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P18379-001

SENT VIA EMAIL

Mr. Joe Turner, Land Use Hearings Officer
c/o Dept. of Land Use & Transportation
Washington County
Public Services Building
155 N. First Ave, Suite 350, MS. #350-13
Hillsboro, OR 97124

*Re: Brown Contracting Contractor Establishment Application
Modification of Application to Request Exceptions to Critical Services.
County Casefile S2300221*

Dear Mr. Turner,

This letter and exhibits constitute the Applicant's First Open Record Period Submittal.

I. Introduction.

The City of Wilsonville raised concerns in their May 15, 2024 letter about whether the application meets Washington County approval standards related to public facilities and services. Specifically, the city raises issues related to "critical and essential services." As explained below, the city provides no basis for denial of the application.

Oddly, the City of Wilsonville also seeks to have the County Hearings Officer apply certain provisions of the City of Wilsonville Development Code and the City of Wilsonville Public Works Construction Standards. This letter explains why the city's standards do not apply.

This letter serves four additional purposes. First, it seeks to clarify the applicable requirements set forth in CDC 501. Second, it explains why the applicant meets the applicable county standards in CDC 501, and in a few instances, it provides additional evidence to close any potential evidentiary gaps in the application. Third, as a precaution, it seeks to modify the above-cited application to specifically request "exceptions" to certain public facilities and services which may or may not actually be required.

Fourth, as requested by the hearings officer, we discuss certain conditions of approval that we have not been able to come to a full agreement on with county staff. We will continue to work with staff on these issues. Staff has committed to a site visit, which we think will be most helpful in resolving these issues.

II. Facts.

A. Background on the Planning Efforts in this Area.

This case is complicated by the fact that the subject property is located in an area that is in transition from rural uses to urban uses. To make matters worse, the road from which the subject property takes access from is located within the jurisdictional boundary of the City of Wilsonville. This fact has caused confusion as to which standards apply to this land use decision.

The land use history of the area provides some insight into the legal standards applicable to the subject property. The planning area in question consists of approximately 847 acres, located west of I-5 between the cities of Tualatin and Wilsonville, known as the Basalt Creek and West Railroad Areas. The planning area is generally referred to as the “Basalt Creek Planning Area (BCPA).” In 2004, Metro added the Basalt Creek Planning Area to the region’s Urban Growth Boundary (UGB) in order to accommodate growth in industrial employment. Metro Ordinance #04-104B. Metro included conditions, found at Exhibit F of Ord. 04-014B, that only pertain to the UGB expansion area north of Day Road. Exhibit 1. Those conditions state:

Tualatin Area

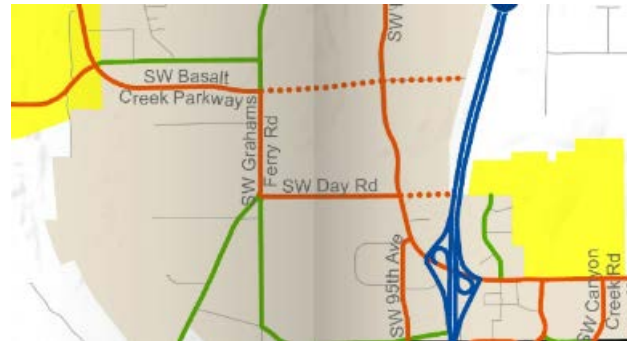
1. Washington County or, upon annexation to the Cities of Tualatin or Wilsonville, the cities, in conjunction with Metro, shall complete Title 11 planning within two years following the selection of the right-of-way alignment for the I-5/99W Connector, or within seven years of the effective date of Ordinance No. 04-1040, whichever occurs earlier.
2. Title 11 planning shall incorporate the general location of the projected right of way alignment for the I-5/99W connector and the Tonquin Trail as shown on the 2004 Regional Transportation Plan. If the selected right-of-way for the connector follows the approximate course of the “South Alignment,” as shown on the Region 2040 Growth Concept Map, as amended by Ordinance No. 03-1014, October 15, 2003, the portion of the Tualatin Area that lies north of the right-of-way shall be designated “Outer Neighborhood” on the Growth Concept Map; the portion that lies south shall be designated “Industrial.”
3. The governments responsible for Title 11 planning shall consider using the I-5/99W connector as a boundary between the city limits of the City of Tualatin and the City of Wilsonville in this area.

Id. at p. 2-3. Thus, Metro delegated to Tualatin and Wilsonville the task of deciding on where the eventual jurisdictional boundary would be located and that the boundary would be the location of an east-west “connector” arterial road.

In 2011, the two cities, Metro, and Washington County entered into an Inter-Governmental Agreement (IGA) that outlines the coordinated planning responsibilities regarding the BCPA. The project team worked with property owners, citizens, service providers, regional

partners, and both cities' Planning Commissions and City Councils to complete transportation, infrastructure and land use planning. The Cities of Tualatin and Wilsonville adopted the Basalt Creek Concept Plan in August 2018, which presents a unified framework for future development in the BCPA.

The connector road, now known as the “Basalt Creek Parkway,” was agreed upon in the 2018 Basalt Creek Concept Plan. Exhibit 2. The connector is now shown on the County TSP. It will eventually serve to route traffic away from the North Wilsonville interchange, and facilitate traffic mobility between Sherwood and south Stafford.



The parties also entered into various planning agreements needed to carry out the concept plan, including the “Washington County – Wilsonville Urban Planning Area Agreement.” Exhibit 3. The Washington County – Wilsonville Urban Planning Area Agreement sets forth additional details pertaining to the planning history. Section II.B.3 of the WC/W UPAA sets forth certain coordination requirements that the County must follow when processing quasi-judicial land use applications in the Urban Planning Area. A map of the UPA is included as an Exhibit A to the WC/W UPAA, and included the subject property.

The City of Wilsonville adopted Comprehensive Plan and Transportation Systems Plan (TSP) amendments in 2019, which implement the Basalt Creek Concept Plan and Basalt Creek Transportation Refinement Plan. Exhibit 5. The City of Wilsonville placed a Comprehensive Plan designation of “Industrial” on the subject property. Exhibit 4. This designation will go into effect upon annexation.

The City of Wilsonville has also enacted an overlay zoning district known as the “Coffee Creek Industrial Design Overlay District (Coffee Creek DOD).” Exhibits 6 & 7. The subject property is not included in that overlay district.

Having reviewed the UPAA discussed above as well as other legal authority, we are not aware of any legal requirement that makes City of Wilsonville standards of any type applicable to this case.

B. Correction of Incorrect Factual Statements Made by the City of Wilsonville.

At various places in the City of Wilsonville’s submittals to date, the city demands that the proposed “open-air storage building” be “removed.” *See, e.g.*, Planning Director’s Letter dated May 15, 2024, at p. 6. See also DKS Technical Memorandum, at p. 1, n1. Contrary to the misinformation supplied by the city, the proposed “open-air storage building” has not been built. The city could have easily verified this by viewing the property on Google Earth. The general location of the proposed building is circled in the aerial below.



III. Legal Analysis.

A. City Standards Do Not Apply.

In her letter dated May 15, 2024, the City of Wilsonville's Planning Director states that "[t]he City has road authority over SW Day Road and, therefore, the City's public facility standards apply to this facility." She does not cite any provision of law for this novel proposition, and we are not aware of any law which supports her position. To the contrary, the city's standards do not apply because this application must be judged by standards set forth in the county's Development Code. ORS 215.416(8)(a). Stated another way, the zoning of the property determines which set of zoning laws apply to it, which is to say that the zoning laws follow the property, not the roads next to the property. This property is zoned FD-20, and therefore the county zoning laws apply to it.

Both ORS 215.416(8)(a) and its counterpart applicable to cities, ORS 227.173(1), set forth what is known to land use practitioners as the "codification requirement." It requires that permits issued by the county be decided based on text and maps adopted into the county's zoning codes:

Approval or denial of a permit application shall be based on standards and criteria which shall be set forth in the zoning ordinance or other appropriate ordinance or regulation of the county and which shall relate approval or denial of a permit application to the zoning ordinance and comprehensive plan for the area in which the proposed use of land would occur and to the zoning ordinance and comprehensive plan for the county as a whole.

The primary purpose of the codification requirement is to assure that permit decisions will be based on pre-existing legislation. *BCT Partnership v. City of Portland*, 130 Or App 271, 276 n2, 881 P2d 176 (1994); *Zirker v. City of Bend*, 233 Or App 601, 227 P3d 1174 (2010). An example of how a zoning ordinance can run afoul of this requirement is provided by *State ex rel. West Main Townhomes v. City of Medford*, 233 Or App 41, 43, 225 P3d 56 (2009), *adhered to as modified on recons*, 234 Or App 343, 228 P 3d 607 (2010).¹ See also *Oster v. City of Silverton*, 79 Or LUBA 447 (2019); *Waveseer of Oregon, LLC v. Deschutes County*, 81 Or LUBA 583 (2020), *aff'd*, 308 Or App 494, 482 P3d 212 (2021);² *Hollander Hospitality v. City of Astoria*, ___ Or LUBA ___ (LUBA No, 2021-061, Sept. 30, 2021); *Landwatch Lane County v. Lane County (Fallon)*, 81 Or LUBA 656 (2020).

Therefore, the only way that “city standards” can apply is if there is something in the county’s Development Code that incorporates those city standards by reference. Unfortunately for the city, the CDC only cites to county “Road Design and Construction Standards.” See e.g., CDC 501-8.2(F) & (G). The city seeks to apply access spacing standards set forth in the City of Wilsonville Public Works Standards, but the CDC demands that the review authority apply access spacing standards set forth in CDC 501-8.5. There is simply no legal support for the idea that the city’s status as “road authority” over SW Day Road somehow makes the applicant subject to city’s public facility standards. In the absence of a more developed argument, the city provides the Hearings Officer no basis for denial of this application on the basis of city standards.

B. The City Fails to Understand that the Applicant is Proposing “Interim” Development under the County FD-20 Zone, Not the “Final / Build-out” Development Envisioned by the Basalt Creek Concept Plan.

In her letter dated May 15, 2024, the City of Wilsonville’s Planning Director makes an interesting concession when she states:

The infrastructure planned by the City is designed to serve the industrial uses planned for the Basalt Creek Industrial Area where this property is located. Improvements are needed to accommodate

¹ The relevant section of the Medford zoning code stated that all development must be consistent with an adopted neighborhood circulation plan and, if such a plan did not exist, it was the developer's responsibility to demonstrate that the development “will not impair the future development of a comprehensive neighborhood circulation system.” The parties agreed that there was no “plan” for the neighborhood at issue. The Court of Appeals held that the code did not give sufficient notice of what was required. The Court noted that the standard refers to eventual development of adjoining property and future provision of access, and there was no way to show compliance with such future standards.

² In *Waveseer*, the county denied an application for a marijuana production facility based upon a 10-factor analysis and conclusion that the proposed facility would be too close to a “youth activity center.” The court held that “nothing in the provisions of the code signal[ed] the notion of a 10-factor analysis, let alone the particular 10 factors identified by the county as relevant.” Under those circumstances, the court held that LUBA was correct to conclude that the county’s interpretation of the “‘youth activity center’ criterion in [the code] violate[d] the codification requirement of ORS 215.416(8).”

this traffic and provide safe, multi-modal access for nearby residents and the hundreds of future employees that will work in the area. The City does not have a deferral or fee in lieu program for improvements and construction must occur at the time of development; therefore the City cannot support County Condition of Approval III. 5. For all these reasons, the exception in Washington County Code Section 501 does not apply, and the City requests that the Hearings Officer deny the application or incorporate the City's conditions of approval related to completing street improvements into the final land use decision rendered.

See letter from Planning Director dated May 15, 2024, at p. 7-8. It is interesting that the city concedes that planned infrastructure is intended to serve *future* planned industrial uses. The applicant's use is not one of the "industrial uses planned for the Basalt Creek Industrial Area." Rather, the applicant is proposing an interim use of land that will be eventually replaced by the "industrial uses planned for the Basalt Creek Industrial Area," upon future annexation into the city.

Policy 18 of the Washington County Comprehensive Plan describes the FD-20 zone as a holding zone:

Future Development 20-Acre District (FD-20) Characterization: The FD-20 District shall be applied to land added to the Regional UGB by Metro during or after June 1999 through a major or legislative amendment. The FD-20 District is intended to protect and retain for future urban density development lands which are predominantly in limited agricultural, forest or residential use. Pursuant to Section 3.07.1110.C. of Metro's Urban Growth Management Functional Plan (UGMFP), the minimum lot area for the creation of new parcels shall be 20 acres. These properties shall remain FD-20 until any appeals regarding the Metro UGB amendment have been finalized and the planning requirements of Title 11 of Metro's UGMFP have been completed and adopted by ordinance.

A contractor establishment is one of the few interim uses allowed in the FD-20 zone. The reason for this is straightforward: such uses do not require much in the way of public infrastructure and they typically do not result in expensive private improvements that would discourage future transition to other land uses. To quote CDC 308, "the FD-20 District recognizes the desirability of encouraging and retaining limited interim uses until the urban comprehensive planning for future urban development of these areas is complete."

The city's misconception of the FD-20 zone is revealed in the following quote:

The industrial-style use proposed by this application is not consistent with the Basalt Creek Concept Plan or with the intent behind the County's FD-20 zoning designation. The FD-20 zoning was applied as a

result of Metro amending the Urban Growth Boundary to accommodate future industrial growth in this area. The intent of applying this zoning designation is to indicate the land is slated for future development.

Id. at p. 7. While it is certainly true that a contractor establishment is inconsistent with the long-term goals of the Basalt Creek Concept Plan, it is entirely consistent with the FD-20 holding zone because it is a “limited interim use” of the land. The city is at least 10-20 years away from being able to provide the infrastructure needed to support final buildout, and in the interim, the land should not lie fallow. Given that realization, it is not appropriate to burden an interim land use with the infrastructure intended to serve future planned industrial land uses which are not contemplated by the applicant.

Continuing, the city’s Planning Director states:

County staff assessment is that half-street improvements can be completed later. However, if the improvements are not a condition of approval, then there is no mechanism to require them of the applicant. Essentially, Washington County is attempting to force the costs to do this work in the future onto City taxpayers, despite the facility already being a City road. The City will not accept this unjustified cost shifting for the benefit of private development to the detriment of the taxpayer. The time to require necessary public improvements is at the time of development, which is now.

Id. at p. 7. The city misses staff’s point: this is not the “time of development.” This is the time of an interim, temporary development. The city will get another bite at the apple when it annexes the property and zones it for a more valuable land uses that will justify the future ROW exactions. In short, the city will get its road improvements when it comes to the table with municipal water and sewer and other urban infrastructure needed by developers who are willing to invest in land uses authorized by the city’s zoning code.

Furthermore, the city sheds crocodile tears when it complains about shifting the burden of paying for infrastructure on “city taxpayers.” Both the county and the city collect SDCs to widen Day Road, including bike lanes and sidewalks on both sides of the road, so the city taxpayers are not paying for the full cost of the road improvements. The city’s SDC-CIP provides that the city should pay 25% of the total \$10.7 million dollars of the project, with the other 75% coming from other funding sources. Of that 25% subtotal, the city has determined that city taxpayers should pay 50% and city developers should pay 50% via SDCs:

Transportation Capital Improvements, 2016 to 2035								
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs	
RW-02	Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road Intersections	\$10,794,223	Years 5-10	25%	50%	\$1,349,278	

Exhibit 8, at p. 17.

Similarly, Washington County continues to collect a TDT (aka: SDC) for this exact same project, even though the county no longer has jurisdiction over Day Road:

		Arterial										
8601	Wilsonville	Day	Grahams Ferry	Boones Ferry	Widen from 3 to 5 lanes	\$ 5,800,000	80%		\$ 4,640,000	100%	\$ 4,640,000	2025-2039

**Transportation Development Tax
 Road Project List Amended**

Appendix C: Road Project List
 Ordinance 691-A as amended
 R+O 23-24
 April 18, 2023

Exhibit 9. In other words, cost allocation decisions have already been made, and this land use application does nothing to upset that decision-making. The applicant will pay the county’s TDT, which will be used to pay some proportional share of the Day Road improvements.

The discussion set forth above provides a good segue to the next topic, which is the unconstitutionality of proposed conditions intended to exaction both land and roadway infrastructure from the applicant.

C. The City’s Proposed Transportation Exactions violate *Nollan / Dolan / Koontz*.

The city seeks to violate the U.S Constitution by demanding land dedications and exactions without even having the courtesy of providing proposed *Nollan / Dolan* findings. As an initial matter, we object to the city’s use of dirty tactics to try to obtain its desired exactions by hook or by crook. The city seeks to have the Hearings Officer impose conditions on the land use approval that would allow the city to extort land, road improvements and monetary exactions:

- ❖ The city improperly seeks to use a fire hydrant to force annexation;
- ❖ The city improperly threatens to prohibit access on Day Road unless land is dedicated.

See Letter from Planning Director dated May 15, 2024, at p. 6. The city demonstrates its lack of understanding of exactions law when it states:

Widening SW Day Road along the site’s frontage to include an additional 11-foot-wide travel lane, curb, planter strip, street trees, bike lane, sidewalk, and street lights would resolve the level of service deficiency in improvements. As these improvements are less than the local half street requirement, and as such, the City has not prepared essential nexus and rough proportionality analysis.

See letter from Planning Director dated May 15, 2024, at p. 5. Day Road is a major arterial, so "local half street" dedications do not apply to this case. We will provide more thorough analysis of the *Nollan / Dolan / Koontz* trilogy in our final argument. For now, it should suffice to say that the Fifth Amendment to the U.S. Constitution does not have a *de-minimus* exception for exactions that are less than “local half street requirements.”

To the contrary, exactions law is premised on the relationship between the negative externalities of development and the cost and extent of the solution the government seeks to remedy those impacts. To this point, one of the most important themes of the unconstitutional exactions doctrine was aptly stated by Justice Black in *Armstrong v. United States*:

The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole.

Armstrong v. United States, 364 U.S. 40, 49 (1960). Here, the decision to convert Day Road to a major freight arterial has absolutely nothing to do with Brown Contracting’s interim development. Rather, Day Road is needed to serve regional traffic between Sherwood, Tualatin, and Wilsonville and to serve future planned industrial and employment uses.

The 2018 version of Metro’s 2035 Regional Transportation Plan (RTP) called for detailed project planning and near-term construction of an extension of SW 124th Avenue from Tualatin-Sherwood Road to the I-5 / Elligsen Road interchange, supporting industrial access from the Tonquin, Southwest Tualatin, and Basalt Creek Planning Areas. The Regional Transportation Plan (2018) included project #14, which was summarized as “Day Road reconstruction to accommodate trucks (Grahams Ferry Road to Boones Ferry Road).”

Roads and Bridges	Washington County	Wilsonville	Wilsonville	11243	Day Road Improvements	Grahams Ferry Rd.	Boones Ferry Rd.	Widen street from 3 to 5 lanes with buffered bike lanes, sidewalks and street lighting. Improve structural integrity for increased freight traffic and provide congestion relief. Sidewalk infill and creation of Tonquin Trail multi-use path spur will reduce pedestrian and vehicle conflicts. Bike buffers will reduce bicycle and freight conflicts.	\$	10,560,000	2028-2040	Yes
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Exhibit 10.

The Basalt Creek Transportation Refinement Plan Recommendations provided further detailed explanation. It stated:

Planning Context. The need to plan for the future transportation system in the Basalt Creek area is driven not only by future growth in the Basalt Creek Planning area itself, but by future growth in surrounding areas targeted for industrial development. Basalt Creek currently lacks the multi-modal transportation facilities needed to support economic and urban-level development. Several planning efforts, summarized below, provide background and context for the Basalt Creek Transportation Refinement Plan:

- The I-5/99W Connector Study recommended an alternative that spreads east-west traffic across three smaller arterials rather than a single expressway. Although specific alignments for these arterials were not defined, the eastern end of the Southern Arterial was generally located within the Basalt Creek Planning Area, south of Tonquin Road. The present planning effort aims to further define the location of the connection between the SW 124th Avenue Extension and the I-5/Elligsen interchange in a manner that does not preclude the future Southern Arterial west of SW 124th.

* * * * *

- The Tonquin Employment Area, Southwest Tualatin Concept Planning Area, and Coffee Creek Planning Area together comprise about 1,000 acres surrounding the Basalt Creek area that are planned primarily for industrial use. These areas are expected to generate growing freight and work-related travel demands on the multi-modal transportation network that runs through the Basalt Creek area. (Emphasis Added).

Exhibit 5 at p. 1-2. So the planning goal was to relieve pressure on the Tualatin-Sherwood highway by rerouting traffic from Sherwood to Wilsonville. Furthermore, the planning for the region recognized that future industrial uses in this area needed increased mobility and freight movement.

The Basalt Creek Transportation Refinement Plan Recommendations also detailed the City of Wilsonville's special interest in Day Road:

During the planning process, the City of Wilsonville expressed concern about the structural condition of Day Road (*i.e.*, failing roadway base and resulting pavement deterioration) and its ability to carry freight traffic for further development of industrial lands. While the Basalt Creek Transportation Refinement Plan focused on roadway needs related to capacity, the PAG agreed that the function

of the arterial network in the Basalt Creek area includes providing roadways with adequate structural design for regional freight needs. Therefore, the PAG agreed that the project recommendations include a commitment to address the construction, operations, and maintenance of the arterial network through the concept planning process. (Emphasis Added).

Id. at p. 3. So the City of Wilsonville speaks here with a forked tongue. On the one hand, it previously convinced regional decisionmakers to dedicate resources to widen and rebuild Day Road to support “regional freight needs” and the “further development of industrial lands” in the Basalt Creek Planning Area and Coffee Creek Planning Area. Here, it attempts to saddle the owners of an *interim* contractor establishment with the requirement to dedicate land and build the very same infrastructure at no cost to the city to support unrelated *future* industrial land uses. This blatant disregard for Constitutional norms is both shocking and unacceptable.

D. Public Facilities and Services, Generally.

The CDC creates three categories of facilities and services: critical, essential, and desirable. The CDC defines these three categories at CDC 501-7.1:

Levels of Public Facilities and Services

501-7.1 Implementation strategies of the Comprehensive Plan have placed Public Facilities and Services into three categories for development:

- A. Critical Services. Public water, public sewer, fire protection, drainage and access on Local and Neighborhood Route roads;*
- B. Essential Services. Schools, Arterial (including State highways) and Collector roads, Regional Trails identified on the Transportation System Plan Pedestrian System map, transit improvements, police protection, street lighting and on-site pedestrian and bicycle facilities in the public right-of-way; and*
- C. Desirable Services. Public transportation service, parks, traffic calming devices, mid-block crossings, Community Trails identified on the Transportation System Plan Pedestrian System Map, Special Area Trails, Pedestrian Connectivity Areas identified on the Community Plans and off-site pedestrian and bicycle facilities.*

The code requires an applicant to either provide the listed critical and essential services or take an exception to their provision. It has been a longstanding pattern of practice in Washington

County to grant such exceptions to contractor facilities. *See* Exhibits 12-16 (examples of contractor establishment decisions where exceptions have been granted).

C. Critical Services.

As defined, “critical services” include five separate types of service: (1) public water, (2) public sewer, (3) public stormwater facilities, (4) fire protection, and (5) access onto either a local road or a neighborhood route road. These five critical services can be categorized into those three services for which the county requires Service Provider Letters (“SPLs”), and two other critical services for which no SPLs are required.

1. Critical Services Where Service Provider Letters are Required.

Three of the five critical services are addressed in CDC 501-8.1. This section requires an applicant proposing development to obtain SPLs for water, sewer, and fire protection.

501-8.1 Critical Services

An applicant for development^[3] shall provide documentation from the appropriate non-county service provider that adequate water, sewer and fire protection can be provided to the proposed development prior to occupancy. The documentation shall be no more than 90 days old.

In this case, the only one of the three identified critical services set forth in CDC 501-8.1 that is available to the subject property is fire protection, which is discussed below. Neither water or sewer service is available to serve the subject property. In 2015, the Hearings Officer applied CDC 5.01-6.1 and granted requested “exceptions” for water, sewer, and surface water management. *See* Final Order Casefile 14-431-D (IND) at p. 1. CDC 5.01-6.1(C) provides the criteria for such exceptions:

501-6 Exceptions for Critical and Essential Services

501-6.1 Development proposals that cannot ensure critical and essential services applicable to the development, other than those required by Sections 501-8.1 B (9) or 501-8.2 G. (Half-street improvements), within the required time frames shall be denied unless all of the following findings can be made:

³ CDC 106-57 defines “development” as:

“[a]ny man-made change to improved or unimproved real estate or its use, including but not limited to construction, installation or change of land or a building or other structure, change in use of land or a building or structure, land division, establishment, or termination of right of access, storage on the land, tree cutting, drilling, and site alteration such as that due to land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking, excavation or clearing. Also refer to Section 421-2.2 for definition of development for flood and drainage hazard area management purposes.”

- A. *The particular inadequate facility(ies) or service(s) is not necessary for the particular proposal within the time period identified by the service provider;*
- B. *The approval of the development application will not substantially interfere with the ability to later provide the particular inadequate facility(ies) or service(s) to anticipated uses in the vicinity of the subject property;*
- C. *The approval of the development application without the assurance of the particular inadequate facility(ies) and service(s) will not cause a danger to the public or residents in the vicinity of the subject property; and*
- D. *It is shown that the applicant has exhausted all practical methods within the ability of the applicant to ensure the provisions of the unacceptable facility(ies) and service(s).*

Thus, CDC 5.01-6.1 provides a set of standards under which development can be approved without necessary infrastructure where such facilities are not needed to serve the applicant. CDC 5.01-6.1 is intended to allow interim development that does not need full urban services, which is consistent with the entire purpose of the FD-20 zone. CDC 5.01-6.1 also ensures that the applicant's interim development does not preclude the provision of facilities at a later time. CDC 5.01-6.1(B).

As mentioned above, the Hearings Officer applied CDC 5.01-6.1 in 2015 and granted requested "exceptions." For this expansion request, staff directed that these *existing* exceptions be applied to the remainder of site, since the applicant is not planning on building structures that would generate need for service on the expanded tax lots. *See* staff report at p. 12.

a. Water.

The City of Wilsonville takes the position that no water service lines can be extended beyond the city limits, and we agree that their code generally prohibits such extensions. For example, with regard to water, the Wilsonville Municipal Code (WMC) 3.100(13) provides:

(13) Water service lines⁴ shall not be extended outside the City limits and water shall not be metered or sold outside the City limits, except, however, when the Council may approve and authorize, by motion, the extension of a line or lines for the purpose of furnishing City water or sewer to any property or facility which is owned, used, occupied, leased or operated by any agency or department of Federal, State, County or special district; or a public entertainment

⁴ The City code defines the term "Water Service Line" to mean "the water supply system from the water main line to the property line." Also, the city's municipal code stated that a "Water Main Line shall mean water main lines which are six inches or larger, constructed within a City right-of-way or dedicated easement."

facility that is privately owned, or privately-owned property where extension of service is required to alleviate a clearly-defined health, safety or fire condition. The extension of a water or sewer line outside the City limits and beyond the Urban Growth Boundary may be approved provided that the City Council adopts findings demonstrating substantial compliance with statewide Planning Goals 2, 3, 4, 11 and 14. Any extension outside the City limits shall be subject to 3.116 of this Code and such additional fees as shall be determined from time to time by the City Council to be reasonable and prudent. All water and sewer service user fees, whether permanent or temporary, for any services provided outside the City limits shall be billed at two times the normal rate as previously established by Resolution. Except for publicly-owned property or facilities, all other property owners who receive City services under this section shall execute a Consent to Annexation as shall be provided by the City.

