the number of vehicle trips proposed taking into account the total number of trips accommodated by these intersections. In other words, all assessments are directly attributable to the impacts from this development.

The required transportation improvements and fee payments are deemed to be roughly proportional to the impact of the proposed development.

**FINDING:** These standards are met.

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

### **16.108.10 – 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.**

### **16.108.40 - Acceptance of Improvements**

#### **A. Final Inspection**

**At such time as all public improvements, except those specifically approved for later installation, have been completed, the applicant shall notify the City of the readiness for final inspection.**

**B. Notification of Acceptance**

The City shall give written notice of acceptance of the improvements upon finding that the applicant has met the requirements of this Chapter and the specifications of all approved plans.

**C. Maintenance Bond**

Prior to City acceptance of public improvements, the applicant shall provide the City a maintenance bond computed at ten percent (10%) of the full value of the improvements, for the purpose of correcting any defective work or maintenance that becomes apparent or arises within two (2) years after final acceptance of the public improvements.

**ANALYSIS:** The development will require new public infrastructure and an Engineering Public Improvement Plan is required.

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

**CONDITION OF APPROVAL C7:** Prior to Issuance of an Engineering Compliance Agreement, final engineering plan approval by the Engineering Department is required, performance and payment bonds and insurance riders must be submitted to the City.

**Chapter 16.110 – SANITARY SEWERS**

**16.110.010 - Required Improvements**

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.

**16.110.20 - 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.**

#### **16.110.030 - Service Availability**

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

**ANALYSIS:** The City of Sherwood Engineering comments state “The submitted plans show the proposed public sanitary sewer main system connecting to the existing sanitary sewer main system constructed as part of the adjacent Reserve at Cedar Creek Subdivision. The construction of the Reserve at Cedar Creek public sanitary sewer must be completed, inspected, approved and accepted by the City before the proposed development may connect to the existing public system. Until such time as the City gives final acceptance of the public sanitary sewer being constructed with the Reserve at Cedar Creek Subdivision, the proposed Cedar Creek Gardens Subdivision shall maintain a 10-foot physical separation between the two systems.

A regional sanitary sewer trunk line extension (Brookman Sanitary Sewer Trunk Line Extension Project) has been constructed through the Reserve at Cedar Creek Subdivision. The alignment of the proposed trunk line is shown on the submitted plans. The proposed trail in the area of the sanitary trunk line shall also double as a maintenance access road for accessing sanitary trunk line manholes.

A regional sanitary sewer trunk line exists north of the subject property and west of SW Redfern Drive. Extension of this trunk line to the regional trail off of SW Redfern Drive will be required to allow for future extension to provide sanitary sewer service to the remainder of the properties within the eastern portion of the Brookman Expansion Area.”

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



**CONDITION OF APPROVAL C8:** Prior to Final Approval of Engineering Plans, the subject development shall design to provide public sanitary sewer service to all proposed lots as required through new public streets/public easements meeting the approval of the Sherwood Engineering Department.

**CONDITION OF APPROVAL C9:** Prior to Final Approval of Engineering Plans, the subject development shall design for the extension of the sanitary sewer north of the subject property and west of SW Redfern Drive to be extended to the southern property line of the subject property meeting the approval of the Sherwood Engineering Department.

**CONDITION OF APPROVAL F6:** Prior to Final Acceptance of Constructed Public Improvements, connection to that portion of the adjacent Reserve at Cedar Creek Subdivision system, will not be permitted until such time as that sanitary sewer main line has been constructed, received final inspection approval, and accepted as public infrastructure by the City. Until that time, a minimum 10-foot physical separation between the Cedar Creek Gardens site development public sanitary infrastructure improvements and the adjacent Reserve at Cedar Creek Subdivision public sanitary infrastructure improvements shall be maintained.

**CONDITION OF APPROVAL F7:** Prior to Final Acceptance of Constructed Public Improvements, any public sanitary sewer to be located on private property shall have a recorded public sanitary sewer easement encompassing the related public sanitary sewer improvement meeting the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL G8:** Prior to Grant of Occupancy, all private sanitary laterals shall be installed in compliance with the current Oregon Plumbing Specialty Code.

## **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.**

#### **16.112.20 - 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.

**16.112.030 - Service Availability**

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

**FINDING:** The City of Sherwood Engineering comments state “The proposed development submittal indicates the public water system previously constructed by the Reserve at Cedar Creek Subdivision will be used to connect to/extend to provide service to the subject development.