The City of Wilsonville has tied water availability to annexation, which is not something that the applicant is interested in pursuing. In part, this is because the city has already assigned a provisional “Industrial” comprehensive plan designation to the property, *See* City of Wilsonville Ordinance 834 (2019) (Exhibit 3, at p. 28). The city intends to rezone the property upon annexation in a manner that prohibits contractor establishments. In this regard, the city points out that a contractor establishment is most assuredly not a part of this future vision. *See* letter from Planning Director dated May 15, 2024, at p. 7 (“The industrial-style use proposed by this application is not consistent with the Basalt Creek Concept Plan * * *”). The BCCP calls for this area to be a “High Tech Employment District.”



The applicant meets the criteria for an exception for public water requirement. With regard to CDC 501-6.1(A), municipal water is not necessary for this particular proposal because Brown Contracting does not use large quantities of water. The applicant obtains water from an existing onsite well, which is sufficient to serve the needs of the existing business. The applicant’s employees use water primarily for bathroom facilities. There are three bathrooms in

the office located on TL 309. The office also features a small kitchen, in which only a microwave and coffee machine are used. The employees use bottled water for drinking because the well water, although safe to consume, has a disagreeable taste. A shower facility is available but is not used. TL 309 has a drip irrigation system used to water some shrubs along the west fence line. The applicant also uses water to run a power washer every other day for short periods of time. The applicant will occasionally, but not regularly, fill up a 200-gallon water buffalo⁵ for use at remote sites. Overall, the level of water usage as part of the business is generally the same or slightly more than a typical residence.

A contractor establishment is an interim land use that does not substantially interfere with the ability to provide water service in the future. CDC 501-6.1(B). No party has provided any facts that suggest that the city cannot provide public water to the site or the area in the future upon annexation.

The contractor establishment was established in 2015, and experience on the site has shown that the 2015 approval of the development application without municipal water has not caused a danger to the public or residents in the vicinity of the subject property. CDC 501-6.1(C).

Finally, there are no “practical methods within the ability of the applicant” to ensure the provision of municipal water. CDC 501-6.1(D). Specifically, the City of Wilsonville has conceded, rather emphatically in fact, that they will not extend water lines outside their city limits unless the property is annexed. The city has further conceded that a contractor establishment would not be allowed once the property is annexed.

b. Sewer.

The applicant meets the criteria for an exception for municipal sewer disposal. The applicant manages effluent via an on-site septic system. With regard to CDC 501-6.1(A), municipal sewer is not necessary for this particular proposal because the existing septic system is sufficient to serve the needs of the contractor establishment. *See* Exhibit 3 to Letter from Andrew Stamp dated May 15, 2024. A contractor establishment is an interim land use that does not substantially interfere with the ability to provide sewer service in the future. CDC 501-6.1(B). The contractor establishment was established in 2015, and experience on the site has shown that the 2015 approval of the development application without municipal sewer has not caused a danger to the public or residents in the vicinity of the subject property. CDC 501-6.1(C). Finally, there are no “practical methods within the ability of the applicant” to ensure the provision of municipal sewer. CDC 501-6.1(D).

⁵ A water buffalo or water wagon is a trailer with a tank used to store and transport water for livestock, farms, ranches, construction contractors, industrial facilities, and auxiliary fire prevention. A water buffalo does not use a pump. Water is gravity fed to the required location.

c. Fire Protection.

The only critical service that can be provided is fire protection. The applicant has submitted a SPL from TVF&R. TVF&R concluded that fire protection can be provided to the subject property. *See* Application Exhibit E.

CDC 501-7.4 states as follows:

The service provider's information shall be treated as a rebuttable assumption as to the ability to provide an acceptable level of service. However, the evidence that can rebut it must be compelling evidence based upon objective data in order to controvert the determination of the service provider.

Although the City of Wilsonville does not call out CDC 501.7-4, it seeks to rebut the presumption by stating that the TVF&R SPL is “inaccurate.” *See* letter from Planning Director dated May 15, 2024, at p. 4. However, the city does not provide any “compelling evidence based upon objective data,” as required by code. Rather, the city’s Planning Director argues, in essence, that annexation is required before a fire hydrant located in the city’s jurisdictional boundary can be used to put out a fire on property located outside the city. *Id.* The city is simply wrong on this point, and its attempt to rebut the presumption fails.

The city’s core assumption is that the SPL is premised on the presence of a fire hydrant in city ROW. That assumption is unfounded. The Deputy Fire Marshal II who approved the SPL, Mr. Brian Ernst, explained to us that TVF&R did not rely on the presence of a fire hydrant to issue the SPL. Rather, TVF&R considers this property to be a “rural un-hydrated area.” In these areas, TVF&R uses Type III wildland fire trucks (aka: “brush trucks”), which carry water on board and also have the capability to pump water from ponds and streams, etc.

We submitted a copy of the TVF&R policy document entitled “New Construction Fire Code Applications for Commercial and Multi-Family Development.”⁶ This document sets forth the relevant policy at page 10:

RURAL COMMERCIAL BUILDINGS - REQUIRED FIRE FLOW:
Commercial structures in rural and suburban areas where adequate and reliable water supply systems DO NOT exist will require a firefighting water supply system sized in accordance with NFPA Standard 1142 (or an approved alternate) capable of delivering a minimum of 500 gpm at 20 psi through an approved fire hydrant in an approved location. (OFC 507, B103.2, and B105)

⁶ We provided a copy of the TVF&R policy standards, which we downloaded from the following source: <https://www.tvfr.com/DocumentCenter/View/1296/NC-Fire-Code-Application-Guide-for-Commercial-Development?bidId=>

- **Exception: Buildings less than 24,000 square feet do not require an onsite firefighting water supply. (OFC B103.1).**
(Emphasis added).

Because the applicant is not proposing any structures which are 24,000 s.f. or larger, the TVF&R policy dictates that no onsite firefighting water supply is required. Therefore, the city fails to meet its burden under CDC 501-7.4.

The city is also wrong to assume that a water hydrant located on city-owned ROW cannot be used to fight a fire located on neighboring land outside the city limits. The city's suggestion seems preposterous on its face, and the city provides no legal analysis to support its ridiculous argument. As noted above, WMC 3.100(13) prohibits the extension of "water service lines" outside the city's jurisdictional boundary. However, water used by TVF&R is not provided by a "water service line." Regardless, TVF&R has concluded that it would bring its own water to a fire, so the point is moot in any event. Again, in the absence of a more developed legal argument, the city provides the Hearings Officer no basis for denial of this application.

2. Critical Services Where Service Provide Letters Are Not Required.

As discussed above, CDC 501-8.1 requires an applicant proposing development to obtain Service Provider Letters ("SPLs") for water, sewer, and fire protection. There are two other critical services that do not require service provider letters: (1) surface water management, and (2) access on Local and Neighborhood Route roads.

a. Drainage / Stormwater Management.

The city seeks to impose a demand that the applicant conduct an unnecessary drainage analysis, stamped by a civil engineer licensed in the State of Oregon, which includes a "downstream analysis." See letter from Planning Director dated May 15, 2024, at p. 6. The city seeks a drainage analysis report "that shows how stormwater will be managed in accordance with the Clean Water Services Standards and ODOT Hydraulics Manual. *Id.* We object to this request.

As an initial matter, we intend to design a surface water management system that complies with Clean Water Services' "Design and Construction Standards for Sanitary Sewer and Surface Water Management." However, the ODOT Hydraulics Manual does not appear to have mandatory regulatory application to this case. See WCC 15.08.330.010 (stating that in areas which are outside of CWS's service boundary, the CWS standards, and the ODOT Hydraulics Manual, shall "provide design guidance."⁷ Therefore, we object to any condition that requires strict compliance with its mandates, whatever they might be.

⁷ 15.08.330.010 - General.

The following and the Clean Water Services (CWS) Design and Construction Standards establish the requirements for the design of drainage facilities within their service boundary.

Outside CWS service boundary, the CWS standards, and the ODOT Hydraulics Manual, shall

Second, we object to any conditions that require a “downstream analysis.” The city recently completed a Stormwater Master Plan that extensively studied Basalt Creek where it enters the city’s jurisdictional boundary, identified existing deficiencies and problems caused by future urbanization, and recommended design solutions to remedy the existing and anticipated deficiencies. Exhibit 17 (Excerpts from 2024 Wilsonville Stormwater Master Plan). The city has, therefore, already completed the “downstream analysis.”

Based on our conversation with the city, it is clear that the city staff does not understand Oregon drainage law. The city seemed to think that it can prohibit upgradient landowners from allowing surface waters onto downgradient property owned by the city, and that upgradient landowners may not add water to any watercourse that enters city boundaries. The city is confused.

Oregon’s law of drainage is based on common law. Oregon is a modified civil rule state. Under the purest form of the civil law rule, drainage easements for natural flows are recognized by operation of law. These easements, which are located at points of natural drainage, ensure that the upper landowner has the right to allow water naturally draining from his land to cross the lower landowner’s property. *Rehfuss v. Weeks*, 93 Or 25, 33, 182 P 137 (1919). In this regard, the civil law rule approaches the issue of drainage from a property law standpoint, as opposed to a tort law approach.

Like most states that use the civil law rule, Oregon has adopted a modification known as the “acceleration” principle. *See Garbarino v. Van Cleave*, 214 Or 54, 330 P2d 28 (1958); *Harbison v. Hillsboro*, 103 Or 257, 271, 204 P 613 (1922); *Rehfuss v. Weeks*, 93 Or 25, 33, 182 P 137 (1919); *Whitney v. Willamette Bridge Ry. Co.*, 23 Or 188, 31 P 472 (1892). Under this principle, the upper landowner may, subject to a “reasonableness” limitation,⁸ make use of manmade features such as pipes, drainage ditches, tiles, and drains to rid his land of surface

provide design guidance.

These requirements shall apply to all storm drainage facilities in existing and proposed county road rights-of-way, public rights-of-way, public drainage easements and tracts of common ownership in unincorporated areas. Storm drainage facilities include, but are not limited to ditches, culverts, inlets, drainage structures, swales, low impact development approaches (LIDA) and detention facilities, creeks and rivers.

⁸ There are limits to the acceleration principle, particularly as related to urban areas. *See e.g., Levene v. City of Salem*, 191 Or 182, 191, 229 P2d 255 (1951). For example, in *Harbison*, the court noted in dicta that the “due regard” must be observed “for the interest of the adjacent landowner so as to cause no unreasonable inconvenience.” *Id.* at 273-4. In *Rehfuss*, the court stated that the up-gradient landowner must act “with prudent regard for the interests of such [down-gradient] owner.” *Rehfuss*, 93 Or at 32. In adopting these limits to the acceleration principle, Oregon courts have added tort law concepts to the civil law rule.

The limits can only be decided on a case-by-case basis, and it is somewhat difficult to assess what is meant by the “unreasonable inconvenience / due regard” limitation. The *Garbarino* court seemed to express some frustration in these formulations, noting that “[n]one of the opinions give us a clue as to the exact meaning of this language or the extent of limitation, if any, imposed thereby on the right of the upland owner to accelerate the natural flow of surface water.” *Garbarino*, 214 Or at 561. This case does not involve any facts which bring the reasonableness limit into question.

water, even though such actions increase the rapidity with which water will collect and discharge into natural drainage channels which drain onto and/or traverse across the lower property.

This principle is expressed - without its moniker - in the following oft-cited passage from the treatise “Smurr on Farm Drainage.” The quote set forth below had been adopted into Oregon law outside of the context of farm drainage, and provides a good summary of the modified “civil rule:”

“Under the rule of the civil law, which has found favor in most of the common-law courts of England and of this country, where two fields adjoin and one is lower than the other, as between the owners of such adjacent lands, the owner of the lower ground has no right to erect embankments or to do anything that will stop the natural flow of water thereto from the upper land, nor anything that will cast it back upon the land above; such lower field being necessarily subject to all the natural flow of water from the upper field. That is, the owner of the higher tract of land has the right to have the surface water flowing or coming naturally upon his premises by rains or melting snows pass off the same through the natural channels upon or over the lower or servient estate, and the owner of the dominant heritage may make such drains and ditches for agricultural purposes on his own lands as may be required by good husbandry, although by so doing the flow of water may be increased in the natural channels which carry the water from the upper to the lower fields; and no one has the right to complain that the volume of water in its natural channels is increased by the artificial drainage of lands which naturally drain therein.”
(Emphasis Added).

Smurr on Farm Drainage § 3, quoted in *Harbison*, 103 Or at 272.

The “acceleration” rule is perhaps the least understood principle of drainage law, because people often confuse an increase in *velocity* or *rapidity*, which is (within limits) legally permissible, with increases in water *quantity*, which is not. Simply put, increasing the *velocity* of water flow is not increasing the *quantity* of water. Engineers will measure the time required for runoff to travel from the hydraulically most distant point in the watershed to the outlet. This is referred to as the “Time of concentration” or (Tc). The hydraulically most distant point is the point with the longest travel time to the watershed outlet, and not necessarily the point with the longest flow distance to the outlet. Time of concentration is generally applied only to surface runoff and may be computed using many different methods.

Thus, although the City of Wilsonville has stated to us that the applicant is not allowed to add any water to any waterbody that flows into the city, that statement clearly misconstrues Oregon drainage law. Upstream property owners have a property right - in the nature of an easement - to send water into natural drainage channels, and that right includes the right to accelerate water via development. The city has no right to complain about any surface water that

the applicant turns into its roadway, or any channelized flow that it turns into natural drainage channels such as Tapman / Basalt Creek.

Contrary to an earlier position taken by the city in conversations with us, the city now acknowledges that city stormwater standards do not apply to this application. *See* letter from Planning Director dated May 15, 2024, at p. 5. Instead, the city concedes that CDC 501-8.1(C) provides the applicable standard. CDC 501-8.1(C) states:

C. No development shall be approved without adequate drainage as prescribed by the county Drainage Master Plan or the adopted Drainage Ordinance or Resolution and Order, and adequate provisions for stormwater, surface water and water quality management as required by the Clean Water Services' "Design and Construction Standards for Sanitary Sewer and Surface Water Management" or its successor.

We address this criterion in the application at page 48. Although that analysis is brief, the application addresses stormwater in much greater detail in response to CDC 423-10 and in the site design plans. *See* application at p. 43 and Application Exhibit A. The property is within unincorporated Washington County, inside of the UGB and outside of the CWS jurisdictional boundary.

The planned grading activities are necessary to create a ground surface suitable for siting a covered, open-air storage building and areas for outdoor equipment storage and staging. The Preliminary Grading and Erosion Control Plan (Application Exhibit A) illustrates the planned covered, open-air storage building footprint with finished floor elevation, the gravel areas to be resurfaced or remain as they exist, the existing and planned stormwater facilities, and the wetland boundary.

Accommodations for stormwater runoff from the new impervious area(s) are planned to be managed on-site in accordance with county stormwater management standards, as applicable. *See* Exhibit 18. Stormwater management is planned to be accomplished by providing interceptor soakage trenches which will collect and route above ground surface stormwater to two below-ground stormwater detention facilities with flow control structures, ensuring that the site's peak post-developed flow is less than or equal to its corresponding peak pre-developed flow for each of the required storm events. The Preliminary Drainage Analysis & Stormwater Report (Exhibit 18) and the Preliminary Plans (Application Exhibit A) demonstrate that County stormwater management standards can be satisfied.

In response to the 2015 land use application, the applicant did successfully design an exceptionally large soakage bed design that is currently functioning as intended. The following documents demonstrate that we applied for permits and obtained them.

- ❖ WACO Grading Permit Set – Existing Conditions and Grading Plans. *See* Exhibit 2 to letter from Andrew H., Stamp dated May 15, 2024.
- ❖ Final As-Built Drawing (12/9/2015). *Id.*

The City of Wilsonville seems to think that the applicant “pulled a fast one” on the county by not including gravel as impervious surface. To the contrary, the final “As-Built” drawing shows that the building coverage, gravel, and concrete surfacing were all totaled to arrive at the overall impervious surface for the site. This final “As-Built” drawing was required to get a “final” on the County grading permit, as well as to arrive at the Type I “Final” for the Contractor’s Establishment Development Review LUA.

- ❖ See Type I Final Approval signed by Ryan Marquardt (3/31/17). Exhibit 4 to letter from Andrew H. Stamp dated May 15, 2024.
- ❖ See email from Miranda Bateschell to County Planner, confirming the conditions of approval were completed (3/27/2017), a copy of which is found at Exhibit 4 to letter from Andrew H. Stamp dated May 15, 2024.
- ❖ See letter from Wilsonville, Michael Carr, confirming public work was completed (10/24/2016) See Exhibit 4 to letter from Andrew H. Stamp dated May 15, 2024.

In summary, the applicant has met its burden to show that it qualifies for an exception for municipal stormwater service. The applicant’s operations do not generate sufficient stormwater to create a need to be served by a municipal stormwater system. CDC 501-6.1(A).

A contractor establishment is an interim land use that does not substantially interfere with the ability to provide stormwater service to the property or neighboring properties in the future. CDC 501-6.1(B).

The contractor establishment was established in 2015, and experience on the site has shown that the 2015 approval of the development application without municipal stormwater has not caused a danger to the public or residents in the vicinity of the subject property. CDC 501-6.1(C).

Finally, there are no “practical methods within the ability of the applicant” to ensure the provision of public stormwater management. CDC 501-6.1(D).

b. Access on Local and Neighborhood Route Roads

The fifth and final critical service is access to a local road or neighborhood route. CDC 501-8.1(B)(2) states:

B. No development shall be approved without an adequate level of access to the proposed development in place or assured at the time of occupancy, with "adequate" defined for critical road services as [stated definitions are not applicable]:

** * * * **

(2) Right-of-way along the entire site frontage meets the following, at minimum, unless modified through a Type II exception approval under Section 501-8.4 B(2), or the site fronts only private street(s).

The county previously found that CDC 501-8.1(B)(2) was met via a series of road exactions that the applicant did not contest. This 2024 expansion application is really aimed at adding more storage space, and is not intended to increase the operational capacity of the business beyond current levels.

The City of Wilsonville requests the Hearings Officer adopt a condition that includes both a ROW dedication and the ridiculous statement that:

“If City public facility standards are not met, such as dedication of sufficient future right-of-way to match the City’s Transportation System Plan (TSP) and associated frontage improvements, the City will not allow site access via SW Day Road.

See letter from City Planning Director dated May 15, 2024, at p. 6. The quote above misstates Oregon law and overstates the city’s authority.

The applicant enjoys a common law right of access, known as “abutters rights,” which are property rights in the nature of an easement. *State ex rel. Dept. of Transp. v. Alderwoods (Oregon), Inc.*, 358 Or 501 366 P3d 316 (2015). Such rights are not shared by the public, and include the following:

the right of access, often called that of ingress and egress; (2) the right to light and air; (3) the right of view; (4) the right to have the street kept open and continued as a public street for the benefit of their abutting property; and (5) whatever adds to the value of the street to the abutter, separately and distinct from whatever rights the abutter may have relating to the street in common with other owners, or with the general public.

Lowell v. Pendleton Auto Co., 123 Or. 383, 261 P. 415 (1927) (Quoting 3 McQuillin, Municipal Corp, Section 1322). See also *Willamette Iron Works v. Oregon R & Nav. Co.*, 26 Or 224, 228-9, 37 P 1016 (1984); *McQuaid v. Portland and Vancouver Railway Co.*, 18 Or 237, 22 P 899 (1889); *Brown v. Jackson*, 268 Or 111, 519 P2d 87 (1974).

In *Willamette Iron Works*, *supra*, the Oregon Supreme Court discussed abutter’s right of access, as follows:

“But there is a limitation to legislative or municipal power over a street, which cannot be exceeded without invading the constitutional rights of abutting owners. An abutting proprietor is entitled to the use of the street in front of his premises to its full width as a means of ingress and egress, and for light and air, and this right is as much property as the soil within the boundaries of his lot; and therefore any impairment thereof or interference therewith, caused by the use of the street for other than legitimate

street purposes, is a taking within the meaning of the Constitution, whether the fee of the street is in the abutting owner or not.”

Id. at 228. In *Lowell v. City of Pendleton*, 123 Or at 404-5, the court recognized that an abutter can object to any use of the street which is incident to public travel if such use interferes with the rights he or she possesses as an abutting property owner. Although abutters rights are generally stated to be subject to the public’s right to use and improve the public road, *Oregon Investment Co. v. Schrunk*, 242 Or 63, 408 P2d 89 (1965), the government cannot close *all* access points enjoyed by a parcel of land without paying just compensation. *State ex rel. Dept. of Transp. v. Alderwoods (Oregon), Inc.*, 358 Or at 516 (citing cases).

Since the subject property has no reasonable alternative access to the street system, any government action to prohibit the applicant from using Day Road for ingress and egress constitutes a taking. *State v. Schoppert*, 82 Or App 311, 314, 728 P2d 80 (1986); *Douglas County v. Briggs*, 34 Or App 409, 578 P2d 1261 (1978), *aff’d*, 286 Or 151, 593 P2d 1115 (1979).

The City of Wilsonville submitted a traffic analysis completed by DKS Associates. Based on the DKS analysis, the city argues that the “locations of the access driveways do not meet the City’s access spacing and sight distance requirements, creating safety issues along SW Day Road.” See letter from City Planning Director dated May 15, 2024, at p. 4. The city makes no effort to explain why the city’s “access spacing and sight distance standards” apply, other than to say that it is the “road authority,” whatever that means. In fact, the referenced standards do not apply.

The “Technical Memorandum” from DKS Associates states that it is quoting Section 4.113.05C of the Wilsonville Development Code (“WDC”). See Technical Memo from DKS Associates dated May 13, 2024, at p. 2. The reference is a typographic error, as the language quoted by DKS is actually found at WDC 4.133.05.C, a section of the WDC that governs an area in the southern part of the city known as the “Wilsonville Road Interchange Area.” The subject property is not located in that area, however, and so it is unclear why DKS cites to code provisions that clearly do not apply.

But that is not the only mistake that DKS makes. DKS also seeks to apply “Table 2.12, Access Spacing Standards, Public Works Standards, City of Wilsonville, 2017.” See Technical Memo from DKS Associates dated May 13, 2024, at p. 3, n3. The subject property is not located in the City of Wilsonville, and the applicant does not propose any construction in city-owned ROW. Therefore, the city’s standards, including their driveway access spacing standards in Table 2.12, do not apply.

CDC 501-8.1(B)(2) does not state that the county review authority should apply city standards. To the contrary, CDC 501-8.1(B)(2) merely requires that the access be “adequate.” Although CDC 501-8.1(B)(1) defines the term “adequate” in relation to certain types of

housing,⁹ the term is left undefined with regard to non-residential land uses. Nonetheless, the CDC also says that the dictionary should be used to define otherwise undefined terms:

106-1.3 Any word or term not herein defined shall be used as defined by "Webster's Third New International Dictionary," copyright 1993, located in the Washington County Department of Land Use and Transportation.

For this reason, we turn to Webster's. Generally speaking, the term "adequate" means "sufficient to meet a need" or "legally sufficient," even if it is "narrowly or barely sufficient." See Webster's Third New International Dictionary, Unabridged (1993) at p. 25. LUBA has affirmed an interpretation of the term "adequate" where it was interpreted to mean "barely sufficient to meet the need." *Dickas v. City of Beaverton*, 17 Or LUBA 578 (1989). Thus, the standard to be applied in this case is a rather low one.

The attached analysis from Lancaster Engineering demonstrates that the County sight distance standards are met. Exhibit 20.

The applicant has met its burden to show that it qualifies for an exception to the requirement that it take access from a local road. The current road is more than adequate to service its needs, despite not being a local road. The "particular inadequate facility" (the city's arterial) is "not necessary for the particular proposal within the time period identified by the service provider." CDC 501-6.1(A).

Although the city complains that there is "inadequate right-of-way," the city uses the wrong measuring stick. In her letter dated May 15, 2024, the Planning Director states:

Additionally, there is inadequate right-of-way along the site frontage to meet the City's Major Arterial right-of-way standards. Without the proper right-of-way dedication, this land use action impedes the City's ability to provide adequate facilities and services to meet the needs of the proposed development and, in the future, to meet anticipated uses in the vicinity of the subject property. The additional vehicle trips generated by on-site modifications have changed the use at the site driveways and at City/County intersections in the vicinity of the site. The increase in trips and expansion of use further exacerbates access spacing and sight distance issues. (Emphasis added).

Id. at p. 4. The applicant does not need an arterial to conduct its operations. It just needs a local road for access. The fact that the city wants an arterial is irrelevant to the approval criterion. As quoted above, the city states that "this land use action impedes the city's ability to provide adequate facilities and services to meet the needs of the proposed development." But this is

⁹ This was done for the purpose of complying with the "clear and objective" requirements set forth in state law pertaining to approval standards for housing.

simply not true. Day Road is already more than adequate to meet the applicant’s needs, as evidenced by the last seven years of operation. In fact, any abutting *local* street would meet the applicant’s need. Because no local road is available, the city and county must provide – and have provided - direct access to the arterial.

The applicant also meets CDC 501-6.1(B), because the approval of the development application will not substantially interfere with the ability of the city to provide any anticipated uses in the vicinity of the subject property with city roads. The city states that “this land use action impedes the City’s ability to provide adequate facilities and services” * * * “to meet anticipated uses in the vicinity of the subject property.” However, the city provides no evidence to prove its point. To the contrary, the city has condemnation authority, and can therefore condemn the requested right-of-way at any time. The applicant is not proposing any development that would make it more expensive to condemn the needed ROW. Moreover, a contractor establishment is exactly the type of interim land use contemplated in the FD-20 zone, and preserves the land for future urbanization.

The city also collects SDCs to widen Day Road, including bike lanes and sidewalks on both sides of the road. The city’s SDC-CIP provides:

City of Wilsonville
 April 2017

Transportation SDC Methodology
 page 17

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
RW-02	Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road intersections	\$10,794,223	Years 5-10	25%	50%	\$1,349,278

Exhibit 8, at p. 17. If the city and county are both collecting SDCs for this project, then why would city staff think that it could demand land dedication and road improvement exactions from landowners? That would constitute double-dipping, or in this case, triple-dipping.

The contractor establishment was established in 2015, and experience on the site has shown that the 2015 approval of the development application without a full arterial-level road width has caused no problems. The current road width has not caused a danger to the public or residents in the vicinity of the subject property. CDC 501-6.1(C).

Finally, there are no “practical methods within the ability of the applicant” to ensure the provision of municipal arterial transportation systems. CDC 501-6.1(D). Even if the applicant built the arterial along its frontage, the remainder of Day Road would still only function at its current capacity.

Therefore, the Hearings Officer should grant an exception to the any requirement that the applicant provide a direct access to a local road, and find that the existing access is adequate to meet the needs to this interim land use.

B. Essential Services.

In accordance with Section 501-8.2 of the Code, the following facilities and services are considered essential:

- ❖ Schools & Police or Sheriff protection
- ❖ Transit agency service and improvements
- ❖ Regional Trails
- ❖ Adequate Level of Arterial and Collector Roads
- ❖ Street Lighting
- ❖ Gravel roads are unacceptable for development within the Urban Growth Boundary
- ❖ On-site pedestrian and bicycle facilities in public ROW
- ❖ Half-Street improvements

We address each of these issues below, except for the “gravel roads” issue, which does not apply.

1. Schools & Police Protection.

The only essential services that can be provided in this case are police protection and street lighting. CDC 501-8.2(A)(1) addresses service provider documentation. It states:

*(1) An applicant shall provide documentation from the appropriate school district, police or sheriff department, transit agency, trail provider and highway department that adequate levels of service are available or will be available to the proposed development within the time-frames required by the service provider. * * * * **

An adequate level of school service is not considered applicable to this development application for a contractor’s establishment because it does not create a need for additional school capacity.

The applicant has provided a new service provider letter from the Washington County Sheriff’s Department establishing that police protection is available to the site. *See* Exhibit 21.

The “transit agency” is Tri-Met. This application does not trigger the need to seek a SPL from Tri-Met because Tri-Met does not provide bus service to Day Road. The City of Wilsonville also operates its own transit agency called SMART Transit, which also does not provide service to Day Road. Adequate levels of transit service are not available and will not be available to the proposed development in the foreseeable future.

The “Highway Department” is ODOT, and this application does not trigger the need to seek a SPL from ODOT because the traffic counts are too low to trigger such analysis.

There is no “Trail Provider” and no trails are planned on or near the subject property.

2. Transit Agency Service

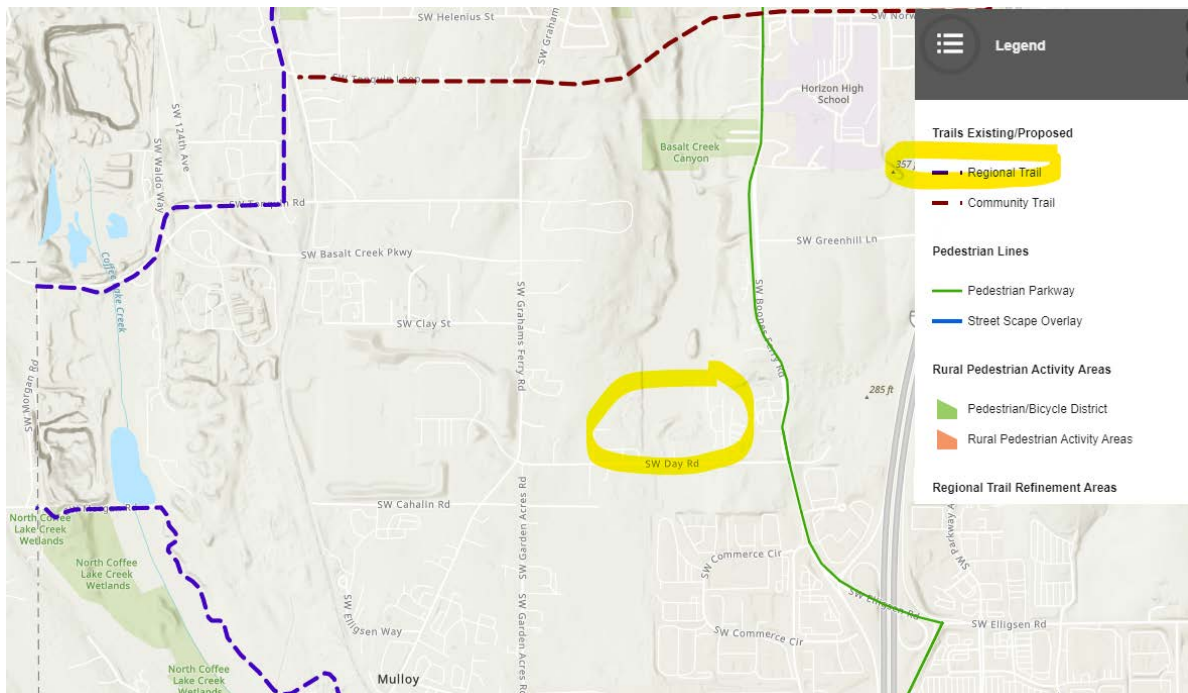
No “transit improvements” exist on Day Road and none are required at this time. As shown on the Preliminary Plans (Application Exhibit A), adjacent property frontages are unimproved and do not provide pedestrian (or roadway) improvements to connect transportation facilities to. The nearest cross street (*i.e.* SW Boones Ferry Road, Arterial facility) is approximately 650 feet to the east. Therefore, this criterion is not triggered.

3. Regional Trails.

CDC 501-8.2(A)(2)(d) addresses regional trails identified on the Transportation System Plan Pedestrian System Map, as follows:

- (i) The applicant shall provide documentation from the current or identified long-term trail provider about needed open space or easement reservations or dedications and/or any necessary improvements for any identified Regional Trail on the Transportation System Plan; and*
- (ii) The applicant shall include in the submitted site plan any open space or easement reservation or dedication area and/or off-street trail, pathway or walkway identified by the trail provider in the documentation provided pursuant to (i) above.*

The site is not burdened by a “Regional trail identified on the Transportation System Plan Pedestrian System Map.” See Exhibit 22.



4. Adequate Level of Arterial and Collector Roads

CDC 501-8.2(B) addresses “adequate level of arterial and collector roads,” as follows:

No development shall be approved without an adequate level of Arterial and Collector roads available to the proposed development in place or assured at the time of occupancy. This requirement is satisfied by payment of the Transportation Development Tax. In addition, payment of the Transportation Development Tax is not an assurance for improvements required by Sections 501-8.2 C. through J.

The applicant will pay the required SDC fee (aka: TDT).

Continuing, CDC 501-8.2(B) further states:

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

- (1) All identified safety improvements within the impact and analysis area (pursuant to Resolution and Order No. 86-95 "Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance - Process Documentation" as modified or updated), shall be constructed prior to occupancy of the development; except that [exception not applicable].*

R&O 86-95 requires the county to distinguish between traffic safety and traffic convenience improvements, a distinction necessary to determine which public improvements must be in place prior to adding vehicle trips to county roads and which improvements may be assured for construction over time. R&O 86-95 provides the process outline to determine if a transportation impact study is required, and the staff analysis required to determine the traffic safety improvements and capacity deficiencies that may be warranted. Since the trip thresholds are not met, an Access Report (a.k.a. Traffic Analysis) was not required, per R&O 86-95. Therefore, the analysis area and safety improvements discussed in R&O 86-95 (as referenced above) are not triggered by this application.

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

- (2) On-site road drainage is adequate to protect the facility. On-site means all lands in the land use application and ½ the right-of-way of existing roads lying adjacent to such lands. **

The applicant is not adding any stormwater to the arterial facility, and therefore, the applicant cannot be required to improve the system. Having said that, it is true that SW Day Road is already improved with curbs, gutters, and subsurface drainage facilities.

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

- (3) Entering sight distance meets standards as specified in "A Policy on Geometric Design of Highways and Streets," American Association of State Highway and Transportation Officials (AASHTO);*

Lancaster Engineering provided a sight distance analysis dated May 30, 2024. Exhibit 20. Lancaster's analysis is intended to supersede any previous sight distance analysis that the applicant submitted with the initial application. Lancaster concluded that sight distance is adequate.

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

- (4) Right-of-way on or adjacent to the frontage property meets Washington County Functional Classification Standards including Streetscape Overlay and Enhanced Major Street Bikeway designations; except that [exception not applicable].*

Neither the city or county have provided *Nollan / Dolan* findings justifying any ROW dedication. No party to this case contests the fact that the access to Day Road is adequate to serve this interim land use.

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

- (5) Access to Arterials and Collectors is in accordance with Section 501-8.5, except that [exception not applicable].*

CDC 501-8.2(5) is discussed below.

In addition to payment of the Transportation Development Tax an applicant shall, at a minimum, assure the following with said assurance provided prior to issuance of a building permit:

(6) *Collectors or Arterials inside the UGB that abut a site and have an existing gravel surface must be brought up to urban standards in accordance with Section 501-8.2 E; except that [exception not applicable].*

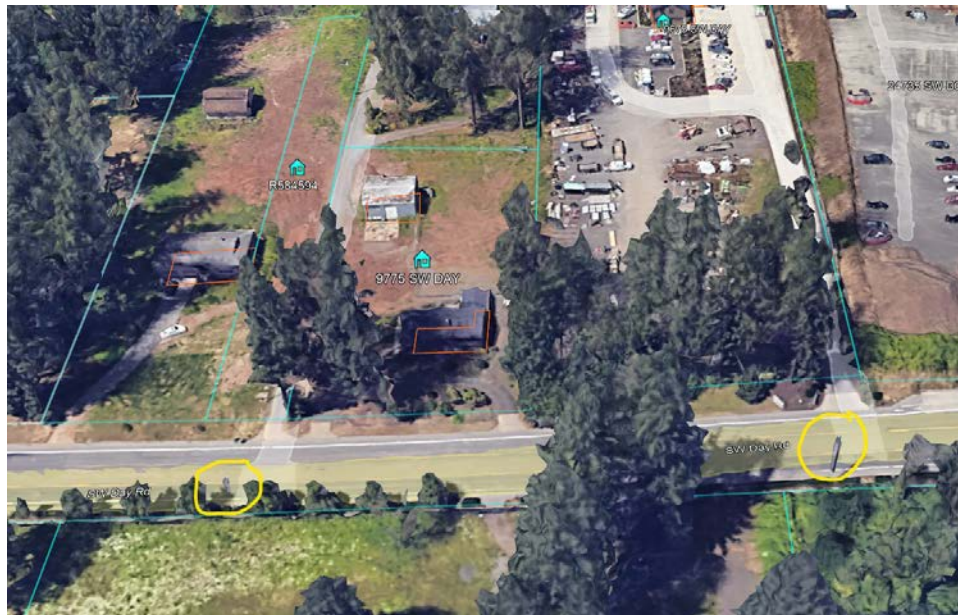
CDC 501-8.2(B) is not applicable.

5. Street Lighting.

CDC 501-8.2(C) is entitled “Street Lighting,” and requires:

For all new Local, Neighborhood Route, Collector and Arterial streets, and half-street improvements an applicant shall provide street lighting consistent with county engineering standards and procedures and the requirements of the electrical utility company providing service to the area. The applicant shall ensure the construction, maintenance and power costs of street light facilities through the annexation and petition for service to an existing county service district for lighting or other funding method approved by the County Engineer. This standard does not apply to [not applicable].

Adequate street lighting is provided on Day Road. There is existing street lighting on the south side of SW Day Road, across from the two (2) access points planned for the contractor’s establishment at 9675 and 9775 SW Day Road. The addresses are shown circled in the Google Earth imagery below.



STREET LIGHTS SHOWN AT BOTH 9675 AND 9775 SW DAY ROAD



9675 SW DAY ROAD



9775 SW DAY ROAD

6. On-site Pedestrian and Bicycle Facilities in the Public Right-of-Way

There are no “on-site pedestrian and bicycle facilities in the public right-of-way” and the county has not provided *Dolan* findings. This is discussed on pages 22-24 of the narrative.

This application for development review involves an industrial use of land and is therefore associated with exception 408-2.1.B(5), above, and does not require the provision of the standards of Section 408-4 through Section 408-9. The subject site is designated FD-20 District and provides an industrial use that is not open to the general public, nor is the vicinity conducive to park and recreation facilities. Considering the nature of this land use, encouraging

pedestrian and bicycle uses through the site is not appropriate. People who visit and/or are employed at the contractor's establishment generally travel in equipment or service vehicles, and generally do not arrive by foot or bicycle, although there is an existing bicycle lane along the site's frontage on SW Day Road. Further, the Washington County Transportation System Plan (TSP) does not identify a future regional or community trail within the project boundaries. Approval of this application will not preclude pedestrian facilities from being constructed in the future, at the time ultimate transportation improvements are implemented.

Section 408-10 Internal Pedestrian Connection Design. The site currently operates as a contractor's establishment that will remain industrial in nature and is generally not open to the public; permanent sidewalk improvements are not desired as the majority of the site will remain graveled for the storage of heavy equipment and materials. As shown on the Preliminary Plans (Exhibit A), the property is currently improved with a ± 20 -foot-wide concrete driveway extending from SW Day Road to the existing and future buildings on-site, which provides sufficient connection for pedestrians and vehicles. There are no existing sidewalks along the north side of SW Day Road within over 500 feet to the east or west of the site. Use of the site is not intended for public use or pedestrians, and thus, connections through the site are not required or provided. Further, adjacent properties are similar in nature and do not provide transportation facilities (i.e. sidewalks) for connection. For these reasons, an internal pedestrian route is not necessary, but can be provided if required by the county.

Section 408-10.3 Pedestrian Connection Design. This project involves construction of a new open-air structure intended to be used for outdoor storage for an existing contractor's establishment. A reduction in the number of pedestrian connections is not proposed because none are specifically required pursuant to CDC 408-10.1. This site is industrial in nature and is not open to the public. Authorized persons who enter the site will typically do so by traveling in company trucks/vehicles. The subject site is within the UGB and has frontage along SW Day Road, an Arterial roadway under City of Wilsonville jurisdiction. A pedestrian connection at this location will not decrease out of direction travel from the street, as there are no sidewalks, transit stops, or pedestrian crossings in the vicinity. As shown on the Preliminary Plans (Exhibit A), adjacent property frontages are unimproved and do not provide pedestrian (or roadway) improvements to connect transportation facilities to. The nearest cross street (i.e. SW Boones Ferry Road, Arterial facility) is approximately 650 feet to the east. Therefore, this criterion is not relevant.

Section 408-11 Community Plan Ped Connectivity. The subject site is designated within Area of Special Concern 5 (ASC 5) on the Comprehensive Framework Plan (CFP) for the Urban Area and is not associated with an additional community plan. Further, the site is identified on Washington County CFP Future Development Area Maps A, B, and C, although pedestrian connectivity areas are not detailed. Lastly, as shown on the Preliminary Plans (Exhibit A), adjacent property frontages do not provide pedestrian facilities (sidewalks) to connect to. Therefore, the provisions above are not applicable.

7. Half Street Improvement.

CDC 501-8.2(G) states:

G. A half-street improvement shall be constructed along the site's frontage of existing Collector and Arterial roads which abut the site and are not improved in accordance with the Washington County Transportation System Plan and Road Design and Construction Standards. This standard does not apply to [exception not applicable].

The City of Wilsonville cites to this standard in support of their argument that the applicant is required to build Day Road to arterial standards. *See* letter from City Planning Director dated May 15, 2024, at p. 4. The applicant objects to this requirement on the grounds that the application of CDC 501-8.2(G) is unconstitutional as applied to this case. *See Nollan v. California Coastal Comm'n*, 48 US 825, 831-32, 107 SCt 3141 (1987); *Dolan v. City of Tigard*, 512 US 374, 384, 114 SCt 2309 (1994); *Koontz v. St. Johns River Water Management Dist.*, 570 US 595, 133 SCt 2586 (2013).

The fact that a zoning code may *legislatively* require the improvements is immaterial to the *Nollan / Dolan* analysis. For example, in *Carver v. City of Salem*, 42 Or LUBA 305 (2002), *aff'd w/o op.*, 184 Or App 503 (2002), LUBA held that a landowner's choice to seek development in an area with inadequate public facilities, rather than wait an indefinite period of time until the local government or another developer provides the missing facilities, does not constitute a voluntary waiver of the landowner's rights under the Takings Clause, or otherwise allow the county or city to impose an exaction of land to provide the missing facilities, without satisfying *Dolan's* rough proportionality test.

Similarly, in *Hill v. City of Portland*, 293 Or App 283 428 P3d 986 (2018), the City of Portland imposed a condition requiring the landowner to dedicate a two- to seven-foot-wide right-of-way along the site's frontage along SE 122nd Avenue to accommodate future street improvements. The City of Portland defended this exaction by pointing out, correctly, that their code standards demanded such exactions by creating road standards. The Court of Appeals held that this exaction was subject to the *Nollan / Dolan* test. The court found that the City of Portland could not sidestep *Nollan / Dolan* by merely legislatively incorporating the desired exactions into the Development Code.

Thus, in this case, the county and city cannot evade *Nollan's* requirement that it demonstrate that the impacts of a particular proposal "substantially impede" a legitimate governmental interest (so as to permit the denial of a permit outright), simply by defining approval criteria that do not take into account a proposal's impacts. *See Koontz*, 570 US at 606-07 (rejecting notion that a government can evade the requirements of *Nollan* and *Dolan* through artful phrasing).

Both LUBA and Oregon courts have held that a local government must either disregard or modify its own standards if that is the only way to avoid violating *Nollan / Dolan*. *See Dudek*

v. Umatilla County, 42 Or LUBA 427 (2002), *aff'd*, 187 Or App 504, 69 P3d 751 (2003); *Gensman v. City of Tigard*, 29 Or LUBA 505, 515 (1995). *See also Lincoln City Chamber of Commerce v. City of Lincoln City*, 164 Or App 272, 991 P2d 1080 (1999) (the city may adopt rules that exceed “rough proportionality” for some land use applicants because city will apply rules only if they are “roughly proportional.”).

Both county staff and the city declined to prepare the required *Nollan/Dolan* findings. *See* letter from City Planning Director dated May 15, 2024, at p. 4. CDC 501-8.2(G) cannot be applied to this applicant in the absence of such findings.

IV. Contested Conditions.

As requested, staff and the applicant resolved more of the issues that the applicant identified with the proposed conditions set forth in the staff report. We very much appreciate staff's efforts to reach consensus on these issues. Only six of staff's proposed conditions remain problematic.

In our meeting with staff on April 25th, 2024, county staff made a point about using CDC 207-5.1 as authority to impose conditions on the applicant. We reviewed that provision and have some concerns / objections to how it is being used. To recap, CDC 207-5.1 provides:

207-5.1 The Review Authority may impose conditions on any Type II or III development approval. Such conditions shall be designed to protect the public from potential adverse impacts of the proposed use or development or to fulfill an identified need for public services within the impact area of the proposed development. Conditions shall not restrict densities to less than that authorized by the development standards of this Code.

At the outset, we wish to clarify that we do not take issue with the unremarkable principle that the county possesses the general authority to impose conditions of approval on a land use approval. *See SkyDive Oregon, Inc. v. Clackamas County*, 122 Or App 342, 857 P2d 879 (1993); *Von Clemm v. City of Portland*, 66 Or LUBA 379, 383-84 (2012). However, CDC 207-5.1 is not an independent approval standard. Rather, it is both a delegation of authority and a limitation on the delegation. The distinction is important.

Where a problem arises is if the review authority tries to use CDC 207-5.1 to create what amounts to a new approval standard or a modification of an existing standard. For example, if the code sets forth a 10-foot setback, CDC 207-5.1 cannot be used as authority to impose a 20-foot setback under the guise of “protect[ing] the public from potential adverse impacts of the proposed use.” ORS 215.427(1)-(3). LUBA and the courts have often stated that a local government cannot interpret its code in a manner that amounts to a *de-facto* amendment of its language. *1000 Friends of Oregon v. Wasco County Court*, 299 Or 344, 703 P2d 207 (1985) (LCDC interpretation overturned as *de facto* amendment of its own rule). “To amend legislation *de facto* or to subvert its meaning in the guise of interpreting it is not a permissible exercise.” *Goose Hollow Foothills League v. City of Portland*, 117 Or App 211, 843 P2d 992, 995 (1992);

Von Lubken v. Hood River County, 104 Or App 683, 803 P2d 750 (1990), *on recons*, 106 Or App 226, *rev den*, 311 Or 349 (1991). The same holds true for conditions of approval.

Thus, the quoted code language should be read as a limitation, which is to say that any condition which does not “protect the public from potential adverse impacts of the proposed use” violates CDC 207-5.1. *See generally Applebee v. Washington County*, 54 Or LUBA 364, 401-2 (2007) (rejecting county’s argument that interprets CDC 207-5.1 as providing authority to impose conditions unrelated to the impacts of the proposed development, but rather for the purpose of addressing alleged code violations related to an unrelated permit). A condition needs to be tied to an actual approval standard independent of CDC 207-5.1.

In *KB Trees v. Washington County*, 81 Or LUBA 325 (2020), LUBA rejected the argument that CDC 207-5.1 imposed a duty upon the review authority to impose conditions on an applicant. LUBA noted that the petitioners argued that a condition that the hearings officer imposed was inadequate because it does not “protect the public from potential adverse impacts of the proposed use,” within the meaning of CDC 207-5.1.” Although LUBA’s precise reasoning for rejecting petitioner’s argument is not entirely clear from the opinion, it is clear that LUBA did not treat CDC 207-5.1 as an independent approval standard, as the petitioner in that case clearly desired.

Thus, it is important that the county tie any condition of approval to an actual substantive approval criterion. That is not to say that substantive approval criteria exist in this case on which a condition of approval can be based. Our point is merely that the path taken is as important as the destination.

With that in mind, we turn to the contested conditions:

A. Proposed Condition II(A).

A. Obtain a Grading Permit from the Washington County Building Services Division. The Grading Permit application must follow the grading submittal package checklist from the Building Services Division.

NOTE: *Revise the grading plans to reflect no disturbance through either grading or fill in the area of Tax lot 303 north of the east-west lot line between Tax Lots 306 and 309. Additionally, revise the grading plans to reflect no encroachment on Tax Lot 311 west of the west facade of the existing dwelling on site as of the date of this staff report.*

Applicant Response to Proposed Condition: Proposed condition of approval II(A) attempts to prohibit the applicant from using a large portion of its property under the guise of protecting “significant natural resources.” The staff report states:

Section 422 Significant Natural Resources

STAFF: The Comprehensive Framework Plan for the Urban Area (CFP) indicates the presence of significant natural resources on the subject site. Policy 41 of the CFP describes the area in the vicinity of the site as containing Significant Natural Areas and Natural Resource areas (Water Areas and Wetlands and Fish and Wildlife Habitat). The Significant Natural Area consists of the Tonquin Scablands. In staff's review of Casefile L1400431-D(IND), which covered the original Contractor's Establishment and tax lot 3S102B000309, staff found that Significant Natural Areas and Natural Resource areas (Water Areas and Wetlands and Fish and Wildlife Habitat) were not present on tax lot 3S102B000309.

The applicant included an assessment of the new lots and found that wetlands and Title 13 Riparian Resources are present generally along the western part of three of the added lots (see Figure 7 of Attachment D of the application). The assessment concluded that none of the proposed site grading or tree removal encroaches within the mapped wetlands and Title 13 Riparian resources (see Figure 8 of Attachment D of the application). At such time as the site is annexed into the City of Wilsonville subsequent development of the property would be subjected to Wilsonville's significant resource protection regulations (Vegetative Corridors are not currently required since the site is not within the CWS service district boundary). However, in order to ensure adequate protection of the existing wetlands and Title 13 Riparian resources and to minimize impacts on adjacent residential uses to the north and west at this time, staff recommends the following Conditions of Approval:

Revise the grading plans to reflect no disturbance through either grading or fill in the area of Tax lot 303 north of the east-west lot line between Tax Lots 306 and 309. Additionally, revise the grading plans to reflect no encroachment on Tax Lot 311 west of the west facade of the existing dwelling.

Said Recommended Conditions of Approval pursuant to Section 207-5.1 are intended to protect the public from potential adverse impacts of the proposed use or development on the wetlands. Due to the large acreage of the development site, staff does not find that the reduced grading resulting from the above two Recommended Conditions of Approval will adversely impact the ability to develop the site in a manner commensurate with the need for expansion. A large percentage of the site can be grading to support the needed business expansion while at the same time ensuring minimized impacts on the natural environment and nearby residences.

The assessment also concluded that the geologic features characteristic of the designated Significant Natural Area (i.e., Tonquin Scablands Geologic Area) were not present on the development site. The applicant further concluded that the proposed site grading (i.e., surface level site improvements) will not result in impacts to the unique geological characteristics of the area. This is due in large part to the fact that very little removal (cut) of earthen material will be required to develop the site. Rather, fill material will be brought on site to provide a level expansion area. Consequently, staff does not anticipate that the existing geological substrate will be adversely impacted (altered) given that the expanded parking and storage areas shall be leveled with pervious gravel, lessening impacts to the areas geological resource.

Based on this assessment the applicant concluded that the

“planned site improvements shown on the Preliminary Plans (Exhibit A) and the Natural Resource Assessment (Exhibit D) will provide preservation of natural resources in accordance with Section 422.”

Staff concurs with the applicant's assessment and find that the proposed development does not impact or otherwise encroach within the wetlands and Title 13 Riparian Resources. However, as stated above, slight modifications to site grading are needed to further protect the natural resources as well to protect the abutting residences from potential impacts of the grading as originally proposed. The standards of Section 422 are met.

See staff report at p. 18-19.

As an initial matter, the applicant has proposed to regrade only portions of the property that are not regulated as “Natural Resource areas.” The Staff report attempts to impose the condition as a necessary means for protecting the “existing wetlands and Title 13 Riparian resources,” but the staff report does not provide any scientific explanation for this conclusion. Ironically, the location of land staff seeks to “protect” from development reveals to the real reason for the proposed condition: it is simply being done to appease the McClendon family. There is no nexus between the goals of CDC 422 and the land sought to be regulated. If the true objective of the condition was to protect the wetlands, the condition would be written so as to apply existing code standards in a manner that creates a buffer between the wetland and the land sought to be regraded. But the condition does not operate in any such logical manner. Instead, the condition is designed to make the northern portion of TL 303 and 311 a *de-facto* extension of the McClendon family's backyard. This is simply not an acceptable application of CDC 422. The proposed condition is arbitrary and capricious and serves no legitimate governmental purpose.

At our meeting with staff, we were asked why Brown Contracting needed so much room for the contractor establishment. As we understood the concern, staff did not want Brown Contracting to unnecessarily antagonize the McClendon family by using portions of TL 303 that were highly visible to McClendon, particularly if that land was not needed to conduct their operations. The applicant does not seek to antagonize the McClendon family. To the contrary, the applicant has taken extraordinary steps to reduce conflicts with its neighbors. Nonetheless, this is a neighborhood in transition to urban uses of land, and Brown Contracting seeks to use as much of the property that is feasible for the contractor establishment. The northern portion of TL 303 is relatively flat and is ideal for use as long term storage space. This area would be used for items that are needed less frequently, and hence, there would not be as much activity in this area. The applicant is making great effort to place the noisier aspects of its operations as far south as possible. The applicant is willing to provide screening as a mechanism to reduce impacts.