The City of Sherwood Water System Master Plan shows the need for construction of 12-inch waterline within Brookman Road. The public water line will extend the proposed water main constructed with the Reserve at Cedar Creek Subdivision, across the entire SW Brookman Road frontage of the Cedar Creek Gardens Subdivision. Because the line is sized larger than the residential standard of 8-inches, the construction cost of this

line will be eligible for water system SDC credits on that portion greater than 8-inches. This water line will be extended into the subject property to provide water service to Lots 9-39. This also includes installing a 12-inch waterline within SW Brookman Road along the frontage of Lot 41 and Tract H. This section may be a payment in lieu at the cost an 8-inch waterline along the frontage of Lot 41 and Tract H if it would result in a short, dry waterline.

Lots 1-8 will obtain service via connection to the existing water line constructed within SW Yamel Terrace with the Reserve at Cedar Creek Subdivision. Lots 40-41 will obtain water from the extension of an existing water line within SW Redfern Drive. Per TVF&R, a fire hydrant on the west side of SW Brookman Road is required to provide fire service to Lots 40 and 41.

**CONDITION OF APPROVAL C10:** Prior to Final Approval of Engineering Plans, the subject development shall design to provide public water service to all proposed lots as required through new public streets/public easements meeting the approval of the Sherwood Engineering Department. All public water pipe shall have joint restraints.

**CONDITION OF APPROVAL C11:** Prior to Final Approval of Engineering Plans, the applicant shall obtain any necessary Right-of-Way Permits and/or Utility Facilities Permits from WACO for constructing public improvements within the SW Brookman Road right-of-way.

**CONDITION OF APPROVAL C12:** Prior to Final Approval of Engineering Plans, applicant shall obtain and provide letter from Sherwood Public Works Department, that existing public water system has the capacity and pressure to provide appropriate public water and fire service to the proposed development.

**CONDITION OF APPROVAL C13:** Prior to Final Approval of Engineering Plans, the subject development shall design for the installation of a 12-inch waterline running down SW Brookman Road, shall extend the entire length of the property frontage right-of-way line. The oversizing cost of construction (greater than 8") shall be eligible for water system SDC credits. A payment-in-lieu may be accepted by the city in place of construction of a 12-inch waterline along the frontage of Lot 41 and Tract H.

**CONDITION OF APPROVAL F8:** Prior to Final Acceptance of Public Improvements, connection to that portion of the public water system being constructed by the adjacent Reserve at Cedar Creek Subdivision, will not be permitted until such time as that portion of the public water system is constructed, has received final inspection approval, and is accepted as public infrastructure by the City. Until that time, a minimum 10-foot physical separation between the proposed site development public water system and the Reserve at Cedar Creek Subdivision public water systems, shall be maintained.

**CONDITION OF APPROVAL G9:** Prior to Issuance of Occupancy of any residential lot structures, all service laterals shall be installed in compliance with the current Oregon Plumbing Specialty Code.

**Chapter 16.114 – STORM WATER**

**16.114.010 - Required Improvements**

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.

(Note: Section 16.114.015, Street Systems Improvement Fees (SIF) was repealed by Ordinance 91-922 § 19) to be removed from the SZCDC and permanently located in the Municipal Code).

**16.114.20 - 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.

**16.114.30 - 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 state “The proposed development submittal includes a Service Provider Letter issued by CWS (File No. 21-002919), dated April 20, 2022. The SPL lists 23 specific conditions which are to be completed and adhered to as part of the proposed project approval.

A preliminary stormwater drainage report prepared by PDG, dated April 26, 2022 has been submitted. Within the preliminary drainage report/preliminary plans the following important items are of note:

- 1) Two regional facilities will be constructed. One for Lots 1-8 and the other for Lots 9-39.
- 2) Lots 40 and 41 will have individual on-lot LIDA facilities.
- 3) The proposed regional facilities will provide for water quality treatment, hydro-modification and detention.”

**FINDING:** These criteria is met as conditioned below

**CONDITION OF APPROVAL C14:** Prior to Final Engineering Plan Approval, applicant shall obtain an NPDES 1200C permit.

**CONDITION OF APPROVAL B17:** Prior to Final Plat Approval, the stormwater treatment facilities shall be shown as being located in individual tracts of land dedicated to the City of Sherwood.

**CONDITION OF APPROVAL B18:** Prior to Final Plat Approval, an easement over the vegetated corridors tracts of land granting access to CWS shall be recorded with the plat.

**CONDITION OF APPROVAL C15:** Prior to Final Engineering Plan Approval, submitted site development plans shall provide for compliance with all 23 requirements and conditions stated in the CWS issued Service Provider Letter (File No. 21-002919).