Land appropriately zoned and priced for contractor establishments is rare in Oregon. Usually, zoning codes allow them on some urban industrial lands and urban commercial lands. However, contractor establishments do not typically need urban services such as municipal water and sewer, making these uses a waste of precious urban industrial and urban commercial land. Moreover, contractors usually cannot afford to pay for urban industrial or commercial land when they are essentially seeking to use that land as a glorified parking lot or storage area.

On the other hand, neither EFU, forest, nor rural residential lands allow contractor establishments. Rural commercial and rural industrial land do allow such uses, and would conceptually be the ideal location for such uses. However, rural commercial and rural industrial land is very scarce by design. Rural industrial and rural commercial zoning designations were typically only applied to land that supported such uses at the time of initial zoning, and therefore opportunities to buy such lands are few and far between. Small scale contractor establishments operations can sometimes be permitted as home occupations in rural residential zones, but home occupation permits are often difficult to obtain, and contractors usually outgrow the conditions of the permit in short order. Thus, Oregon land use laws work against contractor establishments, despite the fact that the construction industry is a key driver of economic growth in the state.

We respectfully ask that the hearings officer not impose proposed condition IIA.

B. Proposed Condition II(A)(1)-(3).

A. Complete the following items through the City of Wilsonville:

1. Any construction work done within the existing and proposed additional right-of-way shall need to be constructed in conformance with the City's Public Works Standards and done under a City of Wilsonville Public Works Permit, available through the City Engineering Division. Please submit plans of proposed construction within the right-of-way for review by engineering staff; plan review fee is 2% of the engineer's estimate and Public Works Permit fee is an additional 5% of the engineer's estimate.

2. Dedicate additional right-of-way along the SW Day Road frontages of Tax Lots 3S102B000309, 3S102B000310, 3S102B000302, and 3S102B000311 required to provide 53.5 feet from centerline for the City's Arterial designation.
3. Record any necessary bicycle and pedestrian easements within the SW Day Road right-of-way with the city of Wilsonville.

Applicant Response to Proposed Condition: These proposed conditions are based on requests from the City of Wilsonville. The applicant objects to any condition that requires it to interact with the City of Wilsonville in any manner, other than the ROW permit for construction access. As mentioned elsewhere in this letter, any demand to “dedicate additional right-of-way along the SW Day Road” to bring the road up to full major arterial standard requires *Nollan / Dolan* findings. The same is true for the requested “bicycle and pedestrian easements.” The city has not provided the necessary findings, and does not appear to even understand how to conduct the required analysis. The applicant has no intention of dedicating anything to Wilsonville, nor does the applicant intend to conduct any construction work in city of Wilsonville ROW other than construction access.

Frankly, the “bicycle and pedestrian easement” condition does not make any sense, because if these easements are required to be located “within the SW Day Road right-of-way,” then an easement is redundant. After all, when used in this context, the term “right-of-way” is nothing more than an easement granted in favor of the public.

C. Proposed Condition III(B)(4).

Planting plans for a landscape buffer consisting of evergreen shrubs (e.g., arborvitae) having a minimum height of six feet at maturity along the west property line of Tax Lot 311 in a manner that does not interfere with intersection sight distance standards for nearby driveways and shall otherwise extend from the right-of-way north to the wetland boundary.

Applicant Response to Proposed Condition: We were initially supportive of the provision of arborvitae along the western property line. However, after a recent site visit and a visit with our neighbor to the west, Patti Kief, we are of the opinion that a full row of arborvitae along the entire west property line would be pointless. She submitted a letter into the record. Exhibit 26. The applicant will make efforts to buy this property in the future. As shown in photographs we took dated May 24, 2024, Exhibit 24, photos 10-23, the boundary between TL 311 and TL 312 is already heavily vegetated in most places, especially near the dwelling on TL 312. Arborvitae would not likely survive in that area due to the heavy tree canopy. We would be amenable to providing a six-foot-tall sight obscuring fence as an alternative.

//

D. Proposed Condition III(B)(5)

- i. Obtain a building permit for the fence located north of the existing shop buildings on Tax Lot 309. The fence is limited to a maximum height of seven feet, unless either a Type II Adjustment (formerly Hardship Relief Variance) or a Type III Variance (for greater than a 20% increase in height) is applied for and approved to allow fence height over seven feet.

Applicant Response to Proposed Condition: This is a condition requiring a building permit and variance for the proposed sound wall. The applicant does understand that a variance and building permit are required. The concern is that the permitting will be complicated from a building code and engineering standpoint. For this reason, the applicant seeks to decouple proposed condition III(B)(5) from the rest of the approval by moving the condition to Section VII. That way, it moves forward on its own timeline and process, rather than tying up the remainder of the approval. Right now, the condition is in Section III, which requires it to be completed “prior to final approval....” This will delay progress unnecessarily.

E. Proposed Condition III(B)(9).

9. Completed Service Provider Letter information from the City of Wilsonville for transportation.

Applicant Response to Proposed Condition: The CDC does not require the applicant to obtain a “Service Provider Letter” (“SPL”) from the City of Wilsonville for transportation. With regard to critical services, CDC 501-8.1 requires an applicant proposing development to obtain SPLs for water, sewer, and fire protection. CDC 501-8.2(A)(1) addresses service provider documentation for essential services. It states:

*(1) An applicant shall provide documentation from the appropriate school district, police or sheriff department, transit agency, trail provider and highway department that adequate levels of service are available or will be available to the proposed development within the time-frames required by the service provider. * * * * **

Wilsonville is not a school district, police agency, transit agency, trail provider, or highway department. Therefore, no SPL is required from Wilsonville pertaining to transportation. The code does not appear to tie adequate levels of Arterial and Collector Roads to a service provider letter requirement. County staff can determine “adequacy” using the county code.

CDC 203-4(N) has a requirement for “city coordination letter,” which is different than a SPL. CDC 203-4(N) states:

203-4 Application

...

N. For Standard Land Divisions and development actions subject to Type II or III Development review on lands within a City Coordination Area (see map(s) on file with Current Planning), documentation from the appropriate city that ensures early coordination has occurred and confirms the City was informed of the pending application and was provided the opportunity to communicate regarding connection to city services. Changes of use that do not propose any new structures are exempt from this requirement. The documentation shall be no more than 180 days old.

According to staff, the “City Coordination Area maps” don’t actually exist. See Exhibit 25. That aside, CDC 203-4(N) is where the “City Coordination Letter” comes from. The UPAA has similar coordination language. See Exhibit 3. However, the County did not mark this requirement as necessary at the pre-app, and thus, we did not send a request.

In light of this, we respectfully request that the Hearings Officer omit Condition III B(9) in its entirety.

F. Proposed Condition IV(C)

- C. Complete all required on-site improvements, including but not limited to planting plans for a landscape buffer consisting of evergreen shrubs (e.g., arborvitae) having a minimum height of six feet at maturity along the west property line of Tax Lot 311 and obtain final sign-off by Project Planner, Paul Schaefer. Please contact staff a minimum of 48 hours in advance of the requested final Current Planning inspection.

Applicant Response to Proposed Condition: For the reasons stated above, we ask that the Hearings Officer omit or modify this condition as well.

V. Conclusion.

We thank the Hearings Officer for taking the time to review this case.

Sincerely,

VF Law

/s/ *Andrew H. Stamp*

Andrew H. Stamp

AHS/nbro
Enclosure
cc: Client
AKS Engineering & Forestry, LLC

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE) ORDINANCE NO. 04-1040B
METRO URBAN GROWTH BOUNDARY, THE)
REGIONAL FRAMEWORK PLAN AND THE)
METRO CODE TO INCREASE THE CAPACITY)
OF THE BOUNDARY TO ACCOMMODATE)
GROWTH IN INDUSTRIAL EMPLOYMENT) Introduced by the Metro Council
)

WHEREAS, by Ordinance No. 02-969B (For The Purpose Of Amending The Urban Growth Boundary, The Regional Framework Plan And The Metro Code In Order To Increase The Capacity Of The Boundary To Accommodate Population Growth To The Year 2022), the Council amended Title 4 (Industrial and Other Employment Areas) of the Urban Growth Management Functional Plan to increase the capacity of industrial land to accommodate industrial jobs; and

WHEREAS, the Metro Council adopted an Employment and Industrial Areas Map as part of Title 4 (Retail in Employment and Industrial Areas) in Ordinance No. 96-647C (For the Purpose of Adopting a Functional Plan for Early Implementation of the 2040 Growth Concept) on November 21, 1996; and

WHEREAS, the Council amended the Regional Framework Plan (RFP) by Exhibit D to Ordinance No. 02-969B (For the Purpose of Amending the Metro Urban Growth Boundary, the Regional Framework Plan and the Metro Code in Order to Increase the Capacity of the Boundary to Accommodate Population Growth to the Year 2022), adopted on December 5, 2002, to establish a new 2040 Growth Concept design type entitled“Regionally Significant Industrial Area”(RSIA) and to add Policies 1.4.1 and 1.4.2 to protect such areas by limiting conflicting uses; and

WHEREAS, by Exhibit F to Ordinance No. 02-969B the Council amended Title 4 (Industrial and Other Employment Areas) of the Urban Growth Management Functional Plan (“UGMFP”) to implement Policies 1.4.1 and 1.4.2 of the RFP; and

WHEREAS, by Exhibit E of Ordinance No. 02-969B the Council adopted a“Generalized Map of Regionally Significant Industrial Areas”depicting certain Industrial Areas that lay within the UGB prior to its expansion as part of Task 2 of periodic review as RSIA’s; and

WHEREAS, Title 4 calls upon the Council to delineate specific boundaries for RSIA's derived from the "Generalized Map of Regionally Significant Industrial Areas" after consultation with cities and counties; and

WHEREAS, by Ordinance No. 02-969B, the Council added capacity to the UGB but did not add sufficient capacity to accommodate the full need for land for industrial use; and

WHEREAS, the Metro Council submitted Ordinance No. 969B, in combination with other ordinances that increased the capacity of the UGB, to the Land Conservation and Development Commission (LCDC) as part of Metro's periodic review of the capacity of its UGB; and

WHEREAS, on July 7, 2003, LCDC issued its "Partial Approval and Remand Order 03-WKTASK-001524" that approved most of the Council's decisions, but returned the matter to the Council for completion or revision of three tasks: (1) provide complete data on the number, density and mix of housing types and determine the need for housing types over the next 20 years; (2) add capacity to the UGB for the unmet portion of the need for land for industrial use; and (3) either remove tax lots 1300, 1400 and 1500 in Study Area 62 from the UGB or justify their inclusion; and

WHEREAS, the Council completed its analysis of the number, density and mix of housing types and the need for housing over the planning period 2002-2022 and incorporated its conclusions in a revision to its Housing Needs Analysis; and

WHEREAS, the Council increased the capacity of the UGB both by adding land to the UGB and by revising the Regional Framework Plan and Title 4 of the UGMFP to meet the previously unmet portion of the need for land for industrial use; and

WHEREAS, a change in design type designation of a portion of Study Area 12 added to the UGB on December 5, 2002, by Ordinance No. 02-969B from residential to industrial will help the region accommodate the need for industrial use without reducing the region's residential capacity below the region's residential need; and

WHEREAS, the Council decided to remove tax lots 1300, 1400 and 1500 in Study Area 62 from the UGB; and

WHEREAS, the Council consulted its Metropolitan Policy Advisory Committee and the 24 cities and three counties of the metropolitan region and considered comments and suggestions prior to making this decision; and

WHEREAS, prior to making this decision, the Council sent individual mailed notification to more than 100,000 households in the region and held public hearings on Title 4 and the efficient use of industrial land on December 4 and 11, 2003, public workshops at six locations around the region in March, 2004, on possible amendments to the UGB, and public hearings on the entire matter on April 22 and 29, May 6, [May 27](#), and June 10 and 24, 2004; now, therefore

THE METRO COUNCIL HEREBY ORDAINS AS FOLLOWS:

1. Policy 1.12 of the Regional Framework Plan is hereby amended, as indicated in Exhibit A, attached and incorporated into this ordinance, to guide the choice of farmland for addition to the UGB when no higher priority land is available or suitable.
2. Title 4 (Industrial and Other Employment Areas) of the Urban Growth Management Functional Plan is hereby amended, as indicated in Exhibit B, attached and incorporated into this ordinance, to improve implementation of Title 4 by cities and counties in the region.
3. The Employment and Industrial Areas Map is hereby amended, as shown in Exhibit C, attached and incorporated into this ordinance, to depict the boundaries of Regionally Significant Industrial Areas pursuant to Policy 1.4.1 of the Regional Framework Plan in order to ensure more efficient use of the areas for industries reliant upon the movement of freight and to protect the function and capacity of freight routes and connectors in the region.
4. The Revised Housing Needs Analysis, January 24, 2003, is hereby further revised, as indicated in Exhibit D, Addendum to Housing Needs Analysis, April 5, 2004, attached and incorporated into this ordinance, to comply with the first item in LCDC's "Partial Approval and Remand Order 03-WKTASK-001524."
5. The Metro UGB is hereby amended to include all or portions of the Study Areas shown on Exhibit E [with the designated 2040 Growth Concept design type, and more precisely identified in the Industrial Land Alternative Analysis Study, February, 2004, Item \(c\) in Appendix A](#), subject to the conditions set forth in Exhibit F, and to exclude tax lots 1300, 1400 and 1500 in Study Area 62 ~~and the southeast portion of Study Area 9 from the UGB~~, also shown on Exhibit E and more precisely identified in the Staff Report, "In Consideration of Ordinance No. 04-1040, For the Purpose of Amending the Metro Urban Growth Boundary, the Regional Framework Plan and the Metro Code to increase the capacity of the Boundary to Accommodate Growth in Industrial Employment", Item (a) in Appendix A. Exhibits E and F are attached and incorporated into this ordinance to comply with the second and third items in LCDC's "Partial Approval and Remand Order 03-WKTASK-001524."

6. Ordinance No. 02-969B is hereby amended to change the 2040 Growth Concept design type designation for that 90-acre portion of Study Area 12 that projects from the rest of the study area to the southeast along Highway 26 from 'Inner Neighborhood' to 'Regionally Significant Industrial Area.'

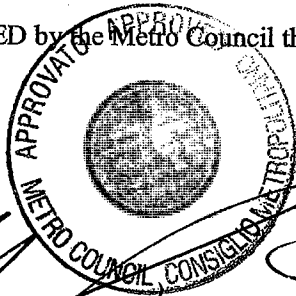
67. The Appendix, attached and incorporated into this ordinance, is hereby adopted in support of the amendments to the UGB, the Regional Framework Plan and the Metro Code in sections 1 through 3 of this ordinance. The following documents comprise the Appendix:

- a. Staff Report, 'In Consideration of Ordinance No. 04-1040, For the Purpose of Amending the Metro Urban Growth Boundary, the Regional Framework Plan and the Metro Code to increase the capacity of the Boundary to Accommodate Growth in Industrial Employment', April 5, 2004.
- b. 2002-2022 Urban Growth Report: An Employment Land Need Analysis, June 24, 2004 Supplement.
- c. Industrial Land Alternative Analysis Study, February, 2004.
- d. Measure 26-29 Technical Report: Assessment of the Impacts of the June, 2004, UGB Expansion on Property Owners.
- e. Industrial Land Expansion Public Comment Report, March, 2004.
- f. 'An Assessment of Potential Regionally Significant Industrial Areas', memorandum from Mary Weber to Dick Benner, October 21, 2003.
- g. 'Recommended Factors for Identifying RSIA's', memorandum from Mary Weber to MTAC, June 30, 2003.
- h. 'Slopes Constraints on Industrial Development', memorandum from Lydia Neill to David Bragdon, November 25, 2003.
- i. 'Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use', prepared by the Metro Agricultural Lands Technical Workgroup, April, 2004.
- j. 'Technical Assessment of Reducing Lands within Alternatives Analysis Study Areas', memorandum from Lydia Neill to David Bragdon, October 30, 2003.
- k. Agriculture at the Edge: A Symposium, October 31, 2003, Summary by Kimi Iboshi Sloop, December, 2003.
- m. 'Industrial Land Aggregation Methodology, Test and Results', memorandum from Lydia Neill to David Bragdon, September 24, 2003.
- n. 'Industrial Areas Requested by Local Jurisdictions', memorandum from Tim O'Brien to Lydia Neill, July 29, 2003.

- o. 'Industrial Land Locational and Siting Factors', memorandum from Lydia Neill to David Bragdon, June 9, 2003.
- p. 'A Review of Information Pertaining to Regional Industrial Lands', memorandum from Dick Benner to David Bragdon, January 26, 2004.
- q. Map of Freight Network and Freight Facilities, Metro, November, 2003.
- r. 'Evaluating the Industrial Land Supply with Projected Demand', memorandum from Lydia Neill to David Bragdon, May 14, 2003.
- s. 'Identifying 2003 Industrial Land Alternatives Analysis Study Areas', memorandum from Tim O'Brien to Lydia Neill, July 9, 2003.
- t. 'For the Purpose of Reducing the Land Under Consideration in the 2002 and 2003 Alternatives Analysis for Meet the Remaining Need for Industrial Land through Urban Growth Boundary Expansion', Staff Report, November 18, 2003.
- u. 'Formation of Industrial Neighborhoods', memorandum from Lydia Neill to David Bragdon, October 24, 2003.
- v. 'Developed Lots 5 Acres and Smaller Outside the UGB', memorandum from Amy Rose to Lydia Neill, November 18, 2003.
- w. 'Employment Land Included in the 2002 Urban Growth Boundary Expansion', memorandum from Andy Cotugno to David Bragdon, March 10, 2003.
- x. 'Identifying Additional Land for Industrial Purposes', memorandum from Tim O'Brien to Lydia Neill, March 7, 2003.
- y. Staff Report, 'In Consideration of Ordinance No. 04-1040B, For the Purpose of Amending the Metro Urban Growth Boundary, the Regional Framework Plan and the Metro Code to increase the Capacity of the Boundary to Accommodate Growth in Industrial Employment', June 21, 2004.

78. The Findings of Fact and Conclusions of Law in Exhibit G, attached and incorporated into this ordinance, explain how this ordinance complies with state law, the Regional Framework Plan and the Metro Code.

ADOPTED by the Metro Council this 24th day of June, 2004.



[Signature]
 David Bragdon, Council President

ATTEST:

Approved as to Form:

[Signature]
 Christina Billington, Recording Secretary

[Signature]
 Daniel B. Cooper, Metro Attorney

Exhibit A to Ordinance No. 04-1040B

**REGIONAL FRAMEWORK PLAN POLICY 1.12
Protection of Agriculture and Forest Resource Land**

~~1.12.1.1.1~~ Agricultural and forest land outside the UGB shall be protected from urbanization, and accounted for in regional economic and development plans, consistent with this Plan. However, Metro recognizes that all the statewide goals, including Statewide Goal 10, and Goal 14, Urbanization, are of equal importance to Goals 3 and 4, which protect agriculture and forest resource lands. These goals represent competing and, some times, conflicting policy interests which need to be balanced.

~~1.12.1 Rural Resource Lands~~

~~Rural resource lands outside the UGB that have significant resource value should actively be protected from urbanization. However, not all land zoned for exclusive farm use is of equal agricultural value.~~

1.12.2 When the Council must choose among agricultural lands of the same soil classification for addition to the UGB, the Council shall choose agricultural land deemed less important to the continuation of commercial agriculture in the region.

~~1.12.2 Urban Expansion~~

~~Expansion of the UGB shall occur in urban reserves, established consistent with the urban rural transition objective. All urban reserves should be planned for future urbanization even if they contain resource lands.~~

1.12.3 Metro shall enter into agreements with neighboring cities and counties to carry out Council policy on protection of agricultural and forest resource policy through the designation of Rural Reserves and other measures.

~~1.12.3 Farm and Forest Practices~~

~~Protect and support the ability for farm and forest practices to continue. The designation and management of rural reserves by the Metro Council may help establish this support, consistent with the Growth Concept. Agriculture and forestry require long term certainty of protection from adverse impacts of urbanization in order to promote needed investments.~~

1.12.4 Metro shall work with neighboring counties to provide a high degree of certainty for investment in agriculture in agriculture and forestry and to reduce conflicts between urbanization and agricultural and forest practices.

Exhibit B to Ordinance No. 04-1040B

TITLE 4: INDUSTRIAL AND OTHER EMPLOYMENT AREAS

3.07.410 Purpose and Intent

A. The Regional Framework Plan calls for a strong economic climate. To improve the region's economic climate, **[the plan] Title 4** seeks to **provide and** protect **[the] a** supply of sites for employment by limiting **[incompatible uses within] the types and scale of non-industrial uses in Regionally Significant Industrial Areas (RSIAs)**, Industrial Areas and Employment Areas. **Title 4 also seeks to provide the benefits of "clustering" to those industries that operate more productively and efficiently in proximity to one another than in dispersed locations. Title 4 further seeks [T]to** protect the capacity and efficiency of the region's transportation system for **the** movement of goods and services, and to **[promote the creation of jobs within designated Centers and discourages certain kinds of commercial retail development outside Centers] encourage the location of other types of employment in Centers, Employment Areas, Corridors, Main Streets and Station Communities.** **[It is the purpose of Title 4 to achieve these policies.] The Metro Council will [consider amendments to this title in order to make the title consistent with new policies on economic development adopted] evaluate the effectiveness of Title 4 in achieving these purposes** as part of **its** periodic **[review] analysis of the capacity of the urban growth boundary.**

3.07.420 Protection of Regionally Significant Industrial Areas

A. Regionally Significant Industrial Areas (RSIA) are those areas **[that offer the best opportunities for family-wage industrial jobs] near the region's most significant transportation facilities for the movement of freight and other areas most suitable for movement and storage of goods.** Each city and county with land use planning authority over **[areas] RSIAs** shown on the **[Generalized Map of Regionally Significant Industrial Areas adopted in Ordinance No. 02-969] Employment and Industrial Areas Map** shall derive specific plan designation and zoning district boundaries of **[the areas] RSIAs within its jurisdiction** from the Map, taking into account the location of existing uses that would not conform to the limitations on non-industrial uses in **[subsection C, D and E] this section**, and **[its] the** need **[of individual cities and counties]** to achieve a mix of **[types of]** employment uses.

B. **[Each city and county with land use planning authority over an area designated by Metro on the 2040 Growth Concept Map, as amended by Ordinance No. 02-969, as a Regionally Significant Industrial Area shall, as part of compliance with section 3.07.1120 of the Urban Growth Management Functional Plan, derive plan designation and zoning district boundaries of the areas from the Growth Concept Map] Cities and counties shall review their land use regulations and revise them, if necessary, to include measures to limit the size and location of new buildings for retail commercial uses - such as stores and restaurants - and retail and professional services that cater to daily customers - such as financial, insurance, real estate, legal, medical and dental offices - to ensure that they serve primarily the needs of workers in the area. One such measure shall be that new buildings for stores, branches, agencies or other outlets for these retail uses and services shall not occupy more than 3,000 square feet of sales or service area in a single outlet, or multiple outlets that occupy more than 20,000 square feet of sales or service area in a single building or in multiple buildings that are part of the same development project, with the following exceptions:**

1. Within the boundaries of a public use airport subject to a facilities master plan, customary airport uses, uses that are accessory to the travel-related and freight movement activities of airports, hospitality uses, and retail uses appropriate to serve the needs of the traveling public; and

2. Training facilities whose primary purpose is to provide training to meet industrial needs.

C. [After determining boundaries of Regionally Significant Industrial Areas pursuant to subsections A and B, the city or county] **Cities and counties** shall [adopt implementing ordinances that limit development in the areas to industrial uses, uses accessory to industrial uses, offices for industrial research and development and large corporate headquarters in compliance with subsection E of this section, utilities, and those non-industrial uses necessary to serve the needs of businesses and employees of the areas] **review their land use regulations and revise them, if necessary, to include measures to limit the siting and location of new buildings for the uses described in subsection B and for non-industrial uses that do not cater to daily customers - such as bank or insurance processing centers - to ensure that such uses do not reduce off-peak performance on Main Roadway Routes and Roadway Connectors shown on Metro's Freight Network Map, November, 2003, below standards set in the 2004 Regional Transportation Plan or require added road capacity to prevent falling below the standards.**

D. [Notwithstanding subsection C, a city or county shall not approve:

1. A commercial retail use with more that 20,000 square feet of retail sales area in a single building or in multiple buildings that are part of the same development project;
or

2. Commercial retail uses that would occupy more than five percent of the net developable portion of all contiguous Regionally Significant Industrial Areas] **No city or county shall amend its land use regulations that apply to lands shown as RSIA on the Employment and Industrial Areas Map to authorize uses described in subsection B that were not authorized prior to July 1, 2004.**

E. [As provided in subsection C of this section, a city or county may approve an office for industrial research and development or a large corporate headquarters if:

1. The office is served by public or private transit; and

2. If the office is for a corporate headquarters, it will accommodate for the initial occupant at least 1,000 employees]

[F. A city or county] **Cities and counties** may allow division of lots or parcels into smaller lots or parcels as follows:

1. Lots or parcels [less] **smaller** than 50 acres may be divided into any number of smaller lots or parcels[;].

2. Lots or parcels [50 acres or] larger **than 50 acres** may be divided into smaller lots and parcels **pursuant to a master plan approved by the city or county** so long as the resulting division yields [the maximum number of lots or parcels of] at least [50 acres] **one lot or parcel of at least 50 acres in size**[;].

3. **Lots or parcels 50 acres or larger, including those created pursuant to paragraph (2) of this subsection, may be divided into any number of smaller lots or parcels pursuant to a master plan approved by the city or county so long as at least 40 percent of the area of the lot or parcel has**

been developed with industrial uses or uses accessory to industrial use, and no portion has been developed, or is proposed to be developed, with uses described in subsection B of this section.

4. Notwithstanding paragraphs 2[, **and**] 3 [**and**] of this subsection, any lot or parcel may be divided into smaller lots or parcels or made subject to rights-of-way for the following purposes:

- a. To provide public facilities and services;
- b. To separate a portion of a lot or parcel in order to protect a natural resource, to provide a public amenity, or to implement a remediation plan for a site identified by the Oregon Department of Environmental Quality pursuant to ORS 465.225;
- c. To separate a portion of a lot or parcel containing a nonconforming use from the remainder of the lot or parcel in order to render the remainder more practical for a permitted use; **or**
- d. [**To reconfigure the pattern of lots and parcels pursuant to subsection G or this section**]

[**e.**] To allow the creation of a lot for financing purposes when the created lot is part of a master planned development.

[**G. A city or county may allow reconfiguration of lots or parcels less than 50 acres in area if the reconfiguration would be more conducive to a permitted use and would result in no net increase in the total number of lots and parcels. Lots or parcels 50 acres or greater in area may also be reconfigured so long as the resulting area of any such lot or parcel would not be less than 50 acres.**]

[**H**] F. Notwithstanding subsections [**C and D**] **B** of this section, a city or county may allow the lawful use of any building, structure or land existing at the time of adoption of its ordinance to implement this section to continue and to expand to add up to 20 percent more floor area and 10 percent more land area. Notwithstanding subsection E of this section, a city or county may allow division of lots or parcels pursuant to a master plan approved by the city or county prior to [**December 31, 2003**] **July 1, 2004**.