**CONDITION OF APPROVAL C16:** Prior to Final Engineering Plan Approval, submitted site development stormwater improvement plans shall provide for City access to stormwater outfall/outlet structures for maintenance purposes.

**CONDITION OF APPROVAL C17:** Prior to Final Engineering Plan Approval, a Final Stormwater Drainage Report shall be provided to City of Sherwood Engineering Department for review and approval.

**CONDITION OF APPROVAL C18:** Prior to Final Engineering Plan Approval, a Stormwater Connection Permit shall be obtained from CWS.

**CONDITION OF APPROVAL C19:** Prior to Final Engineering Plan Approval, obtain and submit to Engineer a concurrence letter from DSL for the wetlands on the site or submit documentation from DSL that concurrence is not required.

**CONDITION OF APPROVAL C20:** Prior to Final Engineering Plan Approval, the subject development shall design to provide stormwater improvements as needed to serve new street improvements and to serve each lot meeting the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL F9:** Prior to Final Acceptance of Constructed Public Improvements, any public stormwater system that is located on private property shall have a recorded public stormwater easement encompassing the related public stormwater sewer improvement meeting the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL F10:** Prior to Final Acceptance of Constructed Public Improvements, all private stormwater laterals shall be installed in compliance with the current Oregon Plumbing Specialty Code.

**CONDITION OF APPROVAL G10:** Prior to Grant of Occupancy, Lots 40 and 41 shall have constructed individual LIDA facilities meeting the approval of the City of Sherwood Engineering Department.

**CONDITION OF APPROVAL G11:** Prior to Grant of Occupancy, Lots 40 and 41 shall have Private Stormwater Facility Access and Maintenance Covenant recorded with Washington County. A O&M plan is also required to be submitted to the City of Sherwood Engineering Department.

## **Chapter 16.116 - FIRE PROTECTION**

### **16.116.10 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 the 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.

**16.116.30 - Miscellaneous Requirements**

**A. Timing of Installation**

When fire protection facilities are required, such facilities shall be installed and made serviceable prior to or at the time any combustible construction begins on the land unless, in the opinion of the Fire District, the nature or circumstances of said construction makes immediate installation impractical.

**B. Maintenance of Facilities**

All on-site fire protection facilities, shall be maintained in good

working order. The Fire District may conduct periodic tests and inspection of fire protection and may order the necessary repairs or changes be made within ten (10) days.

**C. Modification of Facilities**

**On-site fire protection facilities, may be altered or repaired with the consent of the Fire District; provided that such alteration or repairs shall be carried out in conformity with the provisions of this Chapter.**

**ANALYSIS:** The proposal is for a residential subdivision and the applicant is required to install fire protection facilities that meet the standards of Tualatin Valley Fire & Rescue (TVF&R). TVF&R has issued a Service Provider Letter for the proposal included as Exhibit A19. TVF&R has further clarified via email that a turnaround is not required for Lots 40 and 41 (Exhibit B7).

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

**CONDITION OF APPROVAL A14:** The applicant shall comply with the TVF&R Service Provider Letter and all applicable fire code regulations, as determined by service provider.

**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.**

**16.118.20 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:** All utilities are required to be placed underground in accordance with the standard above. Sherwood Broadband utilities are required to be installed along the subject properties frontage per requirements set forth in City Ordinance 2005-017 and City Resolution 2005-074.

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

**CONDITION OF APPROVAL A15:** Per City Municipal Code Chapter 16.118, all new utilities shall be placed underground unless covered by exceptions noted under Section 16.118.040, and as approved by the City Engineer.

**CONDITION OF APPROVAL F11:** Prior to Final Acceptance of Constructed Public Improvements, Sherwood Broadband utilities (vaults and conduit) shall be installed along all subject properties street frontages per requirements set forth in City Ordinance 2005-017 and City Resolution 2005-074 unless a fee-in-lieu is accepted.

#### **16.118.050 - Private Streets**

**The construction of new private streets, serving single-family residential developments shall be prohibited unless it provides principal access to two or fewer residential lots or parcels i.e. flag lots. 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. 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. A private street shall also be signed differently from public streets and include the words "Private Street".**

**ANALYSIS:** The application proposes three private streets, identified as Tract G and two shared access easement to serve Lots 1 and 3, and 40 and 41. The applicant has been conditioned to design the private streets in accordance with City code.

**FINDING:** These criteria are met.

## **Chapter 16.156 - ENERGY CONSERVATION\***

### **16.156.010 - Purpose**

This Chapter and applicable portions of Chapter 5 of the Community Development Plan provide for natural heating and cooling opportunities in new development. The requirements of this Chapter shall not result in development exceeding allowable densities or lot coverage, or the destruction of existing trees.

### **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 subdivision layout has been designed to conform to the existing natural resources on the site, namely Cedar Creek and its tributaries. All of the structures will have a south facing wall with a side, front, or rear yard setback to permit

sunlight. Street trees and the natural vegetation associated with Cedar Creek will provide shade and cooling during summer.

**FINDING:** This standard is met.

#### **IV. STAFF RECOMMENDATION AND CONDITIONS OF APPROVAL**

**STAFF RECOMMENDATION:** Staff recommends approval of LU 2021-023 SUB Cedar Creek Gardens, subject to the findings and Conditions of Approval described in this report. The recommendation is based on review of the applicable code standards and approval criteria, the applicant's submittal, agency comments, and public testimony.

##### **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/owner/applicant is responsible for all costs associated with private/public facility improvements.
4. The continual operation of the property shall comply with the applicable requirements of the Sherwood Zoning and Community Development Code and Municipal Code.
5. 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.
6. All new utilities to be installed for the development of the subject property shall be underground.
7. Retaining walls within public easements or the public right-of-way shall require engineering approval.
8. The applicant must submit a sign permit to install future signage on the site.
9. The preliminary plat approval is valid for two years from the date of the Notice of

Decision. The final plat shall be approved by the City within two years of Notice of Decision, unless an extension is granted by the City prior to the two-year deadline.

10. The construction time period of public improvements for each phase shall be no greater than two years without reapplying for a preliminary plat. The construction time period begins when an engineering compliance agreement is issued from the City's Engineering Department.
11. Tracts A, B, C, D, and H shall be dedicated to the City of Sherwood for permanent ownership and maintenance. Tracts B and D shall be dedicated after removing land not defined as environmentally constrained in SZCDC § 16.10.
12. Tracts E, F, G, I, and the non-constrained land within Tracts B and D shall be permanently owned and maintained by the HOA.
13. WACO Transportation Development Tax (TDT) credit eligible offsets will be based on requirements and limitations established by WACO Ordinance Mo. 691A, as modified by Ordinances 729, 741, 746-A, 751 and 793-A, and as described in WACO's *Countywide Transportation Development Tax Procedures Manual*, dated July 2019. City Transportation SDC credit eligible off-sets will be based on requirements and limitations established by City of Sherwood Municipal Code Chapter 15.16 – System Development Charges and Chapter 15.20 – Park and Recreation System Development Charges on New Development.
14. The applicant shall comply with the TVF&R Service Provider Letter and all applicable fire code regulations, as determined by service provider.
15. Per City Municipal Code Chapter 16.118, all new utilities shall be placed underground unless covered by exceptions noted under Section 16.118.040, and as approved by the City Engineer.

**B. Prior to Final Plat Approval**

1. Prior to Final Plat approval, Lot 3 shall be modified to provide a minimum width at the front property line of 25 ft., while remaining in compliance with all of the remaining Development Standards.
2. Prior to Final Plat approval, revise the plat to include clear vision areas pursuant to SZCDC § 16.58.010.

3. Prior to Final Plat approval, revise the landscape plans to include clear vision areas pursuant to SZCDC § 16.58.010.
4. Prior to final plat approval, provide a Covenants, Conditions, & Restrictions (CC&R) document that describes the reservations, restrictions, and maintenance responsibilities for the shared private streets including Tract G and the easements serving Lots 2, 3, 19, 20, 39, 40, and 41.
5. Prior to Final Plat approval, revise the open space plan and provide a final usable open space percentage after removing Tracts H, E, and F from the calculations. The final percentage shall exceed 5% of the net buildable site.
6. Prior to Final Plat approval, provide a final open space improvement plan that provides seating opportunities for the pocket parks adjacent to the pedestrian trail, including Tract I.
7. Prior to final plat approval, the plat shall be revised to remove non-environmentally constrained land from Tracts B and D. The area removed shall be provided in separate tracts to be owned and maintained by the HOA. Environmentally constrained land is defined by SZCDC § 16.10
8. Prior to final plat approval, provide draft CC&Rs that describe ownership and maintenance responsibilities for Tracts E, F, G, I, and the non-constrained land within Tracts B and D. Maintenance responsibilities shall include the community trail.
9. Prior to final plat approval, a detailed street tree plan that complies with the size and spacing standards of SZCDC § 16.142.060 shall be submitted to the City. The proposed tulip trees shall be replaced with a tree on the City's Street Tree List.
10. Prior to final plat approval, the name of all new public and private streets shall be provided on the plat. Public street names shall conform to the naming standards in SZCDC § 16.106.010.
11. Prior to Final Approval of Plat, applicant shall show a 33-foot wide right-of-way dedication to WACO along the SW Brookman Road frontage, meeting WACO's standards for half of a 5-lane arterial right-of-way section width of 53-feet as measured from the existing right-of-way centerline.