3.07.430 Protection of Industrial Areas

A. [**In Industrial Areas mapped pursuant to Metro Code section 3.07.130 that are not Regionally Significant Industrial Areas, c**] **C**ities and counties shall [**limit new and expanded retail commercial uses to those appropriate in type and size to serve the needs of businesses, employees and residents of the Industrial Areas**] **review their land use regulations and revise them, if necessary, to include measures to limit new buildings for retail commercial uses - such as stores and restaurants - and retail and professional services that cater to daily customers – such as financial, insurance, real estate, legal, medical and dental offices - in order to ensure that they serve primarily the needs of workers in the area. One such measure shall be that new buildings for stores, branches, agencies or other outlets for these retail uses and services shall not occupy more than 5,000 square feet of sales or service area in a single outlet, or multiple outlets that occupy more than 20,000 square feet of sales or service area in a single building or in multiple buildings that are part of the same development project, with the following exceptions:**

1. Within the boundaries of a public use airport subject to a facilities master plan, customary airport uses, uses that are accessory to the travel-related and freight movement activities of airports, hospitality uses, and retail uses appropriate to serve the needs of the traveling public; and

2. Training facilities whose primary purpose is to provide training to meet industrial needs.

B. [In an Industrial Area, a city or county shall not approve:

1. A commercial retail use with more than 20,000 square feet of retail sales area in a single building or in multiple buildings that are part of the same development project; or

2. Commercial retail uses that would occupy more than ten percent of the net developable portion of the area or any adjacent Industrial Area] Cities and counties shall review their land use regulations and revise them, if necessary, to include measures to limit new buildings for the uses described in subsection A to ensure that they do not interfere with the efficient movement of freight along Main Roadway Routes and Roadway Connectors shown on Metro's Freight Network Map, November, 2003. Such measures may include, but are not limited to restrictions on access to freight routes and connectors, siting limitations and traffic thresholds. This subsection does not require cities and counties to include such measures to limit new other buildings or uses.

C. No city or county shall amend its land use regulations that apply to lands shown as Industrial Area on the Employment and Industrial Areas Map to authorize uses described in subsection A of this section that were not authorized prior to July 1, 2004.

D. Cities and counties may allow division of lots or parcels into smaller lots or parcels as follows:

1. Lots or parcels smaller than 50 acres may be divided into any number of smaller lots or parcels.

2. Lots or parcels larger than 50 acres may be divided into smaller lots and parcels pursuant to a master plan approved by the city or county so long as the resulting division yields at least one lot or parcel of at least 50 acres in size.

3. Lots or parcels 50 acres or larger, including those created pursuant to paragraph (2) of this subsection, may be divided into any number of smaller lots or parcels pursuant to a master plan approved by the city or county so long as at least 40 percent of the area of the lot or parcel has been developed with industrial uses or uses accessory to industrial use, and no portion has been developed, or is proposed to be developed with uses described in subsection A of this section.

4. Notwithstanding paragraphs 2 and 3 of this subsection, any lot or parcel may be divided into smaller lots or parcels or made subject to rights-of-way for the following purposes:

a. To provide public facilities and services;

b. To separate a portion of a lot or parcel in order to protect a natural resource, to provide a public amenity, or to implement a remediation plan for a site identified by the Oregon Department of Environmental Quality pursuant to ORS 465.225;

c. To separate a portion of a lot or parcel containing a nonconforming use from the remainder of the lot or parcel in order to render the remainder more practical for a permitted use; or

d. To allow the creation of a lot for financing purposes when the created lot is part of a master planned development.

E. Notwithstanding **[subsection B] subsection A** of this section, a city or county may allow the lawful use of any building, structure or land **existing** at the time of **[enactment of an] adoption of its ordinance [adopted pursuant to this section] to implement this section** to continue and to expand to add up to 20 percent more **[floorspace] floor area** and 10 percent more land area. **Notwithstanding subsection D of this section, a city or county may allow division of lots or parcels pursuant to a master plan approved by the city or county prior to July 1, 2004.**

3.07.440 Employment Areas

- A. Except as provided in subsections C, D and E, in Employment Areas mapped pursuant to Metro Code Section 3.07.130, cities and counties shall limit new and expanded retail commercial uses to those appropriate in type and size to serve the needs of businesses, employees and residents of the Employment Areas.
- B. Except as provided in subsections C, D and E, a city or county shall not approve a commercial retail use in an Employment Areas with more than 60,000 square feet of gross leasable area in a single building, or retail commercial uses with a total of more than 60,000 square feet of retail sales area on a single lot or parcel, or on contiguous lots or parcels, including those separated only by transportation right-of-way.
- C. A city or county whose zoning ordinance applies to an Employment Area and is listed on Table 3.07-4 may continue to authorize retail commercial uses with more than 60,000 square feet of gross leasable area in that zone if the ordinance authorized those uses on January 1, 2003.
- D. A city or county whose zoning ordinance applies to an Employment Area and is not listed on Table 3.07-4 may continue to authorize retail commercial uses with more than 60,000 square feet of gross leasable area in that zone if:
1. The ordinance authorized those uses on January 1, 2003;
 2. Transportation facilities adequate to serve the retail commercial uses will be in place at the time the uses begin operation; and
 3. The comprehensive plan provides for transportation facilities adequate to serve other uses planned for the Employment Area over the planning period.
- E. A city or county may authorize new retail commercial uses with more than 60,000 square feet of gross leasable area in Employment Areas if the uses:
1. Generate no more than a 25 percent increase in site-generated vehicle trips above permitted non-industrial uses; and
 2. Meet the Maximum Permitted Parking – Zone A requirements set forth in Table 3.07-2 of Title 2 of the Urban Growth Management Functional Plan.

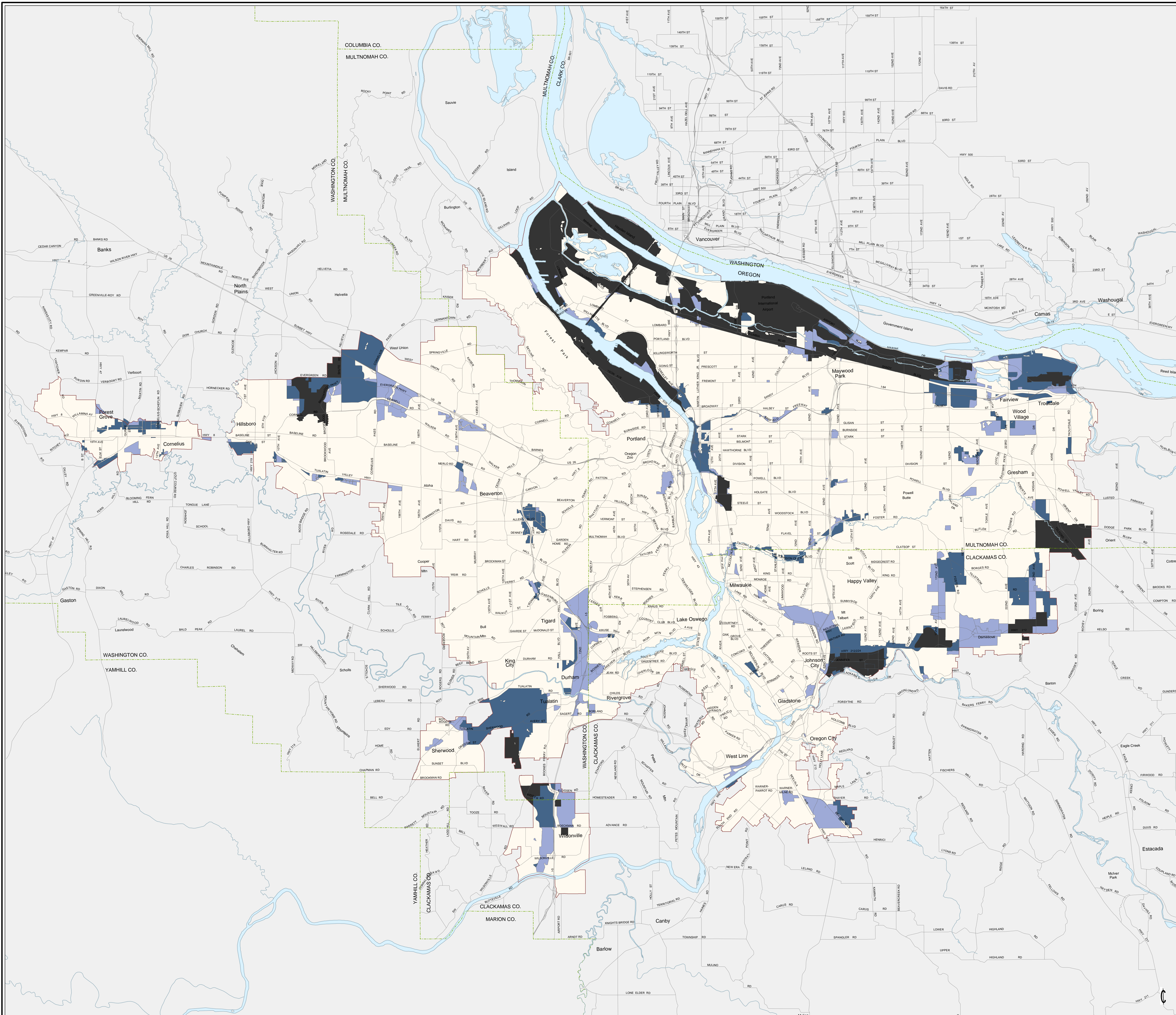
Title 4 Industrial and Employment Areas

Ordinance No. 04-1040B

Exhibit C

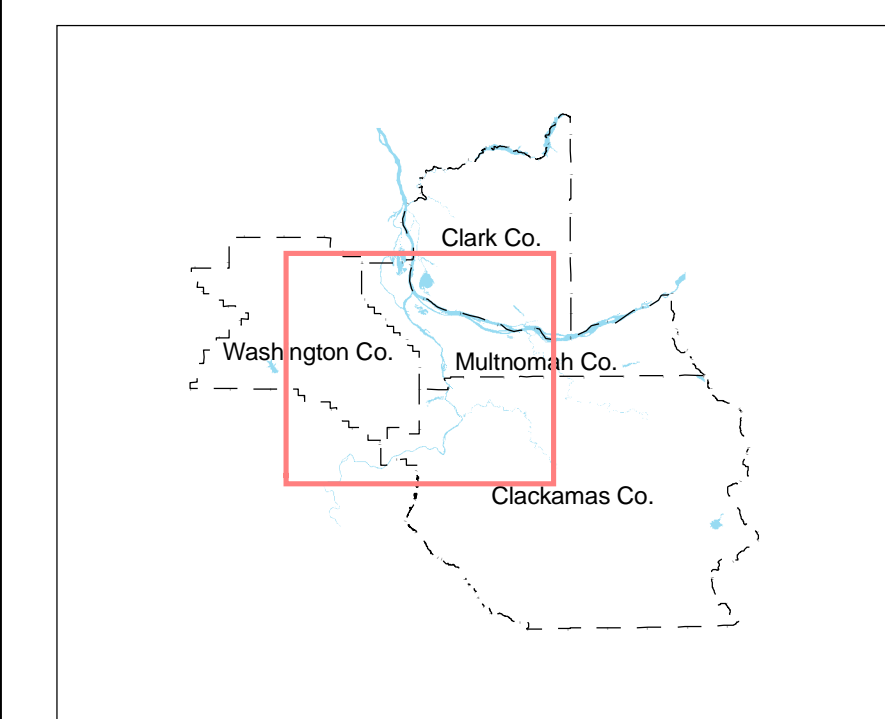
June 24, 2004

-  Employment Land
-  Industrial Land
-  Regionally Significant Industrial Areas



WARNING: Some maps combine data layers of differing map accuracies, e.g. flood plains can be based on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

The information on this map was derived from digital databases on Metro's GIS. Care was taken in the creation of this map. Metro cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the accuracy of the information or fitness for a particular purpose, accompanying this product. However, notification of any errors will be appreciated.



Location Map



METRO DATA RESOURCE CENTER
600 NORTHEAST GRAND AVENUE PORTLAND, OREGON 97232-2736
TEL: (503) 737-1742 FAX: (503) 737-1909
drc@metro.dst.or.us www.metro-region.org

Exhibit D to Ordinance No. 04-1040B
Addendum to Housing Needs Analysis
April 5, 2004

I. INTRODUCTION

The attached three Tables satisfy the requirements of ORS 197.298(5)(a)(E) to provide at least 3 years of data on the number, density and average mix of housing for vacant, partially vacant, redevelopment and infill (refill) and mixed use designated land. Table 5(a)(E) – 1 provides number, density and mix data on refill land for the period 1997 through 2001. Table 5(a)(E) – 2 provides the same data for development on vacant and partially vacant land for the period 1998 through 2001. Table 5(a)(E) – 3 displays the number, density and mix data for development on mixed use land for the period 1998 – 2001.

As noted in the original Housing Needs Analysis submission, the data in the attached Tables are subsets of more aggregated data contained in the original Housing Needs Analysis Report. While interesting and informative, the data in the attached Tables do not contradict the conclusions and actions taken in conjunction with the Urban Growth Report and periodic review. Nor do the data affect the determinations of the overall average density and overall mix of housing types at which residential development must occur in order to meet housing needs through 2022, as depicted in the original Housing Needs Analysis, pages 2 through 7 and Figures 3.1, 3.2, 3.3, 5.1 and 5.3.

The remainder of the report consists of an explanation of methodology and data sources and a synopsis of the data content of each of the tables.

II. METHODOLOGY AND DATA SOURCES

A. Data Sources

In order to retrospectively meet the requirements of State Statute we made maximum use of Metro's RLIS archived data that extend back in some degree to 1995. These data consist of the following elements:

1. Land use data at the tax lot level designating land by vacant, developed and zoning category.
2. County assessor tax lot data showing use, value, sales data, etc.
3. Geo-coded building permit data by building type.
4. Air photos for each year taken approximately in July of each year with a trend of improving resolution level over time.

B. Sampling Approach

We elected to measure the data using a 20% sampling approach so that we could manually audit each of the selected data points to insure accuracy. Machine processing of the data is not possible due to the following sources of measurement error.

1. Building permit geo-coding variability as approximately 70% of building permits actually geo-code exactly to the correct tax lot.

2. Building permit data error due to incomplete reporting, undetected duplicates and inaccurate descriptions of building type, work done and location.
3. Slight registration discrepancies between tax lot maps, air photos and archived land use coverages.
4. Variability between the time a building permit is issued, building takes place and the tax lot is created and enumerated in the County Assessor's tax lot coverage. The practical consequence of this is often that a row house constructed on a 2,500 sq. ft. lot appears to be on a 100,000 sq. ft. plus lot because the subdivision plat is not yet available in the data base.

For multi-family units we modified the 20% sample to include 100% of all building permits for 20 or more units and applied the 20% rate to permits of under 20 units. This avoided the potential sampling errors associated with having a few permits for multi-family of over 100 or more units.

C. Expansion Back to the Population Totals

Because we elected a 100% count of multi-family the sample was not self-weighting. As a consequence after the analysis was complete we used a two phase approach to estimate the building permit population. First, we expanded our sample by building type back to the totals reported in our building permit data base. Secondly, since our building permit data base is incomplete relative to the totals reported to the State and Federal Government, we expanded our building permit data base to match the County totals by building type.

D. Definition of Entities Being Measure

State Statute requires we report on the number and densities by building type of development on "refill", "vacant", "partly vacant" and "mixed use" land. These entities we define and discuss in the context of our RLIS data base and measurement protocols as follows:

1. **Refill:** Housing units developed on land that Metro already considers developed in its data base. Refill is further divided into redevelopment and infill. Redevelopment occurs after an existing building has been removed. Infill is additional building without removal of existing buildings.
 - a. **Method of Measurement:** We measure refill by counting the number of permits that locate on land Metro considers developed in the next fiscal year. For instance for the year "1998" we would compare the RLIS developed and vacant lands inventory for the year ending June 30, 1998 with all building permits issued beginning July 1, 1998 and ending June 30, 1999. Building permits located on land Metro classed vacant as of June 30, 1998 would be classed as development on vacant land and permits landing on land Metro classed as developed as of June 30, 1998 would be classed as refill.
 - b. **Measurement Protocols:** As noted earlier we select a 20% sample of all permits for new residential construction from the RLIS data base for the relevant years (with the exception of the 100% of multi-family permits equal to or exceeding 20 units). Each permit is scrutinized manually by a

trained intern using the RLIS data base and air photos to insure it is properly located and that the permit is for valid construction that did occur as the permit indicated. The analyst then determines whether the permit constitutes refill or vacant land development. Beginning with this study the analyst further classifies the permit to “legal – Urban Growth Report” refill and “economic – MetroScope” refill. This distinction results from the fact that RLIS analysts classify some individual lots in developing green field areas as developed prior to actual development occurring and also classify land cleared for urban renewal areas as vacant. In the former case the economic interpretation is development on new and in the latter case the economic interpretation is refill development. However, to be consistent with the RLIS land accounting system on which the Urban Growth Report is based we classify development the way RLIS accounts for it. On the other hand, the MetroScope land use model used for forecasting and policy evaluation counts green field development as vacant land consumption and urban renewal as refill (redevelopment). Consequently, we report refill data for both classifications.

2. Vacant and partially vacant: In RLIS tax lots that are “completely vacant” (90% vacant) are classed as totally vacant. If the unoccupied portion of a tax lot with development exceeds ½ acre, the unoccupied portion is classed a partially vacant. Green field sites under development may transition from vacant to partially vacant, back to totally vacant to developed and back again to totally vacant depending on the patterns of tax lot subdivision activity and zone changes. This also is true for urban renewal redevelopment sites. There are also a limited number of partially vacant sites in established residential areas where present zoning would allow further subdivision and development.
 - a. **Method of Measurement**: Using the audited building permit sample we machine processed the permits classed as legally vacant to fully vacant and partially vacant. Due to map registration discrepancies the RLIS developed lands coverage for 1997 could not be used so we dropped 600 observations for that year. In addition, another 1400 observations failed the machine screening in that they could not be conclusively classed as either vacant or partially vacant without manual auditing. The 2000 observations excluded from the vacant and partially vacant analysis resulting in the number of units developed on some type of vacant land dropping from 39,000 to 25,000. Though not relevant to the refill study or overall results, discussions with RLIS analysts indicated that the machine filtering process was more likely to exclude partially vacant than vacant tax lots. The bias, resulting from this procedure was minimized, by restating our inventory totals of vacant and partially vacant land using the same screening procedures.
 - b. **Measurement Protocols**: Once the refill data base was reclassified between vacant and partially vacant, we tabulated all the development on vacant land by the type of vacant land it fell on by building type (multi-family and single family) and by lot size.

3. Mixed use development: In our RLIS data base mixed use development is classed as MUC1, MUC2 and MUC3. From the original audited refill data base we selected all the records of building permits that fell on land classed as MUC1, MUC2 or MUC3 regardless of whether it was refill, vacant or partially vacant. Again matching the RLIS land use inventory for 1997 proved problematic for machine selection procedures and this year was excluded. The resulting selection process produced 402 observations representing over 4,600 units constructed from 1998 through 2001.

E. Years of Data Included in the Retrospective Analysis

We included building permit data from 12/97 through 6/2002 that could be reliably recovered and geo-coded from our existing RLIS data base. This time period allows us to evaluate 5 years of recent history in regard to “refill” and 4 years of history for “vacant”, “partly vacant” and “mixed use” land.

III. SYNOPSIS OF RESULTS

A. Data Table 5E1: Refill Numbers by Type and Density 1997 – 2001

The data displayed on Table 5E1 show the amount of residential development of vacant and refill land that occurred during the period 1997 through 2001. During that period nearly 54,000 dwelling units located within the Metro region.¹ Of the 54,000 dwelling units, 26.5% occurred as refill according to the legal – Urban Growth Report definition. Using the economic-MetroScope definition 30.4% were refill reflecting the increasing importance of redevelopment in urban renewal areas and centers. Nearly 20,000 of the units constructed were multi-family with a legal refill rate of 31.5% and an economic rate of 40.2%. 34,000 units constructed were single family with a legal refill rate of 23.6% and an economic rate of 24.7%. Average lot sizes are also reported for every category.² For multi-family average lot sizes range from 1,800 to 2,000 sq. ft. depending on category. For single family average lot sizes range from 6,600 to 8,400 sq. ft. with refill development generally in the 6,500 – 7,000 sq. ft. range.

B. Table 5E1(a): Median Lot Size Data

This table provides additional and somewhat more meaningful weighted median lot size data. When we compare the average lot sizes in Table 5E1, we observe substantive differences in most cases. In general the median lot sizes are 30% less for vacant single family, 25% more for vacant multi-family, 25% less for refill single family and 30% less for refill multi-family. For all types combined the weighted median is 27% less for vacant and 26% less for refill. Assuming that the present median is a superior measure of long run average lot size, the combined weighted median of 4,417 sq. ft. should be used to determine vacant land consumption. This figure combined with the 39,619 units located on legally vacant land over the 5 year period implies a land consumption of slightly over 4,000 net buildable acres. Using a plausible range of gross to net conversion factors of .55 - .7 yields a gross buildable acre consumption of 1,150 to 1,450 acres per year, within the range estimated in the original Housing Needs Analysis.³

¹ **Real Estate Report for Metropolitan Portland, Oregon**, Spring 2003. Numbers are based on building permits summarized at the County level and only approximate the UGB. This procedure slightly overstates UGB land consumption.

² Average as contrasted to median inflates land consumption as the measure is substantially influenced by a few large lot single family permits on urban land still zoned RRFU that will subsequently be subdivided. RLIS procedure of assuming ½ acre of land consumption for permits on non-subdivided land also inflates average lot size.

³ While appearing precise, attempting to estimate long run densities and land consumption from individual lot sizes involves substantial uncertainties. The most serious of these is the gross to net conversion factor as we only observe

C. Table 5E2: Housing on Fully Vacant and Partially Vacant Land

The accompanying table presents the required data on development on a subcategory of vacant land – fully vacant land and land partially vacant. As noted in the methods section, fully or partially vacant is classified relative to the tax lot existing at the time of the RLIS vacant and developed lands inventory. As also noted in the methods section, due to procedures and quirks of the land development and reporting process land may be fully vacant, partially vacant or developed refill land several times during the development process. In addition as a result of attempting to categorize and measure “partially vacant” we discover that the acreage totals are extremely volatile and sensitive to whatever criteria we use in the machine query process to differ partial from full. Very minor discrepancies between vacant land coverages and assessor’s tax lot coverages can dramatically change the inventories of fully and partially vacant. In the methods section we note that we use the same selection criteria for both the inventory totals and the classification of the refill sample into fully and partially vacant.

Of the over 39,000 legal vacant units located in the Metro Region for the period 1997 – 2001 we were able to reliably classify 25,000 units covering the period 1998 – 2001. Of these 15,500 (62.6%) were on fully vacant land and 9,300 (37.4%) were on partially vacant land. Looking at *Table 5E2(a) Fully Vacant and Partially Vacant Land Inventory 1998 – 2001* (replacing Table 4.1AB in the original Housing Needs Analysis) that on average partially vacant comprised 34.3% of the vacant land inventory. In sum development on partially vacant land overall has been occurring at roughly the same rate as development on fully vacant land and appears to not be materially different.

At the same time we recognize that there are a number of instances where partially vacant land shares a tax lot with a high valued single family home. In order to better understand the likelihood of further development under these circumstances, we used our single family sales price study to estimate the “optimum lot size” by neighborhood and house size. We define optimum lot size as the lot size at which at the loss of value to a homeowner by selling off part of his lot just equals the amount he gains by selling the land. If the homeowner sells more land, the value of his house declines more than he gains by the sale. Conversely, if he sells less land, the land unsold contributes less to the value of his home than the amount he would receive were he to sell it. Making that calculation for Dunthorpe we found that a \$1,000,000 home on 5 acres would have a positive incentive to sell off land down to about 1 – 1.5 acres. By comparison, a \$600,000 home on 1 acre would have an incentive to sell off no more than ½ acre. Significantly, in 2000 the average Dunthorpe selling price was \$590,000 for a 3,100 sq. ft. house on a 22,000 sq. ft. lot, almost exactly the optimum lot size determined from our estimates. On average then we would expect Dunthorpe to have no additional capacity other than that resulting from subdivision of lots at least 1 acre to sizes no smaller than ½ acre. Optimum lot size calculations vary dramatically by neighborhood. For instance, the average house in the Powellhurst-Gilbert neighborhood has a positive incentive to sell off land down to and sometimes below a 5,000 sq. ft. lot minimum. This is more often the case within the Metro region notwithstanding the exceptionally high value areas such as Dunthorpe.

D. Table 5E3: Housing on Mixed Use Designated Land

As required by statute the accompanying table shows development for the period 1998 – 2001 that occurred on land Metro considered at the time of development to be MUC1, MUC2 and MUC3. As pointed out in the methods section, the mixed use inventory includes refill, vacant and partially vacant

net buildable land consumption and cannot measure land lost to streets, parks, schools, freeways, etc. The second drawback is that average lot size measures are always exaggerated by a few large lot placements (often of manufactured homes) done by private individuals that will undoubtedly be further subdivided sometime in the future.

lands. Over the 4 year period we noted 4,600 housing units developed of which 3,000 were multi-family and 1,600 were single family. Average lot size for multi-family was 1,400 sq. ft. and single family lot size was 2,300 sq. ft. Table 5E3(a) depicts the 2040 Plan mixed use capacity as of 8/98. Total mixed use capacity at that time was roughly 23,000 units. Mixed use development constituted about 11% of residential development for the 4 year period 98 – 2001. As of 1998, mixed use capacity of 23,000 units constituted 12% of the capacity 193,000 dwelling unit capacity estimated at the time. As was the case with vacant and partially vacant, this sub-classification of land type seems to produce housing at a rate commensurate with its proportion of the land inventory.

**Exhibit 5E1_: Housing on Vacant and Refill Land -
Number, Type and Density 1997 Through 2001**

Vacant/Refill Status	Year					Grand Total
	1997	1998	1999	2000	2001	
	Legal - Urban Growth Report Basis					
Vacant Legal						
Multi Family	4,412	3,761	2,407	1,824	1,274	13,678
Average Lot Size	2,208	2,021	813	1,244	2,502	1,810
Single Family	4,594	5,670	4,814	5,425	5,439	25,941
Average Lot Size	8,516	8,611	10,104	6,292	8,161	8,292
Total All Types	9,005	9,431	7,221	7,249	6,713	39,619
Average Lot Size	5,425	5,983	7,007	5,022	7,087	6,054
Refill Legal						
Multi Family	2,228	1,567	918	503	1,059	6,275
Average Lot Size	2,729	2,042	1,178	1,353	1,499	2,013
Single Family	2,446	1,451	1,994	958	1,170	8,020
Average Lot Size	6,017	7,505	5,787	7,521	9,260	6,882
Total All Types	4,675	3,018	2,912	1,461	2,229	14,295
Average Lot Size	4,450	4,669	4,334	5,397	5,573	4,744
Percent of Development Refill	34.2%	24.2%	28.7%	16.8%	24.9%	26.5%
	Economic - MetroScope Basis					
Vacant Economic						
Multi Family	4,300	3,103	1,983	1,484	1,068	11,938
Average Lot Size	2,260	2,124	955	1,245	2,304	1,885
Single Family	5,196	4,962	5,466	4,503	5,455	25,582
Average Lot Size	8,352	9,035	9,614	6,463	8,178	8,384
Total All Types	9,496	8,065	7,449	5,986	6,523	37,520
Average Lot Size	5,593	6,376	7,309	5,169	7,216	6,317
Refill Economic						
Multi Family	2,340	2,225	1,342	843	1,265	8,015
Average Lot Size	2,608	1,894	852	1,309	1,830	1,856
Single Family	1,844	2,159	1,342	1,880	1,154	8,379
Average Lot Size	5,664	6,891	5,686	6,510	9,196	6,660
Total All Types	4,184	4,384	2,684	2,724	2,419	16,394
Average Lot Size	3,955	4,355	3,269	4,899	5,344	4,311
Percent of Development Refill	30.6%	35.2%	26.5%	31.3%	27.0%	30.4%

**Exhibit 5E1(a)_: Housing on Vacant and Refill Land -
Median Lot Size 1997 - 2001**

Year	Legal - Urban Growth Report Basis					2001 Totals	
	1997	1998	1999	2000			
Single Family							
Median Lot Size Vacant	5,936	5,887	6,021	5,268	5,001	5,605	
Median Lot Size Refill	5,406	5,628	4,001	5,301	5,047	5,032	
Multi Family							
Median Lot Size Vacant	3,550	2,348	352	825	2,377	2,242	
Median Lot Size Refill	1,630	2,318	953	408	534	1,384	
Total All Types							
Median Lot Size Vacant	4,684	4,480	4,159	4,105	4,562	4,417	
Median Lot Size Refill	3,930	3,902	3,003	3,851	2,724	3,506	
Economic - MetroScope Basis							
Single Family							
Median Lot Size Vacant	5,955	5,897	6,000	5,277	5,026	5,636	
Median Lot Size Refill	5,196	5,569	3,177	5,267	5,001	4,958	
Multi Family							
Median Lot Size Vacant	3,562	2,367	385	933	2,377	2,420	
Median Lot Size Refill	1,100	2,007	485	404	1,172	1,131	
Total All Types							
Median Lot Size Vacant	4,835	4,555	4,628	4,515	4,688	4,660	
Median Lot Size Refill	3,031	3,739	1,731	3,218	2,816	2,997	

**Exhibit 5E3_ : Housing on Mixed Use Designated Land by
Number, Type and Density 1998 Through 2001**

Land Use Class	Year				Grand Total
	1998	1999	2000	2001	
Mixed Use One					
Multi Family	1,116	367	262	321	2,066
Average Lot Size	1,834	1,427	1,437	2,313	1,786
Single Family	226	100	304	737	1,367
Average Lot Size	3,127	4,386	2,482	1,946	2,439
Mixed Use Two					
Multi Family	41	153	132	-	326
Average Lot Size	2,277	252	1,090	-	846
Single Family	40	87	55	25	207
Average Lot Size	1,919	2,159	1,265	1,574	1,803
Mixed Use Three					
Multi Family	133	203	146	107	590
Average Lot Size	1,605	345	250	100	561
Single Family	37	23	21	-	80
Average Lot Size	2,108	1,841	2,144	-	2,043
Total Mixed Use					
Multi Family	1,290	723	541	428	2,982
Average Lot Size	1,824	874	1,032	1,758	1,441
Single Family	303	210	380	763	1,655
Average Lot Size	2,845	3,187	2,287	1,934	2,340
Total All Types	1,593	933	920	1,190	4,637
Average Lot Size	2,018	1,394	1,549	1,870	1,762

Exhibit 5E3(a)_: Mixed Use 2040 Plan Designated Land Capacity 8/98
(Includes Capacity of Vacant, Infill and Redevelopment Land & Areas)

Plan Category	DU Capacity
MUC 1	10,320
MUC 2	7,250
MUC 3	4,650
Total Capacity	22,220

Source: Compiled from Urban Growth Report Addendum, August 1998, page 40.
MUC 1 includes MUEA capacity.

**Exhibit 5E2_: Housing on Fully Vacant and Partially
Vacant Land - Number, Type and Density 1998 Through 2001**

Land Vacancy Class	Year				Grand Total
	1998	1999	2000	2001	
Fully Vacant					
Multi Family	1,012	1,910	714	801	4,438
Average Lot Size	2,383	871	1,720	2,784	1,698
Single Family	2,554	2,894	2,808	2,951	11,206
Average Lot Size	6,517	6,743	5,684	5,327	6,054
Total	3,566	4,804	3,522	3,752	15,644
Average Lot Size	5,344	4,408	4,880	4,784	4,818
Partly Vacant					
Multi Family	2,496	319	271	126	3,213
Average Lot Size	1,847	638	778	1,339	1,617
Single Family	2,219	1,159	1,501	1,244	6,122
Average Lot Size	5,984	7,764	5,624	4,622	5,956
Total	4,715	1,478	1,772	1,370	9,335
Average Lot Size	3,794	6,227	4,882	4,320	4,463
Combined					
Multi Family	3,508	2,229	986	927	7,651
Average Lot Size	2,002	837	1,460	2,588	1,664
Single Family	4,773	4,053	4,309	4,194	17,329
Average Lot Size	6,269	7,035	5,663	5,118	6,019
Total	8,281	6,282	5,295	5,122	24,979
Average Lot Size	4,461	4,836	4,881	4,660	4,685
Percent Units on Fully Vacant:					62.6%
Percent Units on Partly Vacant:					37.4%

**Exhibit 5E2(a)_: Housing on Fully Vacant and Partially
Vacant Land - Inventory of Fully Vacant and Partially Vacant All Land Classes**

Land Vacancy Class	Year				2001 4 Year Average	Percent
	1998	1999	2000			
Fully Vacant	33,422	30,820	28,789	26,631	29,916	65.7%
Partly Vacant	16,678	15,776	15,401	14,738	15,648	34.3%
Total	50,100	46,596	44,190	41,369	45,564	100.0%

Filter Criteria: Full - 90% of year 1 tax lot is vacant

Maybe - Vacant area is <90% of year 1 taxlot and >=5,000 sq. ft. and <1/2 acre

Part - Vacant area is <90% of year 1 taxlot and >= 1/2 acre

Sliver - vacant area is <90% of year 1 taxlot and < 5,000 sq. ft.

2004 UGB Expansion

Ordinance 04-1040B

Exhibit E

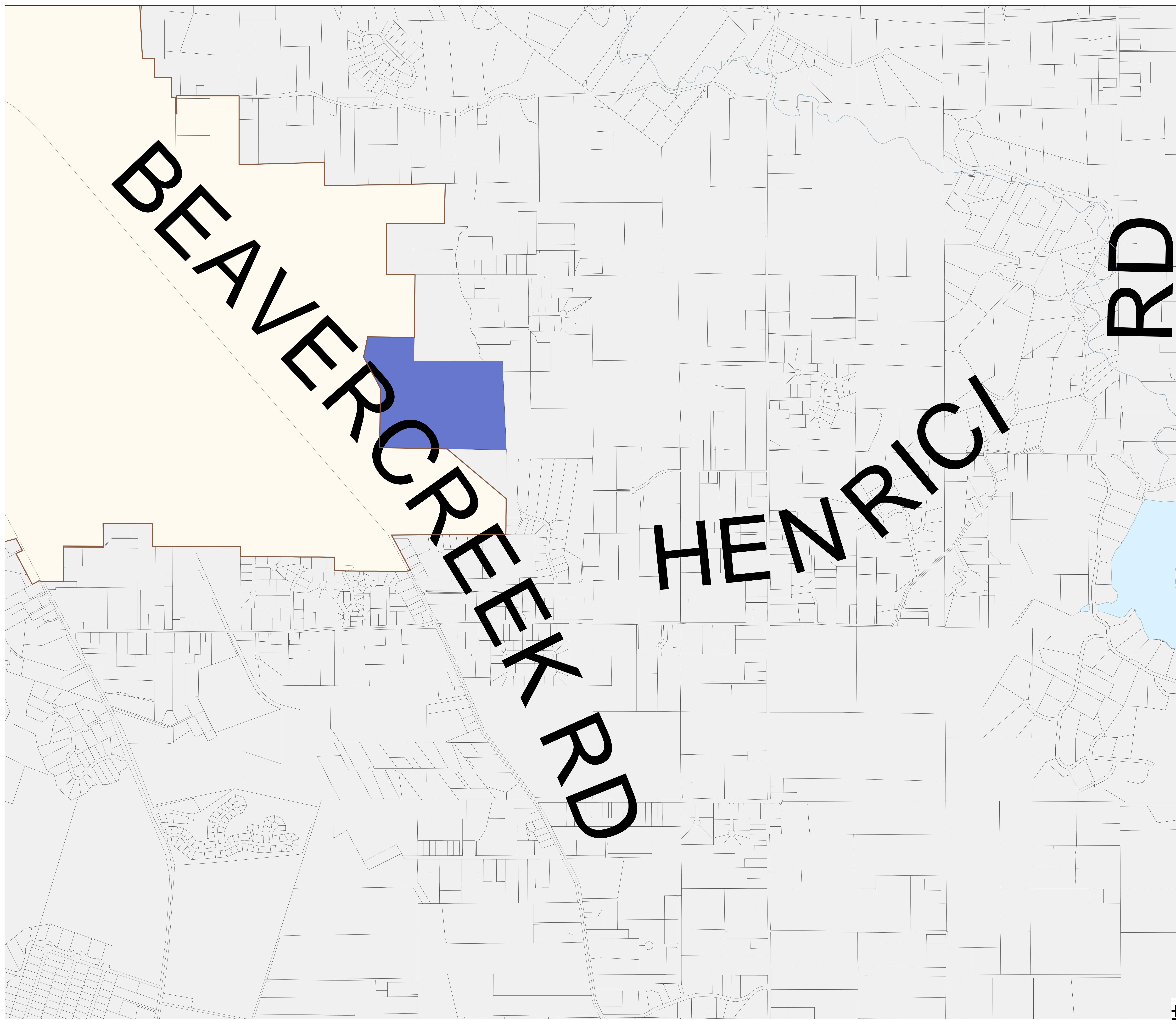
June 24, 2004

2040 Design Type

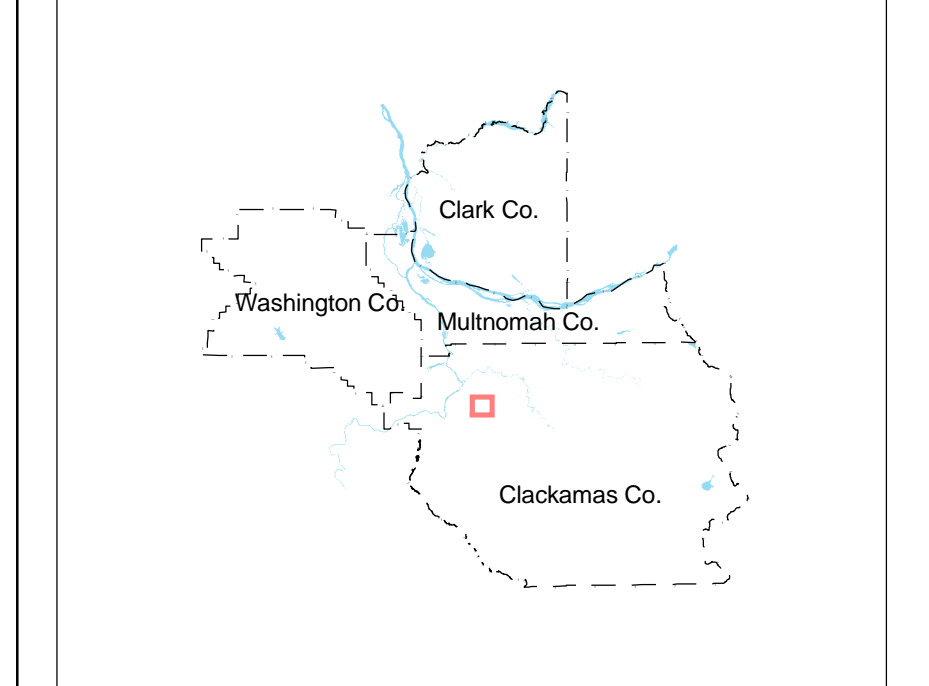
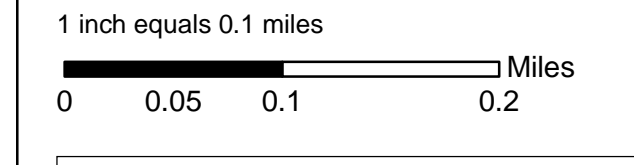
 Industrial Land

 Urban Growth Boundary

Beaver Creek Area



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Exhibit E

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2040 Design Type

 Industrial Land

 Urban Growth Boundary

Coffee Creek Area

Sherwood

TUALATIN-SHERWOOD ROAD

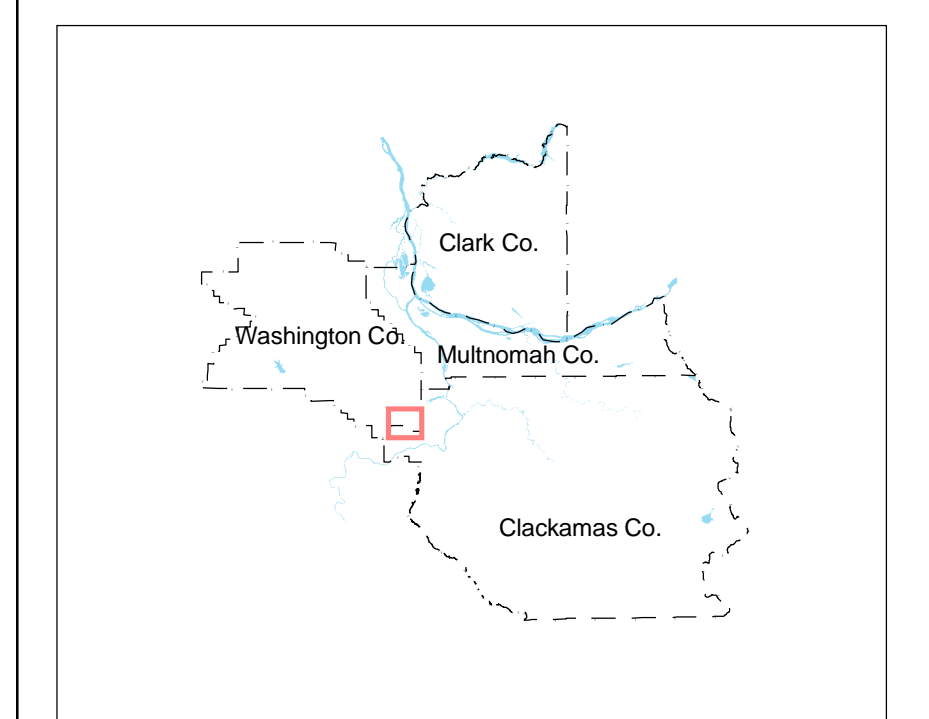
BOONES FERRY RD

WASHINGTON CO.

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1 inch equals 0.1 miles
0 0.05 0.1 0.2 Miles



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Verboort

Forest Grove

Cornelius

Tualatin

River

HWY 8

HWY 17

2004 UGB Expansion

Ordinance 04-1040B

Exhibit E

June 24, 2004

2040 Design Type

 RSIA

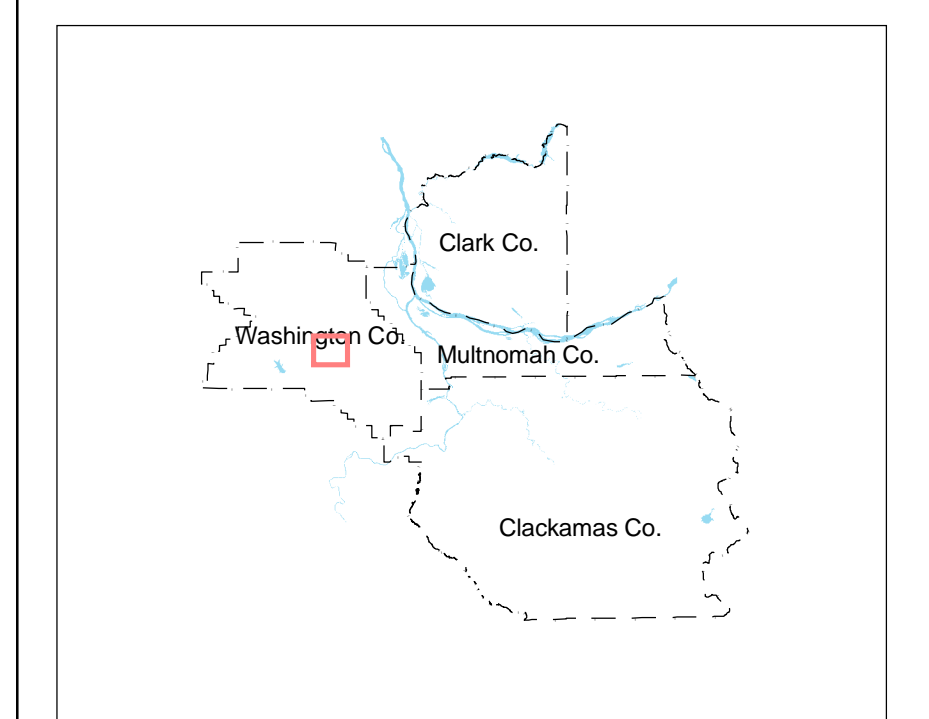
 Urban Growth Boundary

Cornelius Area

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0 0.05 0.1 0.2 Miles



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Exhibit E

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2040 Design Type

 Industrial Land

 Urban Growth Boundary

Damascus West Area

HWY 212

Damascus

Carver

HWY 224

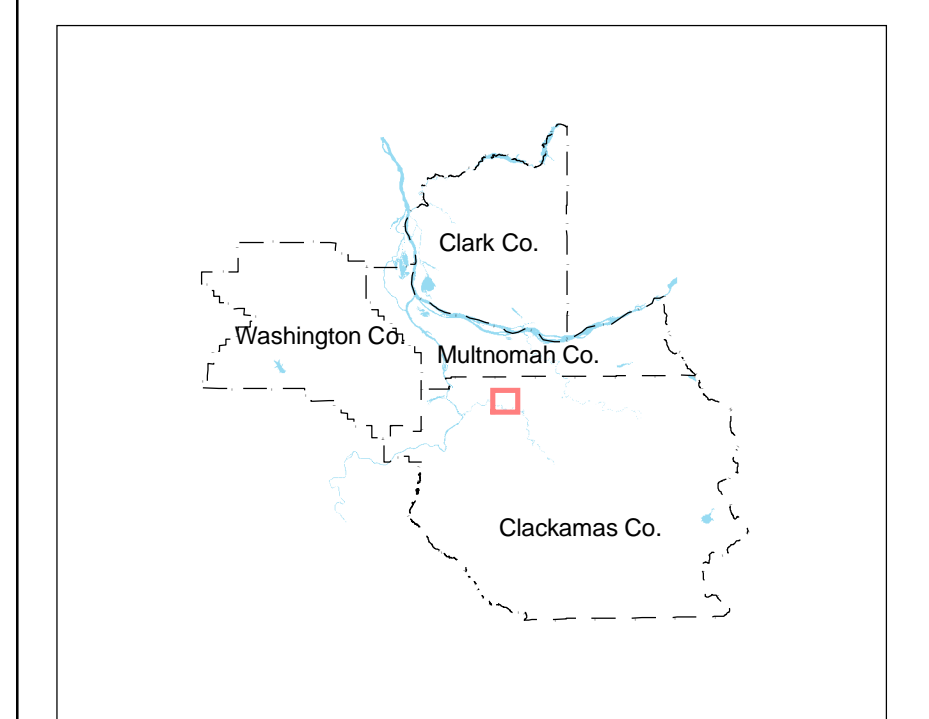
River

Clackamas

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Exhibit E

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2040 Design Type

 RSIA Land

 Urban Growth Boundary

Helvetia
Area

Helvetia

SUNSET HWY

RD

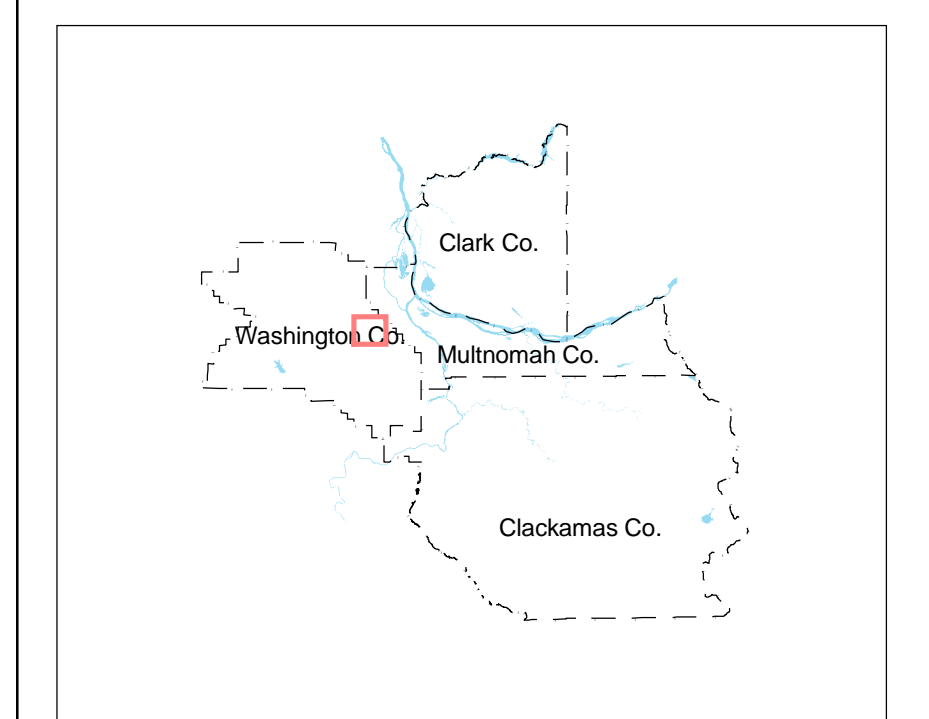
West Union

PASS

WARNING: some maps combine data layers of differing map accuracies, e.g. flood plains can be laid on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

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1 inch equals 0.1 miles
0 0.05 0.1 0.2 Miles



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2004 UGB Expansion

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Exhibit E

June 24, 2004

2040 Design Type

 RSIA

 Urban Growth Boundary

Orient
Area

Orient

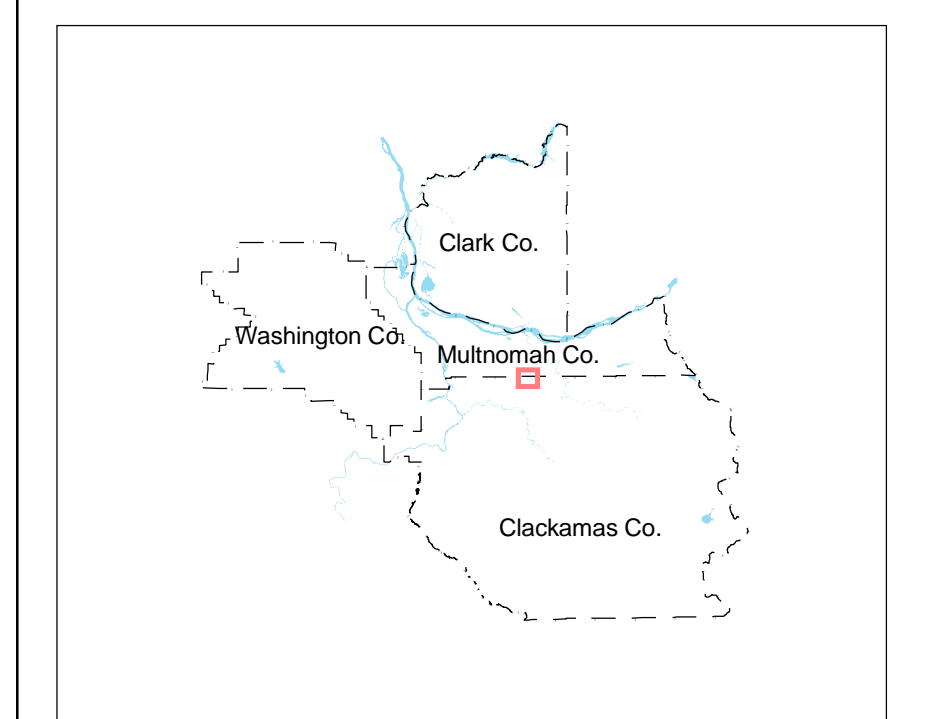
US

26

WARNING: some maps combine data layers of differing map accuracies, e.g. flood plains can be laid on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

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1 inch equals 0.1 miles
0 0.03 0.06 0.12 Miles