12. Prior to Final Approval of Plat, applicant shall show right-of-way dedication to establish a 26-foot wide right-of-way along the SW Brookman Road street frontage for Lot 41 and Tract H meeting the approval of the City of Sherwood Engineering Department.
13. Prior to Final Approval of Plat, show clear vision easements on all corner lots fronting public streets. The clear vision easement shall be to the City of Sherwood and conform with MC Section 16.58.010.
14. Prior to Final Approval of Plat, applicant shall show a minimum 8-foot wide public utility easement (PUE) on private property along all public street frontages unless otherwise approved by the City Engineer.
15. Prior to Final Approval of Plat, all proposed private street tracts shall comply with all the standards stated in the City MC Section 16.118.050 (Private Streets).
16. Prior to final plat approval, the applicant shall dedicate right-of-way for Brookman Rd. and meet all other requirements of Condition II of the Washington County comments dated June 30, 2022.
17. Prior to Final Plat Approval, the stormwater treatment facilities shall be shown as being located in individual tracts of land dedicated to the City of Sherwood.
18. Prior to Final Plat Approval, an easement over the vegetated corridors tracts of land granting access to CWS shall be recorded with the plat.

**C. Prior to Engineering Approval of the Public Improvement Plans**

1. Prior to Issuance of the Engineering Compliance Agreement, the following payments shall be made to the City, and distributed into the appropriate fund accounts (either WACO TDT or City transportation SDC) as determined by the applicant.

Brookman Road frontage right-of-way land dedication.

- c. WACO is requiring a 33-foot wide right-of-way dedication along the frontage of SW Brookman Road.
- d. Right-of-Way land valuation shall be credit eligible against either WACO TDT fees (100%), or the City transportation SDC fees (100%), or a combination of the two for right-of-way dedication in excess of a city half street local street section (26 feet).

SW Sunset Boulevard/SW Woodhaven Drive TIA mitigation item A

- a. A proportionate share cost of \$19,480.52 for a signalized intersection improvements.
- b. Mitigation item A is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$19,480.52.

SW Sunset Boulevard/SW Timbrel Lane TIA mitigation item B

- a. A proportionate share cost of \$14,516.13 for a mini-roundabout intersection improvement.
- b. Mitigation item B is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$14,516.13.

SW Ladd Hill Road/SW Main Street/SW Sunset Boulevard mitigation item C

- a. A proportionate share cost of \$8,650.52 for a signalized intersection improvement.
- b. Mitigation item C is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$8,650.52.

SW Baker Road/SW Murdock Road/SW Sunset Boulevard mitigation item D

- a. A proportionate share cost of \$26,627.22 for addition of turn lane intersection improvements.
- b. Mitigation item D is credit eligible at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees not to exceed \$26,627.22

SW Brookman Road/SW Highway 99

- a. A proportionate share cost of \$30,941.88 (41 lots at \$754.68/lot) for signalized intersection improvements.
- b. This mitigation item is credit eligible at 100% for WACO TDT fees.

2. Prior to Issuance of the Engineering Compliance Agreement, SW Brookman Road Frontage Improvements shall be installed to meet a 5-lane arterial class street meeting Washington County and City of Sherwood standards unless a Fee In-Lieu-Of Construction Payment is made. Fee-in-lieu will consist of the following: 14-feet of street widening at local street thickness, curb and gutter, 6-foot width of sidewalk, 2 catch basins, street lighting, street trees and storm water quality and hydromodification facilities (\$1.50/sf) – since none of this is above the local street section, it is not credit eligible. Any payment in-lieu required by Washington County in excess of the payment above will be at 100% for WACO TDT fees, or 100% City transportation SDC fees, or a combination of the two fees.