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2004 UGB Expansion

Ordinance 04-1040B

Exhibit E

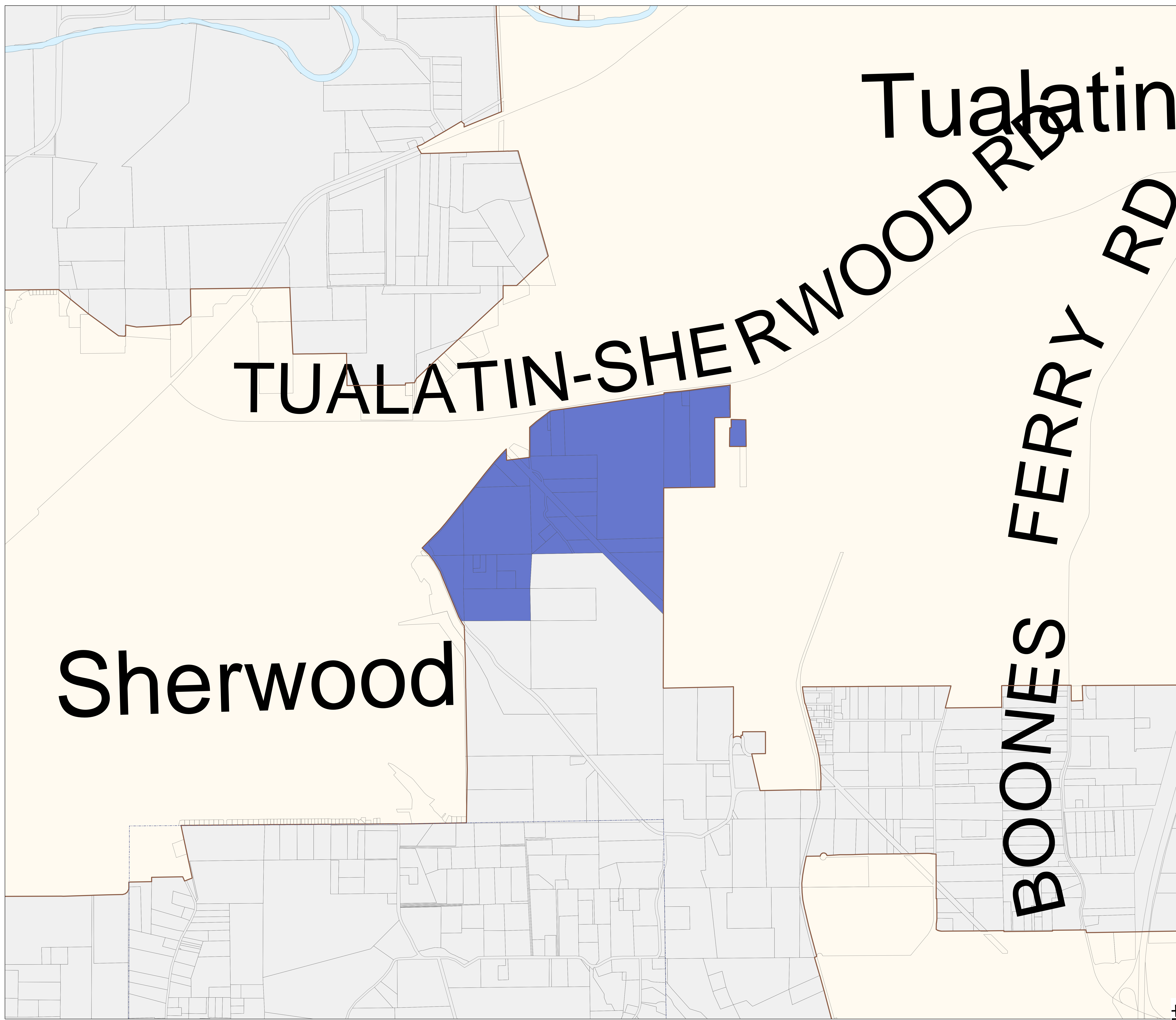
June 24, 2004

2040 Design Type

 Industrial Land

 Urban Growth Boundary

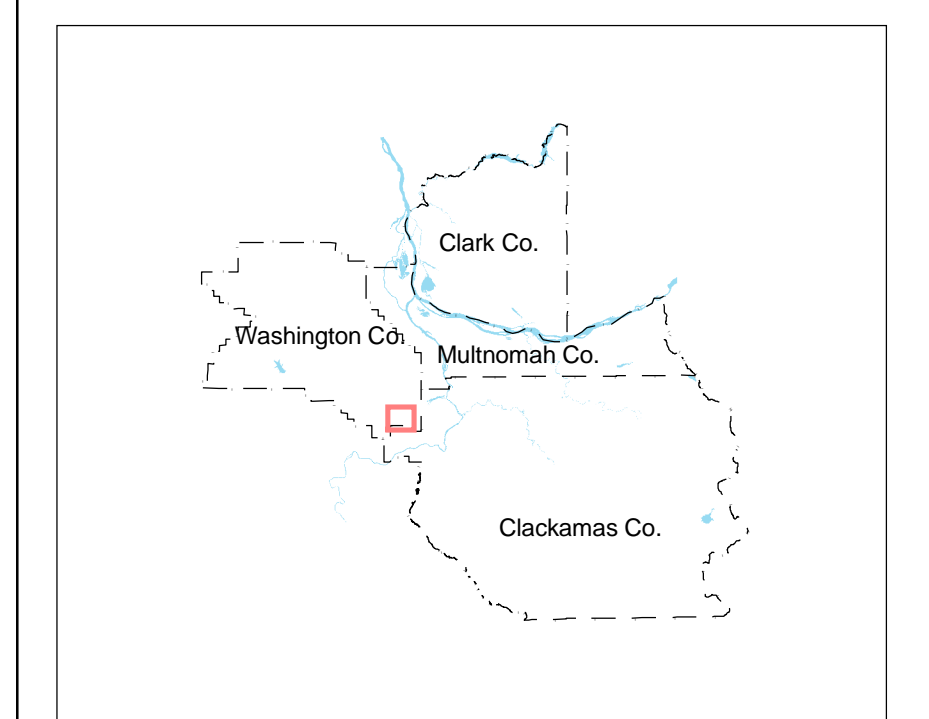
Quarry Area



WARNING: some maps combine data layers of differing map accuracies, e.g. flood plains can be tied on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

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1 inch equals 0.1 miles
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Location Map

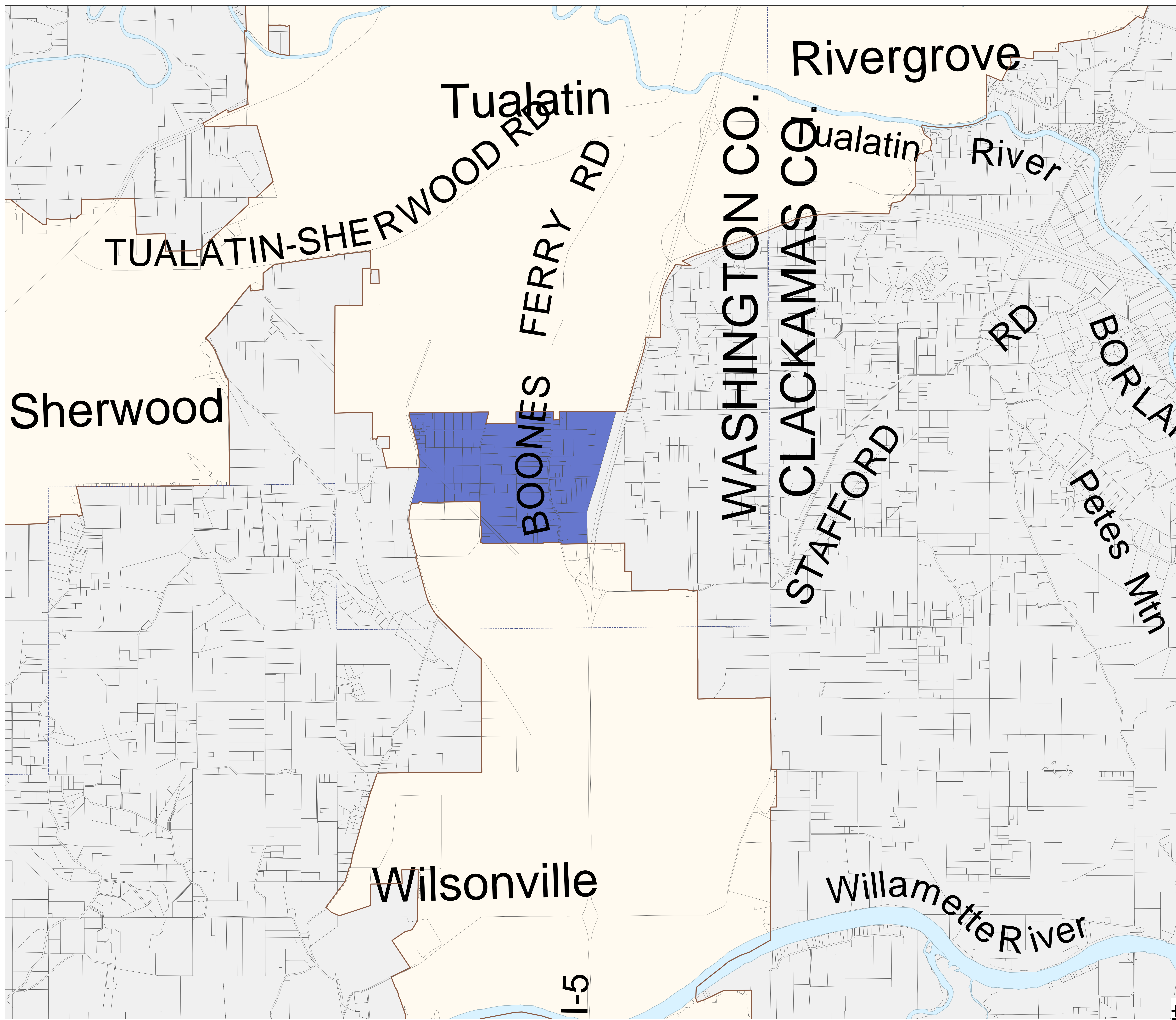


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600 NORTHEAST GRAND AVENUE PORTLAND, OREGON 97232-2736
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2004 UGB Expansion
Ordinance 04-1040B
Exhibit E
June 24, 2004

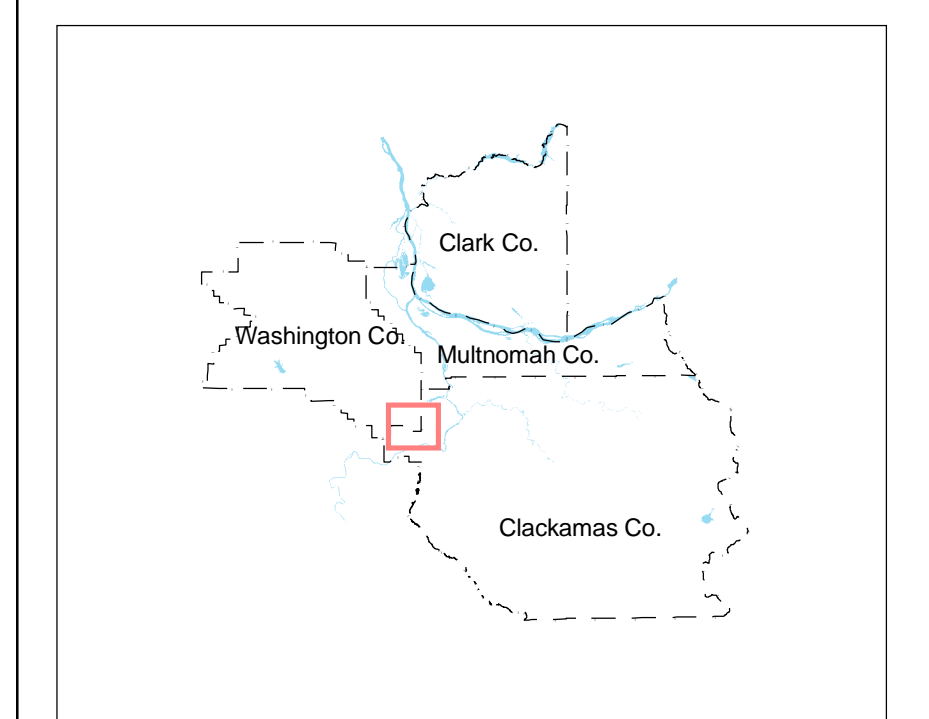
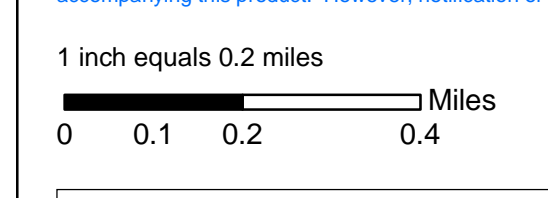
2040 Design Type
 Industrial Land
 Urban Growth Boundary

Tualatin Area



WARNING: Some maps combine data layers of differing map accuracies, e.g. flood plains can be tied on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

The information on this map was derived from digital databases on Metro's GIS. Care was taken in the creation of this map. Metro cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the accuracy, completeness, or fitness for a particular purpose, accompanying this product. However, notification of any errors will be appreciated.



Location Map



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Exhibit F to Ordinance No. 04-1040B
Conditions on Addition of Land to the UGB

I. GENERAL CONDITIONS APPLICABLE TO ALL LANDS ADDED TO THE UGB

A. The city or county with land use planning responsibility for a study area included in the UGB shall complete the planning required by Metro Code Title 11, Urban Growth Management Functional Plan (“UGMFP”), section 3.07.1120 (“Title 11 planning”) for the area. Unless otherwise stated in specific conditions below, the city or county shall complete Title 11 planning within two years after the effective date of this ordinance. Specific conditions below identify the city or county responsible for each study area.

B. The city or county with land use planning responsibility for a study area included in the UGB, as specified below, shall apply the 2040 Growth Concept design types shown on Exhibit E of this ordinance to the planning required by Title 11 for the study area.

C. The city or county with land use planning responsibility for a study area included in the UGB shall apply interim protection standards in Metro Code Title 11, UGMFP, section 3.07.1110, to the study area until the effective date of the comprehensive plan provisions and land use regulations adopted to implement Title 11.

D. In Title 11 planning, each city or county with land use planning responsibility for a study area included in the UGB shall recommend appropriate long-range boundaries for consideration by the Council in future expansions of the UGB or designation of urban reserves pursuant to 660 Oregon Administrative Rules Division 21.

E. Each city or county with land use planning responsibility for an area included in the UGB by this ordinance shall adopt provisions – such as setbacks, buffers and designated lanes for movement of slow-moving farm machinery – in its land use regulations to enhance compatibility between urban uses in the UGB and agricultural practices on adjacent land outside the UGB zoned for farm or forest use.

F. Each city or county with land use planning responsibility for a study area included in the UGB shall apply Title 4 of the UGMFP to those portions of the study area designated Regionally Significant Industrial Area (“RSIA”), Industrial Area or Employment Area on the 2040 Growth Concept Map (Exhibit C). If the Council places a specific condition on a RSIA below, the city or county shall apply the more restrictive condition.

G. In the application of statewide planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) to Title 11 planning, each city and county with land use responsibility for a study area included in the UGB shall comply with those provisions of Title 3 of the UGMFP acknowledged by the Land Conservation and Development Commission (“LCDC”) to comply with Goal 5. If LCDC has not acknowledged those provisions of Title 3 intended to comply with Goal 5 by the deadline for completion of Title 11 planning, the city or county shall consider, in the city or county’s application of Goal 5 to its Title 11 planning, any inventory of regionally significant Goal 5 resources and any preliminary decisions to allow, limit or prohibit conflicting uses of those resources that is adopted by resolution of the Metro Council.

[H. Each city and county shall apply the Transportation Planning Rule \(OAR 660 Div 012\) in the planning required by subsections F \(transportation plan\) and J \(urban growth diagram\) of Title 11.](#)

II. SPECIFIC CONDITIONS FOR PARTICULAR AREAS

A. Damascus Area

1. Clackamas County and Metro shall complete Title 11 planning requirements through the incorporation of this area into the greater Damascus/Boring Concept Plan planning effort currently underway. This planning shall be completed within the same time frame as specified in Ordinance No. 02-969B.
2. In the planning required by Title 11, subsections (A) and (F) of section 3.07.1120, Clackamas County or any future governing body responsible for the area shall provide for annexation of those portions of the area whose planned capacity is sufficient to support transit to the Tri-met District.
3. In the planning required by Title 11, subsections (A) and (F) of section 3.07.1120, Clackamas County or any future governing body responsible for the area shall provide for annexation of those portions of the area whose planned capacity is sufficient to support transit to the Tri-met District.

B. Beavercreek Area

1. Clackamas County or, upon annexation to Oregon City, the city and county, with Metro, shall complete Title 11 planning for the area.
2. This area shall be planned in conjunction with the adjoining tax lot added to the UGB in 2002, under Ordinance No. 02-969B.

~~C. Borland Area – North of I-205~~

- ~~1. Clackamas County or, upon annexation to the City of Tualatin, the city and county, in coordination with the Cities of Lake Oswego, Tualatin, and West Linn and Metro, shall complete Title 11 planning within four years following the effective date of Ordinance No. 04-1040. The county and city, in conjunction with Lake Oswego and West Linn and Metro shall recommend long range boundaries in the Stafford Basin and general use designations for consideration by the Council in future expansions of the UGB.~~
- ~~2. Until the effective date of new regulations adopted pursuant to Title 11, the city or county with land use planning responsibility for the area shall not allow the division of a lot or parcel that is 50 acres or larger into lots or parcels smaller than 50 acres.~~

~~DC. Tualatin Area~~

1. Washington County or, upon annexation to the Cities of Tualatin or Wilsonville, the cities, in conjunction with Metro, shall complete Title 11 planning within ~~four~~ two years following the selection of the right-of-way alignment for the I-5/99W Connector, or within seven years of the effective date of Ordinance No. 04-1040, whichever occurs earlier.

2. Title 11 planning shall incorporate the general location of the projected right of way ~~location~~ alignment for the I-5/99W connector and the Tonquin Trail as shown on the 2004 Regional Transportation Plan. If the selected right-of-way for the connector follows the approximate course of the "South Alignment," as shown on the Region 2040 Growth Concept Map, as amended by Ordinance No. 03-1014, October 15, 2003, the portion of the Tualatin Area that lies north of the right-of-way shall be designated "~~Inner~~Outer Neighborhood" on the Growth Concept Map; the portion that lies south shall be designated "Industrial."
3. The governments responsible for Title 11 planning shall consider using the I-5/99W connector as a boundary between the city limits of the City of Tualatin and the City of Wilsonville in this area.

~~ED.~~ Quarry Area

1. Washington County or, upon annexation to the cities of Tualatin or Sherwood, the cities, and Metro shall complete Title 11 planning for the area.
2. Title 11 planning shall, if possible, be coordinated with the adjoining area that was included in the UGB in 2002 under Ordinance No. 02-969B.
3. Until the effective date of new regulations adopted pursuant to Title 11, the city or county with land use planning responsibility for the area shall not allow the division of a lot or parcel that is 50 acres or larger into lots or parcels smaller than 50 acres.
4. Title 11 planning shall incorporate the general location of the projected right-of-way for the Tonquin Trail as shown on the 2004 Regional Transportation Plan.

~~FE.~~ Coffee Creek Area

1. Washington and Clackamas Counties or, upon annexation of the area to the ~~City~~ cities of Tualatin or Wilsonville, the city, ~~and in conjunction with~~ Metro, shall complete the Title 11 planning for the area within ~~four~~ two years following the selection of the right-of-way alignment for the I-5/99W Connector, or within seven years of the effective date of Ordinance No. 04-1040B, whichever occurs earlier.
2. ~~The concept~~ Title 11 planning shall incorporate the general location of the projected right of way location for the I-5/99W connector and the Tonquin Trail as shown on the 2004 Regional Transportation Plan.

~~G.~~ Wilsonville East Area

1. ~~Clackamas County or, upon annexation of the area to the City of Wilsonville, the city, and Metro shall complete the Title 11 planning for the area within two years of the effective date of Ordinance No. 04-1040.~~
2. ~~In the planning required by Title 11 a buffer shall be incorporated to mitigate any adverse effects of locating industrial uses adjacent to residential uses located southwest of the area.~~

- ~~3. Until the effective date of new regulations adopted pursuant to Title 11, the city or county with land use planning responsibility for the area shall not allow the division of a lot or parcel that is 50 acres or larger into lots or parcels smaller than 50 acres.~~

~~H~~F. Cornelius Area

1. Washington County, or, upon annexation of the area to the City of Cornelius, the city and Metro shall complete the Title 11 planning for the area.

~~I~~G. Helvetia Area

1. Washington County, or upon annexation of the area to the City of Hillsboro, the city, and Metro shall complete the Title 11 planning for the area.
2. Until the effective date of new regulations adopted pursuant to Title 11, the city or county with land use planning responsibility for the area shall not allow the division of a lot or parcel that is 50 acres or larger into lots or parcels smaller than 50 acres.

**Exhibit G to Ordinance No. 04-1040B
Findings of Facts, Conclusions of Law**

Introduction

The Metro Council adopted Ordinance 04-1040B in response to LCDC Partial Approval and Remand Order 03-WKTASK-001524, entered July 7, 2003. LCDC's order followed its review of seven ordinances (Nos. 02-969B, 02-983B, 02-984A, 02-985A, 02-986A, 02-987A and 02-990A) adopted by the Metro Council as part of Periodic Review Work Task 2. The findings of fact and conclusions of law that explained how those ordinances complied with state planning laws, together with the supplemental findings and conclusions set forth in this exhibit, are part of the explanation how Ordinance No. 04-1040B complies with those laws. These findings also explain how Ordinance No. 04-1040B complies with the three requirements of the remand order.

REQUIREMENT NO. 1:

REMAND ORDER ON SUBTASK 17: COMPLETE THE ACCOMMODATION OF THE NEED FOR THE INDUSTRIAL LAND NEED COMPONENT OF EMPLOYMENT LAND THAT REMAINS APPROVAL OF WORK TASK 2.

I. GENERAL FINDINGS FOR TASK 2 REMAND DECISION ON UGB

A. Coordination with Local Governments

Metro worked closely with the local governments and special districts that comprise the metropolitan region. The Metro Charter provides for a Metropolitan Policy Advisory Committee ("MPAC") composed generally of representatives of local governments, special districts and school districts in the region. MPAC reviewed all elements of this periodic review decision. MPAC made recommendations to the Metro Council on most portions of the decision. All recommendations were forwarded formally to the Council and the Council responded. Metro Councilors and staff held many meetings with local elected officials in the year since LCDC's remand (July 7, 2003).

The record of this decision includes correspondence between local governments and Metro, including Metro's responses to concerns and requests from local governments and local districts related to industrial land.

Metro accommodated the requests and concerns of local governments as much as it could, consistent with state planning laws and its own Regional Framework Plan (Policy 1.11) and Regional Transportation Plan (Policy 2.0).

B. Citizen Involvement

These findings address Goal 1 and Regional Framework Plan Policy 1.13.

To gather public input on this Task 2 remand decision, Metro conducted an extensive citizen involvement effort. The findings for Ordinance No. 02-969B set forth Metro's effort leading to adoption of that ordinance on December 5, 2002. Those findings are incorporated here. Since that time, the Metro notified by mail nearly 75,000 people of the pending decision to expand the UGB for industrial land. Metro also provided individual mailed notice to nearly 5,000 landowners of possible revisions to Title 4 (Industrial and Other Employment Areas) of the Urban Growth Management Functional Plan ("UGMFP"). In March, 2004, Metro held six workshops on industrial land throughout the region, attended by some 1,200 people. Finally, the Council held public hearings on the UGB expansion and Title 4 on December 4 and December 11 of 2003 and April 22 and 29, May 6 and 27, and June 10 and 24 of 2004.

These efforts bring Metro into compliance with Goal 1 and Metro's Regional Framework Plan. More important, this work to involve Metro area citizens has contributed greatly to their understanding of the importance of this set of decisions for the region and have brought Metro invaluable comment on options available to it.

C. Need for Land

These findings address ORS 197.296; ORS 197.732(1)(c)(A); Goal 2, Exceptions, Criterion (c)(1); Oregon Administrative Rules 660-004-0010(1)(c)(B)(i) and 660-004-0020(2)(a); Goal 9 (local plan policies); Goal 10; Goal 14, Factors 1 and 2; Metro Regional Framework Plan ("RFP") Policies 1.2, 1.4, 1.4.1 and 1.4.2; and Metro Code 3.01.020(b)(1) and (2).

The findings for Ordinance No. 02-969B set forth Metro's analysis of the need for land for new jobs through the year 2022. The Urban Growth Report-Employment ("UGR-E") provides the details of that analysis. The analysis indicates that the region will need approximately 14,240 acres to accommodate an additional 355,000 jobs (all employment, commercial and industrial). Based upon new information that came to the Council during hearings on Title 4 revisions and UGB expansion, Metro completed a supplement (Ordinance No. 04-1040B, Appendix A, Item b) to the UGR-E that describes emerging trends in industrial use.

Leading to adoption of the ordinances that expanded the UGB in December, 2002, Metro analyzed the capacity of the existing UGB to accommodate this employment growth. The analysis determined that the UGB contained a surplus of land (759.6 acres) for commercial employment and a deficit of land (5,684.9 acres) for industrial development. The UGR-E provides the details of this analysis.

Following adoption of the December, 2002, ordinances, Metro analyzed the capacity of the expanded UGB. Those ordinances left Metro with a deficit of 1,968 acres of industrial land and a surplus of 393 acres of commercial land. From this analysis, the Council concluded that the UGB, as expanded by ordinances in December, 2002, did not have sufficient capacity to accommodate the remaining unmet need for industrial land. This deficit was one reason for LCDC's July 7, 2003, remand order directing Metro to complete the accommodation of this need for industrial land.

Based upon interviews with industrial developers, brokers and consultants, the Regional Industrial Land Survey ("RILS") and Metro's UGR-E, Metro refined the need for industrial land. Not just any land will satisfy the need for industrial use. Metro defined the need as 1,968 acres of land composed generally of less than 10 percent slope that lies either within two miles of a freeway interchange or within one mile of an existing industrial area. RILS and the UGR-E also calculate the need for parcels of varying sizes by sectors of the industrial economy. Table 13 of the UGR-E shows a need for 14 parcels 50 acres or larger for the warehouse and distribution and tech/flex sectors (page 25).

D. Alternatives: Increase Capacity of the UGB

These findings address ORS 197.732(c)(B); Goal 14, Factors 3 and 4; Goal 2, Exceptions, Criterion 2; OAR 660-004-0010(1)(B)(ii) and 660-004-0020(2)(b); Metro Code 3.01.020(b)(1)(E); and RFP Policies 1.2, 1.3, 1.4, 1.6, 1.7, 1.8 and 1.9.

To address the shortfall in employment capacity, Metro considered measures to increase the efficiency of land use within the UGB designated for employment. Metro's UGMFP Title 4, first adopted in 1996, limited non-employment uses in areas designated Industrial and Employment. Analysis of results of local implementation of Title 4 indicates that commercial uses and other non-industrial uses are converting land designated for industrial use to non-industrial use.

In response to this information, the Metro Council amended the RFP in Ordinance No. 02-969B in December, 2002, to improve the protection of the existing industrial land base. The Council created a new 2040 Growth Concept design type – “Regionally Significant Industrial Land” (“RSIA”) – and revised Title 4 to establish new limitations on commercial office and commercial retail uses in RSIA. Metro estimated that these new measures would reduce the shortfall in industrial land by 1,400 acres by reducing encroachment by commercial uses. The Council counted this “savings” of industrial land in its determination that the deficit of industrial land following the December, 2002, expansion of the UGB was 1,968 net acres.

Following adoption of the December ordinances, the Council began implementation of the new policy and code, including the mapping of RSIA. The process of developing the map with cities and counties in the region uncovered implementation difficulties with the provisions of the new Title 4 that limited commercial retail and office uses. With Ordinance No. 04-1040B, the Council once again revised Title 4 with two objectives: greater flexibility for traded-sector companies and retention of the 1,400-acre “savings” estimated from the December, 2002, revisions. Based upon the analysis of Title 4 revisions in the supplement to the UGR-E (Ordinance No. 04-1040B, Appendix A, Item b), the Council estimates that the revisions, in combination with conditions placed upon areas added to the UGB for industrial use, will continue to “save” 1,400 acres of industrial land from intrusion by commercial uses.

During hearings on the remand from LCDC, the Council received testimony that an increasing number of industrial jobs is finding space in office buildings rather than in traditional industrial buildings. The Council relied upon this testimony to revise Title 4 limitations on offices in industrial areas. The Council also relied upon the testimony to apply the 393-acre surplus of commercial land taken into the UGB by the December, 2002, ordinances to the need for 1,968 acres of industrial land. The Council assumed that offices in the region’s designated Employment Areas, Centers, Corridors, Station Communities and Mains Streets would absorb industrial jobs. This assumption reduced the need for industrial land from 1,968 to 1,575 net acres.