3. Prior to Final Approval of Engineering Plans, applicant shall submit a separate design modification request for each non-conforming public infrastructure design element, to the City Engineer for review and approval.
4. Prior to Final Approval of Engineering Plans, the interior street system providing access to the subject development shall be designed to meet the approval of the City of Sherwood Engineering Department.
5. Prior to Final Approval of Engineering Plans, street widening improvements along SW Brookman Road along the frontage of Lot 41 and Tract 'H' shall be designed to meet a standard residential street section with street light (mast arm and luminaire on power pole acceptable) meeting the approval of the City of Sherwood Engineering Department. A Washington County permit is also required for the driveway connection to SW Brookman Road.
6. Prior to Final Approval of Engineering Plans, the street lighting design shall include a photometric analysis report for review and approval by City Engineering. City lighting standards require Westbrooke fixtures on all internal streets to the subdivision. Street lighting for SW Brookman Road frontage shall conform to WACO standards.
7. Prior to Issuance of an Engineering Compliance Agreement, final engineering plan approval by the Engineering Department is required, performance and payment bonds and insurance riders must be submitted to the City.
8. Prior to Final Approval of Engineering Plans, the subject development shall design to provide public sanitary sewer service to all proposed lots as required through new public streets/public easements meeting the approval of the Sherwood Engineering Department.
9. Prior to Final Approval of Engineering Plans, the subject development shall design for the extension of the sanitary sewer north of the subject property and west of SW Redfern Drive to be extended to the southern property line of the subject property meeting the approval of the Sherwood Engineering Department.
10. Prior to Final Approval of Engineering Plans, the subject development shall design to provide public water service to all proposed lots as required through new public streets/public easements meeting the approval of the Sherwood Engineering Department. All public water pipe shall have joint restraints.



11. Prior to Final Approval of Engineering Plans, the applicant shall obtain any necessary Right-of-Way Permits and/or Utility Facilities Permits from WACO for constructing public improvements within the SW Brookman Road right-of-way.
12. Prior to Final Approval of Engineering Plans, applicant shall obtain and provide letter from Sherwood Public Works Department, that existing public water system has the capacity and pressure to provide appropriate public water and fire service to the proposed development.
13. Prior to Final Approval of Engineering Plans, the subject development shall design for the installation of a 12-inch waterline running down SW Brookman Road, shall extend the entire length of the property frontage right-of-way line. The oversizing cost of construction (greater than 8") shall be eligible for water system SDC credits. A payment-in-lieu may be accepted by the city in place of construction of a 12-inch waterline along the frontage of Lot 41 and Tract H.
14. Prior to Final Engineering Plan Approval, applicant shall obtain an NPDES 1200C permit.
15. Prior to Final Engineering Plan Approval, submitted site development plans shall provide for compliance with all 23 requirements and conditions stated in the CWS issued Service Provider Letter (File No. 21-002919).
16. Prior to Final Engineering Plan Approval, submitted site development stormwater improvement plans shall provide for City access to stormwater outfall/outlet structures for maintenance purposes.
17. Prior to Final Engineering Plan Approval, a Final Stormwater Drainage Report shall be provided to City of Sherwood Engineering Department for review and approval.
18. Prior to Final Engineering Plan Approval, a Stormwater Connection Permit shall be obtained from CWS.
19. Prior to Final Engineering Plan Approval, obtain and submit to Engineer a concurrence letter from DSL for the wetlands on the site or submit documentation from DSL that concurrence is not required.
20. Prior to Final Engineering Plan Approval, the subject development shall design to provide stormwater improvements as needed to serve new street improvements

and to serve each lot meeting the approval of the City of Sherwood Engineering Department.

**D. Prior to Issuance of a Grading Permit**

1. Prior to Issuance of Grading Permit, the subject lots shall be annexed to the Clean Water Services and Metro Service District.
2. Prior to Issuance of a Grading Permit, the applicant shall submit a final Tree Report and Final Tree Preservation and Removal Plan reflecting any required changes in the land use approval. All on-site trees shall be protected through site development in accordance with the Tree Plan and Final Tree Preservation and Removal Plan. The applicant shall obtain approval from adjacent property owners prior to any off-site tree removal.
3. Prior to tree removal and issuance of a grading permit, the proposed development shall obtain a US Army Corps of Engineers/Oregon Department of State Lands joint permit for the filling of the wetlands and provide evidence of a wetland mitigation bank credit equal to the amount of wetland permanently filled on the site.
4. Prior to issuance of a grading permit, the applicant shall obtain final design exceptions from Washington County for the new local street intersection with SW Brookman Rd., the private driveway intersection with SW Brookman Rd., and the sight distance for the left-turn movement into the private driveway from SW Brookman Rd.
5. Prior to Issuance of a Grading Permit for Phase II (phased portion requiring direct access to an arterial) the applicant shall obtain a Washington County Facility permit as required by the Condition I of the Washington County comments dated June 30, 2022.

**E. Prior to Issuance of Building Permits**

1. Prior to issuance of building permits for each lot, the applicant shall provide a plot plan that demonstrates compliance with the setback and height requirements of the MDRL zone. Lots 40 and 41 shall be oriented in an east to west direction with the front of the homes facing east. The space between SW Redfern Dr. and the new residence on Lot 40 shall be deemed the corner lot street side and provide a 15 ft. setback, while remaining in compliance with all of the remaining Development Standards.

2. Prior to Issuance of Building Permits, the applicant will need to receive substantial completion of the public improvements from the Sherwood Engineering Department for the phase which contains the lot. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.
3. Prior to the issuance of building permits, each lot shall provide for a hard surface driveway with a minimum width of 10 ft. and grade not to exceed 14%.
4. Prior to issuance of building permits, one off-street parking space per dwelling unit shall be provided. Garages cannot be counted as parking stalls. Each stall shall be a minimum of 20 ft. deep x 9 ft. wide. Lots 40 and 41 shall each have two (2) off-street stalls at the minimum required width and depth.

**F. Prior to Acceptance of Public Improvements**

1. Prior to Final Acceptance of Public Improvements, all public improvements shown within the approved engineering plans shall be in place and approved by the City of Sherwood Engineering Department for the phase being accepted. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.
2. Prior to Acceptance of Constructed Public Improvements, applicant will comply with all the requirements and conditions of the WACO letter dated June 30, 2022.
3. Prior to Final Acceptance of Constructed Public Improvements, connection of the development area to the public transportation improvements being constructed by the adjacent Reserve at Cedar Creek Subdivision, will not be permitted until such time as the public transportation improvements being constructed by the Reserve at Cedar Creek Subdivision have been constructed, have received final inspection approval, and have been accepted as public infrastructure by the City or as otherwise approved by the Sherwood Engineering Department. Until that time, a minimum 10-foot physical separation between the Cedar Creek Gardens site development public transportation infrastructure improvements and the adjacent Reserve at Cedar Creek Subdivision public transportation infrastructure improvements shall be maintained, unless otherwise approved by the City Engineer.
4. Prior to Final Acceptance of Constructed Public Improvements, all private streets

shall comply with all the standards stated in the City MC Section 16.118.050 (Private Streets).

5. Prior to Final Acceptance of Constructed Public Improvements, all conditions and requirements listing in a letter submitted by WACO, dated June 30, 2022 shall be complied with.
6. Prior to Final Acceptance of Constructed Public Improvements, connection to that portion of the adjacent Reserve at Cedar Creek Subdivision system, will not be permitted until such time as that sanitary sewer main line has been constructed, received final inspection approval, and accepted as public infrastructure by the City. Until that time, a minimum 10-foot physical separation between the Cedar Creek Gardens site development public sanitary infrastructure improvements and the adjacent Reserve at Cedar Creek Subdivision public sanitary infrastructure improvements shall be maintained.
7. Prior to Final Acceptance of Constructed Public Improvements, any public sanitary sewer to be located on private property shall have a recorded public sanitary sewer easement encompassing the related public sanitary sewer improvement meeting the approval of the City of Sherwood Engineering Department.
8. Prior to Final Acceptance of Public Improvements, connection to that portion of the public water system being constructed by the adjacent Reserve at Cedar Creek Subdivision, will not be permitted until such time as that portion of the public water system is constructed, has received final inspection approval, and is accepted as public infrastructure by the City. Until that time, a minimum 10-foot physical separation between the proposed site development public water system and the Reserve at Cedar Creek Subdivision public water systems, shall be maintained.
9. Prior to Final Acceptance of Constructed Public Improvements, any public stormwater system that is located on private property shall have a recorded public stormwater easement encompassing the related public stormwater sewer improvement meeting the approval of the City of Sherwood Engineering Department.
10. Prior to Final Acceptance of Constructed Public Improvements, all private stormwater laterals shall be installed in compliance with the current Oregon Plumbing Specialty Code.
11. Prior to Final Acceptance of Constructed Public Improvements, Sherwood

Broadband utilities (vaults and conduit) shall be installed along all subject properties street frontages per requirements set forth in City Ordinance 2005-017 and City Resolution 2005-074 unless a fee-in-lieu is accepted.

**G. Prior to Receiving Occupancy**

1. Prior to Grant of Occupancy, final acceptance of the constructed public improvements shall be obtained from the Engineering Department for the phase which contains the lot. Phase improvements are divided by Cedar Creek with improvements west of Cedar Creek being part of Phase 1 and improvements east of Cedar Creek part of Phase 2.
2. Prior to Issuance of occupancy, all open space landscaping not subject to CWS standards shall be installed in accordance with SZCDC § 16.92.020 and have an irrigation system.
3. Prior to occupancy of each residence, one off-street parking space per dwelling unit shall be provided. Garages cannot be counted as parking stalls. Each stall shall be a minimum of 20 ft. deep x 9 ft. wide. Lots 40 and 41 shall each have two (2) off-street stalls at the minimum required width and depth.
4. Prior to Grant of Occupancy, for each residential structure constructed within the subdivision and abutting the Flood Plain corridor (Lots 1-18), a completed FEMA Elevation Certificate Form shall be submitted to the City for its records.
5. Prior to occupancy, a continuous visual buffer between Brookman Rd. and the proposed subdivision shall be established through preserving existing native trees in good condition or planting new trees and landscaping in accordance with SZCDC § 16.142.040.
6. Prior to occupancy, the applicant shall pay a fee-in-lieu of construction for SW Brookman Rd. as required by Condition III of the Washington County comments dated June 30, 2022. Prior to occupancy, the community trail and open space plantings and improvements shall be installed by the developer in accordance with the final landscaping and open space improvement plans.
7. Prior to occupancy private streets shall be signed differently from public streets and include the words "Private Street".
8. Prior to Grant of Occupancy, all private sanitary laterals shall be installed in

compliance with the current Oregon Plumbing Specialty Code.

9. Prior to Issuance of Occupancy of any residential lot structures, all service laterals shall be installed in compliance with the current Oregon Plumbing Specialty Code.
10. Prior to Grant of Occupancy, Lots 40 and 41 shall have constructed individual LIDA facilities meeting the approval of the City of Sherwood Engineering Department.
11. Prior to Grant of Occupancy, Lots 40 and 41 shall have Private Stormwater Facility Access and Maintenance Covenant recorded with Washington County. A O&M plan is also required to be submitted to the City of Sherwood Engineering Department
12. Prior to occupancy, the community trail and open space plantings and improvements shall be installed by the developer in accordance with the final landscaping and open space improvement plans.

## **V. EXHIBITS**

### **A. Applicant Submittal (complete application materials available in the project file at City Hall)**

1. Completeness Response Letter
2. Applicant Completeness Response
3. Application Form
4. Subdivision Checklist
5. Tax and Location Map
6. Narrative
7. Pre-Application Notes
8. Neighborhood Meeting Details
9. Mailing Labels
10. Title Report
11. Preliminary Storm Report
12. Clean Water Services SPL
13. Clean Water Services Site Assessment
14. Department of State Lands Concurrence
15. Tree Plan
16. GeoPacific CWS Slope Setbacks
17. GeoPacific Geotech Report
18. FEMA Panel
19. Tualatin Valley Fire & Rescue SPL

20. Pride SPL
21. Transportation Impact Analysis
22. Brookman Road Improvements Memo
23. City Design Modification Form – Max Intersection Spacing
24. City Design Modification Form – Min Intersection Spacing
25. City Design Modification Form – Utility Easements
26. County Design Exception Submittal – Intersection 4
27. County Design Exception Submittal – Intersection 5
28. Plat Name
29. Phasing Exhibit
30. Preliminary Plans
31. County Design Exception Submittal – Sight Distance for Intersection 5
32. Unrecorded Survey of Site

#### **B. Agency Comments**

1. City of Sherwood Engineering
2. City of Sherwood Design Exceptions
3. Washington County Land Use & Transportation (Naomi Vogel)
4. Washington County Land Use & Transportation (Bryan Robb)
5. Washington County Cartography (Ted Foster)
6. Clean Water Services
7. Tualatin Valley Fire and Rescue (Ty Darby)
8. Department of State Lands
9. Oregon Department of Transportation

#### **C. Public Testimony**

1. Sherwood School District (Jim Rose)
2. Lori Kaylor
3. Varunee Burekle
4. Dave Sweeney

#### **D. Additional Information**

1. 2006 Parks Plan – Acquisition Map
2. 2021 Parks Plan – Brookman Area Map
3. Aerial View of Tree Canopy Cover in Project Vicinity
4. Regionally Significant Habitat in Project Vicinity
5. Annexation Document for Subject Property
6. Survey 23506
7. Survey 3337
8. Brookman Addition Concept Plan and Addendum