Also during the hearings, the cities of Wilsonville, Oregon City and Fairview brought news of recent plan amendments (adopted after completion of Metro’s inventory of industrial land) adding land to the industrial land supply. The Council concluded that the land added by Wilsonville (127 acres) and Oregon City (74 acres) are actually available for industrial use, subject to timing and infrastructure requirements. The Council concluded that the Fairview land, though designation industrial in the city’s comprehensive plan, is not yet appropriately zoned to make it available for industrial use. These actions reduced the need for industrial land from 1,575 to 1,374 net acres.

The City of Gresham requested a change to the 2040 Growth Concept Map and the Title 4 Employment and Industrial Areas map for a 90-acre tract that is part of Study Area 12 and adjacent to land added to the UGB in December, 2002, for industrial use. The city says further planning work on its part has revealed that some 20 acres of the tract are suitable for industrial use. The Council makes this change in Ordinance No. 04-1040B, reducing the need from 1,374 to 1,354.

In a further effort to accommodate industrial development more efficiently within the UGB, the Council discovered that it had assumed a commercial development refill rate of 50 percent, lower than the most recently observed rate of 52 percent. For the reasons stated above, the Council concludes that this infill and re-development of lands in designated Employment Areas, Centers, Corridors, Station Communities and Mains Streets will accommodate some of the increasing number of industrial jobs that is locating in offices rather than factories or other traditional industrial buildings. Correction of the commercial refill rate assumption reduces the need for industrial land from 1,354 to 1,180 acres.

E. Alternatives: Expand the UGB

These findings address ORS 197.732(c)(B), (C) and (D) and Goal 2, Exceptions; ORS 197.298(1); Goal 11; Goal 14, Factors 3-7; OAR 660-004-0010(1) and 660-004-0020(2); RFP Policies 1.2, 1.3.1, 1.4, 1.4.1, 1.7, 1.7.2, 1.9, 1.12.1, 1.12.2 and 5.1.1; Regional Transportation Plan Policy 3.0 and Metro Code 3.01.020(b)(3) through (7) and 3.01.020(d)

The measures taken by the Council to increase the capacity of the existing UGB for industrial use, described above leave an unmet need for industrial land of 1,180 acres.

Metro began the search for the most appropriate land for inclusion in the UGB by applying the priorities in ORS 197.298(1). Because Metro has not re-designated "urban reserve" land since its 1997 designation was invalidated on appeal, the highest priority for addition of land is exception land.

Metro first included for consideration all exception land that was studied for inclusion in the December, 2002, ordinances, but not included at that time (59,263 acres). Metro then expanded the search to consider all other land, resource land included, that met the siting characteristics that help define the need for industrial land (less than 10 percent slope and within two miles of a freeway interchange or one mile of an existing industrial area (9,071 acres). In all, Metro looked at approximately 68,000 acres to find the most appropriate land.

Once Metro mapped land by its statutory priority, Metro analyzed the suitability of the land for industrial use, considering the locational factors of Goal 14, the consequences and compatibility criteria of the Goal 2 and statutory exceptions process, the policies of the Regional Framework Plan (RFP) and the criteria in the Metro Code that are based upon Goal 14. This analysis is set forth in the Alternatives Analysis Study, Item (c) in Appendix A of Ordinance No. 04-1040B and subsequent staff reports [Appendix A, Items (a) and (y)].

The Alternatives Analysis and testimony from the hearings gave the Council few easy or obvious choices among the lands it considered. The land most suitable for the types of industrial use forecast in the region for the next 20 years is flat land near freeway interchanges or near existing industrial areas. In addition, the region needs parcels 50 acres or larger for the warehouse and distribution and tech/flex sectors. The land most likely to meet these needs at the perimeter of the UGB is agricultural land, the last priority for inclusion under ORS 197.298(1).

The highest priority for inclusion, under the priority statute, where no urban reserves have been designated, is exception land. But the character of most exception areas makes them unable to fill the region's needs for industrial use. The great majority of exception land outside the UGB is designated for residential use, and most of that is settled with residences. Parcels are generally small (five acres and smaller), the topography is usually rolling and often steep, and streams, small floodplains and wildlife habitat are common. And residents, as evidenced by testimony at Council hearings, are often vigorously opposed to industrial intrusions into what they consider their neighborhoods.

The Council excluded from further consideration those exception lands that lie further than two miles from a freeway interchange and more than one mile from existing industries for the reason that these areas cannot meet the identified need for industrial land. The Staff Report [Appendix A, Item (a)] describes these specific areas in detail at pages 13 to 18.

The Council excluded other study areas (or portions of them) from further consideration even though they could meet the identified need (less than 10 percent slope and either within two miles from a freeway interchange or within one mile from existing industries) because they are unsuitable for industrial use. Further analysis showed that some combination of parcelization, existing development, limitations on use

imposed by Title 3 of the UGMFP (Water Quality, Flood Management and Fish and Wildlife Conservation), poor road access, difficulty in providing public services and negative effects of urbanization on nearby agricultural practices renders the areas unsuitable for industrial use. Portions of the areas contain designated farm or forest land. The Staff Report [Appendix A, Item (a)] describes these specific areas in detail at pages 18 to 25 (and portions of other areas at pages 13 to 18).

The Council also excluded those exception areas that are not contiguous to the UGB, or to areas added to the UGB for industrial use, and do not contain enough suitable land to comprise a minimum of 300 gross acres. Based upon an analysis of industrial areas within the pre-expansion UGB and reasoning set forth in "Formation of Industrial Neighborhoods", memorandum from Lydia Neill to David Bragdon, October 24, 2003, the Council concludes that these small areas cannot satisfy the need for industrial land.

The Council looked next to resource land, beginning with land of lowest capability. The Council included 354 acres (236 net acres) designated for agriculture in the Quarry Study Area, composed predominantly of the poorest soils (Class VII) in the region. Other land with poor soils in the vicinity were rejected due to steep slopes. The Council included 63 acres (30 net acres) designated for forestry in the Beaver Creek Study Area composed of Class IV and VI soils and 102 acres (69 net acres) of Class III and IV soils in the Damascus West Study Area. No other land with soil capability lower than Class II can meet the need for industrial use identified by the Council.

Finally, the Council turned to the many lands under consideration with predominantly Class II soils. To choose among thousands of acres of this flat farmland near urban industrial areas or near freeway interchanges, the Council considered the locational factors of Goal 14 and policies in its Regional Framework Plan ("RFP") and Regional Transportation Plan ("RTP"). Further, the Council sought advice from a group of farmers and agriculturalists in the three counties, assembled by the Oregon Department of Agriculture ("ODA"). This group submitted a report to the Council entitled "Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use." [Appendix A, Item (i).] Preliminary guidance from ODA led the Council to consider an amendment to Policy 1.12 of the RFP on agricultural land, adopted and applied in Ordinance No. 04-1040B: "When the Council must choose among agricultural lands of the same soil classification for addition to the UGB, the Council shall choose agricultural land deemed less important to the continuation of commercial agriculture in the region." (Exhibit A.)

The Council finds that the region will be able to urbanize the lands it has added to the UGB in an efficient and orderly fashion. The Council concludes that the overall consequences of urbanization of these lands are acceptable, especially given the protections in place in the RFP and Metro Code for sensitive resources. Through mitigation measures required by the conditions in Exhibit F, the Council believes it can achieve compatibility between urbanization of the land added to the UGB and adjacent land outside the UGB.

The Council also believes that it is able to maintain separations between communities at the urban fringe sufficient to allow each community to retain a sense of place. The Council chose ridgelines, streams, power lines, roads and property lines to define the boundaries of the UGB in an effort to provide a distinct boundary and a clear transition between urban and rural uses.

The Council also finds that the lands it added to the UGB for industrial use contribute to a compact urban form. The lands are adjacent to the existing UGB. Many involve exception lands that are already partially urbanized and contain some components of public facilities needed to serve urban industrial uses. The Council rejected some areas of exception land that extend far from the UGB and would require long extensions of linear services such as sewer, water and stormwater lines. The Council chose land that adheres closely to siting characteristics needed by the industries likely to grow during the planning period: proximity

to existing industrial areas and accessibility to freeway interchanges. These choices contribute to the region's urban form which, among other things, calls for siting uses with higher densities (commercial and residential) in Centers and other design types served by high-capacity public transit.

Combined with areas added to the UGB for employment in the December, 2002, periodic review ordinances, areas added by Ordinance No. 04-1040B for industrial use are distributed round the region. Most of the jobs land was added to the east side of the region in December, 2002. This ordinance adds industrial land mostly to the south and west sides of the region. In particular, addition of 262 acres north of Cornelius will add jobs, income, investment and tax capacity to a part of the region with disproportionately little of those resources.

F. Water Quality

Each local government responsible for an area added to the UGB must complete the planning requirements of Title 11, Urban Growth Management Functional Plan ("UGMFP"), including compliance with the water quality provisions of Title 3 of the UGMFP.

G. Areas Subject to Natural Disasters and Hazards

The Council has excluded environmentally constrained areas from the inventory of buildable land (see UGRs) and from its calculation of the housing and jobs capacity of each study area (see Alternatives Analysis). Each local government responsible for an area added to the UGB must complete the planning requirements of Title 11, Urban Growth Management Functional Plan ("UGMFP"), including compliance with Title 3 of the UGMFP on floodplains and erosion control.

The Council considered the best information available on known hazards, including earthquake hazard. The study areas with the highest earthquake hazard have been rejected. The are small portions of several study areas with known earthquake hazards added to the UGB. Local governments responsible for Title 11 planning are required by that title (and Goal 7) to take these portions into account in their comprehensive plan amendments.

H. Economic Development

As part of Task 2 of periodic review, Metro reviewed the economic development elements of the comprehensive plans of each of the 24 cities and three counties that comprise the metro area. Metro used the review in its determination of the region's need for employment land and for coordination with local governments of its choices to add land to the UGB for employment purposes.

Revisions to Title 4 (Industrial and Other Employment Areas) of the UGMFP and the conditions placed upon lands added to the UGB (Exhibit F of Ordinance No. 04-1040B and exhibits to December, 2002, ordinances) add significant protection to sites designated for industrial use, both those added to the UGB and those within the UGB prior to expansion, to help ensure their availability for that purpose.

Inclusion of these areas adds 1,920 acres (1,047 net acres) to the UGB for industrial use. Combined with the efficiency measures described in Section D of these Findings (Alternatives: Increase Capacity of the UGB), above, and actions taken in December, 2002, these additions to the UGB accommodate approximately 99 percent of the need for industrial land [identified in the 2002-2022 Urban Growth Report: An Employment Land Need Analysis (9,366 net acres)]. Given the unavoidable imprecision of the many assumptions that underlie the determination of need for industrial land – the population forecast; the employment capture rate; the industrial refill rate; employment density (particularly given changes in building types used by industry over time); the rate of encroachment by non-industrial uses; and the vintage

industrial relocation rate – the Council concludes that its actions in the December, 2002, ordinances and in this Ordinance No. 04-1040B provide a 20-year supply of industrial land for the region and comply with part 2 (periodic review Subtask 17) of LCDC’s Partial Approval and Remand Order 03-WKTASK-001524, July 7, 2003.

II. SPECIFIC FINDINGS FOR PARTICULAR AREAS ADDED TO UGB IN TASK 2 REMAND DECISION

These findings address ORS 197.298; ORS 197.732(1)(c)(B), (C) and (D); Goal 2, Exceptions, Criteria (c)(2), (3) and (4); Oregon Administrative Rules (OAR) 660-004-0010(1)(B)(ii), (iii) and (iv); OAR 660-004-0020(2)(b), (c) and (d); Goal 5; Goal 11; Goal 12; Goal 14, Factors 3 through 7; Metro Code 3.01.020(b)(3) through (7) and 3.01.020(d); Metro RFP Policies 1.2, 1.3, 1.4, 1.6, 1.7, 1.11 and 1.12; and Regional Transportation Plan Policies 2.0, 3.0, 4.0 and 14.0.

A. Damascus West

The Council relies upon the facts and analysis in the Industrial Land Alternative Analysis Study [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 21-23; 111; A-1 – A-4] and the Staff Report [Appendix A, Item (a), p. 27] to support its conclusion that addition of a portion of Damascus West will provide for an orderly and efficient transition from rural to urban land use. The Council chose this area of resource land because it contains a concentration of larger parcels (five parcels between 10 and 20 acres). Parcels of this range are needed for the types of industries Metro expects will grow during the planning period (UGR-E, p. 25) and are generally unavailable in exception areas. Also, soils in the area are Class III and IV, of lower capability than other resource land under consideration. In addition, the area lies within a ground-water restricted area designated by the Oregon Department of Water Resources. Finally, it occupies a small notch that extends into land within the UGB and is relatively isolated by topography and forested land from other agricultural lands to the south, as noted in the report of the Metro Agricultural Lands Technical Workgroup led by the Oregon Department of Agriculture [“Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use”, Appendix A, Item (i)].

1. Orderly Services

The Council relies upon the Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Alternative Analysis Study (Appendix A, Item 6, pages 111 and Table A-2, respectively) for its determination that these services can be provided to the Damascus West area in an orderly and economic manner by extending services from existing serviced areas. Condition IIA(1) of Exhibit F calls for transportation and public facility and service plans within the same four years allowed for Title 11 planning of the entire Damascus area by Condition IIA(1) of Exhibit M of Ordinance No. 02-969B.

The Alternative Analysis Study (p. 20) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the larger Damascus Study Area. Serviceability generally ranges from “easy” to “difficult” to serve (Table 1, p. 111) and compares favorably with areas not included (such as Borland Road South, Norwood/Stafford and Wilsonville West). Transportation services will be only moderately difficult to provide for reasons set forth in the Alternative Analysis Study, p. 21.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above for its conclusion that the area can urbanize efficiently, particularly knowing that Damascus West will be planned in conjunction with the greater Damascus area added to the UGB in December, 2002. The Council

also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on the Damascus West area set forth in the Alternative Analysis Study, pp. 21-22 and Table A-3. The analysis indicates that the consequences will be low, especially considering the requirements of Title 11 of the UGMFP that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of Ordinance No. 04-1040B.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning considered Metro's adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F). The local governments will eventually adopt provisions to implement Metro's Goal 5 program following the Council's adoption of that program, if the local government's ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Damascus West area would have low adverse consequences for nearby agriculture (Alternative Analysis Study, p. 21; Table A-4). This is, in part, due to the facts that the area occupies a small notch that extends into land within the UGB and is relatively isolated by topography and forested land from other agricultural lands to the south, as noted in the report of the Metro Agricultural Lands Technical Workgroup led by the Oregon Department of Agriculture ["Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use", Appendix A, Item (i)]. Ordinance No. 04-1040B, Exhibit F, imposes Condition IE upon urbanization of Damascus West to reduce conflict and improve compatibility between urban use in the area and agricultural use on land to the south.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Damascus West area protected by Clackamas County in its acknowledged comprehensive plan (p. 22). The county will be responsible for protecting these resources in the area when it amends its comprehensive plan and zoning ordinance to implement expansion of the UGB. Condition IG of Exhibit F requires the county to consider Metro's inventory of Goal 5 resources in their application of Goal 5 to the Damascus area. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires Clackamas County to protect water quality and floodplains in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county planning for the area.

6. Public Utilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Clackamas County from upzoning and from dividing land into resulting lots or parcels smaller than 20 acres until the county revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public

facilities such as sanitary sewers, storm sewers and water lines for the area. Metro and the county began this work with the evaluation of the serviceability of the Damascus area in the Alternative Analysis Study (pages 20-21 and 111).

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Damascus West area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Clackamas County from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county revises its comprehensive plans and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county to develop conceptual transportation plans and urban growth diagrams with the general locations of arterial, collector and essential local streets for the area. Metro and Clackamas County began this work with the evaluation of the serviceability of the area in the Alternative Analysis Study (p. 21 and Table A-2) and consideration of how to provide services as part of the analysis required to satisfy Goal 14, factors 3 and 4.

Metro's 2000 Regional Transportation Plan (RTP) anticipated inclusion of the area within the UGB. The plan's "Priority System" of planned transportation facilities shows improvements planned for the area to serve anticipated growth. Among the improvements is the Sunrise Highway, a likely alignment for which (shown on the 2040 Growth Concept Map) borders the portion of the Damascus West Study Area included by this ordinance. The "Financially Constrained System" includes improvements that will add capacity to East Sunnyside Road near the included area (see discussion of RTP below).

8. Regional Framework Plan

The area lies within ½-mile of Damascus Town Center and will provide additional employment to support the center. The area will not only provide employment opportunities for new residents of the Damascus area, but also improve the ratio between jobs and housing in the east side of the region.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan adopted a "Priority System" of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements are the "East Multnomah County Transportation Projects" and the "Pleasant Valley and Damascus Transportation Projects" that will provide the basic transportation services to the area (pages 5-49 to 5-57). Figures 1.4, 1.12, 1.16, 1.17, 1.18 and 1.19 of the RTP show how the region's street design, motor vehicle, public transportation, freight, bicycle and pedestrian systems will extend into the Damascus area.

B. Beavercreek

The Council relies upon the facts and analysis in the Alternative Analyses Study [2003 in Appendix A, Item(d) in Ordinance No. 04-1040B, pp. 32-34; 111; A-1 – A-4] and the Staff Report [Appendix A, Item (a), p. 25] to support its conclusion that addition of a portion of the Beavercreek area will provide for an orderly and efficient transition from rural to urban land use. The Council added this single tract, zoned for forest use but occupied by a portion of a larger golf course, in part because the Council included the other half of the golf course in the UGB by Ordinance No. 02-969B in December, 2002 (as part of Task 2), and

designated it for industrial use. The predominant soils on the tract are Class IV and VI. This parcel (63 acres; 30 net acres) helps satisfy the identified need for large parcels (see UGR-E, page 25), particularly in combination with the other part of the golf course included in December, 2002.

1. Orderly Services

The Council relies upon the Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Alternative Analysis Study (Appendix A, Item 6, pages 111 and Table A-2, respectively) for its determination that these services can be provided to this portion of the Beavercreek area in an orderly and economic manner by extending services from existing serviced areas. Condition IA of Exhibit F calls for transportation and public facility and service plans within two years. Condition IIB(2) specifies that Title 11 planning of the area be done in conjunction with Title 11 planning for the adjoining area added to the UGB by Ordinance No. 02-969B.

The Alternative Analysis Study (p. 32-33) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the larger Beavercreek area. The developable portion of the area included in the UGB adjoins and will be served by the same providers that will serve the area added to the UGB in December, 2002. Serviceability generally ranges from “easy” to “difficult” to serve (Table 1, p. 111) and compares favorably with areas not included (such as Borland Road South, Norwood/Stafford and Wilsonville West). Table A-2 shows transportation services for the larger Beavercreek area to be difficult. However, for the portion of Beavercreek added, transportation services will be the same as those provided to the adjoining property added to the UGB in December, 2002.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above for its conclusion that the area can urbanize efficiently, particularly knowing that this portion of the Beavercreek area will be planned in conjunction with the portion added to the UGB and designated for industrial use in December, 2002. Both portions can be urbanized more efficiently if the portions are planned and urbanized together.

The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on this portion of the Beavercreek area set forth in the Industrial Land Alternative Analysis Study, p. 34 and Table A-3). The analysis indicates that the consequences will be high if the Council were to include the entire Beavercreek study area (2,540 acres). But Ordinance No. 04-1040B includes only a single, 63-acre tract, half of a golf course the other half of which was included in the UGB by Ordinance No. 02-969B. Title 11 of the UGMFP requires that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the tract subject to Title 3 of the UGMFP and the conditions in Exhibit F of this ordinance.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning considered Metro’s adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F). The local governments will eventually adopt provisions to implement Metro’s Goal 5 program following the Council’s adoption of that program, if the local government’s ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Beaver creek area would have moderate adverse consequences for nearby agriculture (p. 111). There will be little effect on agriculture from urbanization of this small portion of the area, however, because the tract itself is part of a golf course, and there are no nearby agricultural activities.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the larger Beaver creek area protected by Clackamas County in its acknowledged comprehensive plan (page 34). The single portion of the larger area added to the UGB by this ordinance contains no inventoried Goal 5 sites protected by Clackamas County. Condition IG of Exhibit F requires the county to consider Metro's inventory of Goal 5 resources in their application of Goal 5 to the small portion of the Beaver creek area included in the UGB. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires Clackamas County to protect water quality and floodplains in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the counties to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county planning for the area.

6. Public Facilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Clackamas County or Oregon City from upzoning and from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area. Metro, the county and the city began this work with the evaluation of the serviceability of the Beaver creek area in the Alternative Analysis Study done as part of Ordinance No.02-969B (pages 108-09; A-9, A-13;) and the Industrial Land Alternative Analysis Study done as part of Ordinance No. 04-1040A (pages 25, 32-33 and 111).

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Beaver creek area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Clackamas County or Oregon City from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop a conceptual transportation plan and urban growth diagram with the general locations of arterial, collector and essential local streets for the area. Metro, the county and the city began this work with the evaluation of the serviceability of the Beaver creek area in the Alternative Analysis done as part of Ordinance No.02-969B (pages 108-09; A-9, A-15-19) and the Analysis done as part of Ordinance No. 04-1040B (pages 25 and 33 and A-2).

The City of Oregon City indicates that the Beaver creek area can be provided with transportation services. The small included portion adjoins an area that is more serviceable than other portions of the larger Beaver creek area considered by the Council. It is contiguous to the city and can be served in an orderly manner.

8. Regional Framework Plan

This small addition of industrial land (63 acres) will be planned in combination with adjoining industrial land added by Ordinance No. 02-969B to comprise a more efficient industrial area. The area will provide employment to support the Oregon City Regional Center.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan adopted a "Priority System" of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements is the "Highway 213 Corridor Study" to complete a long-term traffic management plan and identify projects to implement the plan (pages 5-59 to 5-61).

C. Quarry (Partial)

The Council relies upon the facts and analysis in the Industrial Land Alternative Analyses Study [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 64-66; 111; A-1 – A-4] and the Staff Report [Appendix A, Item (a), pp. 26-27] to support its conclusion that addition of a portion of the Quarry Study Area will provide for an orderly and efficient transition from rural to urban land use. The Council chose this area of resource land because it contains a concentration of larger parcels, relatively few of which are developed with residences. Parcels of this range are needed for the types of industries Metro expects will grow during the planning period (UGR-E, p. 25) and are generally unavailable in exception areas. Also, soils in the area are predominantly Class VII, of lower capability than other resource land under consideration. Significant portions are devoted to quarry operations, which have removed soils altogether. There are major quarry operations adjoining this area to the east and elsewhere nearby. There is also significant industrial development and zoning north and east of the Quarry area. See "Perfect for Industry", prepared by Davis, Wright, Tremaine, LLP, April 29, 2004. The Council included one of the quarry areas in the UGB in Ordinance No. 02-990A for industrial use. Some agricultural activity takes place in the northern section of this area, but it is isolated from other areas devoted to agriculture by quarry operations and other nonfarm activities [Tualatin Valley Sportsmens Club (gun club), for example].

1. Orderly Services

The Council relies upon the Quarry Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Industrial Land Alternative Analysis Study (Appendix A, Item (c), pages 111 and Table A-2, respectively) for its determination that urban services can be provided to the Quarry area in an orderly and economic manner by extending services from existing serviced areas. Condition IIE(2) of Exhibit F calls for coordination of transportation and public facility and service planning for this area with the adjoining area added to the UGB for industrial use on December 12, 2002.

The Alternatives Analysis (p. 64-65) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the Quarry Study Area. Serviceability ranges from "easy" to "moderately difficult" to serve (Table 1, p. 111) and compares favorably with areas not included (such as Borland Road South, Norwood/Stafford and Wilsonville West). Transportation services would be easy to provide for reasons set forth in the Alternative Analysis Study, p. 65.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above for its conclusion that the area can urbanize efficiently, particularly knowing that this portion of the Quarry Study Area will be planned in conjunction with the quarry area to the east, added to the UGB and designated for industrial use in December, 2002. This portion lies close to existing services and Tualatin-Sherwood and Oregon Roads. Both portions can be urbanized more efficiently if the portions are planned and urbanized together.

The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on this portion of the Quarry Study Area set forth in the Alternative Analysis Study, p. 65-66 and Table A-3). The analysis indicates that the environmental consequences will be low. In addition, Title 11 of the UGMFP requires that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of this ordinance.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning considered Metro's adopted Goal 5 inventory during its planning (see Condition I G, Exhibit F). The local governments will eventually adopt provisions to implement Metro's Goal 5 program following the Council's adoption of that program, if the local government's ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Quarry Study Area would have few adverse consequences for nearby agriculture. The area has the UGB on three sides and quarry operations to the east and southeast. The portion devoted to agriculture is in the northwest portion, isolated from agricultural operations south of the quarries.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Quarry Study Area protected by Washington County in its acknowledged comprehensive plan (page 65-66). Significant portions of the area are identified as aggregate sites in the county's Goal 5 inventory and are protected by aggregate overlays. Under Metro's Title 11, current county land use regulations will remain in place until the county, or one of the cities (Tualatin or Sherwood), adopts new plan provisions and land use regulations to allow industrial uses in the area, at which time the county or city will apply Goal 5 to the area and re-consider the decision to protect the quarries under Goal 5.

Condition IG of Exhibit F requires the county or cities to consider Metro's inventory of Goal 5 resources in its application of Goal 5 to the Quarry area included in the UGB. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires the county to protect water quality and wetlands in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county or city planning for the area.

6. Public Facilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Sherwood or Tualatin from upzoning and from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area. Metro, the county and the cities began this work with the evaluation of the serviceability of the Quarry Study Area in the Alternative Analysis done as part of Ordinance No.02-969B (pages 161-63; A-9) and the Analysis done as part of Ordinance No. 04-1040B (pages 64-65 and 111).

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Quarry Study Area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Sherwood or Tualatin from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and land use regulations to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop a conceptual transportation plan and urban growth diagram with the general locations of arterial, collector and essential local streets for the area. Metro and the county and cities began this work with the evaluation of the serviceability of the area in the Alternatives Analysis done as part of Ordinances No.02-969B (pages 108-09; A-9, A-15-19) and 990A and the Analysis done as part of Ordinance No. 04-1040B (pages 64-65 and A-2). The cities indicate a willingness to serve the Quarry area with transportation services pending the determination of service boundaries.

8. Regional Framework Plan

This addition of industrial land will be planned in coordination with adjoining industrial land to the east added by Ordinance No. 02-990A to comprise a more efficient industrial area. The area will provide employment to support the Sherwood and Tualatin Town Centers. The Quarry area runs along the Tualatin-Sherwood Road within two miles of the two centers. Given that the added portion of the Quarry area is suitable for the types of industry likely to grow in the future, the Council includes the area notwithstanding that this part of the region is relatively well-endowed with employment.

By adding the Quarry area to the UGB, following addition of the quarry area to the east, Metro will be bringing a “notch” into the UGB that lies between the two cities of Sherwood and Tualatin. This keeps the form of the region compact and efficient.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan adopted a “Priority System” of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements are the “The Tualatin-Sherwood Major Investment Study”, to complete environmental design for the I-5 to 99W principal arterial connector, and the “Tualatin-Sherwood

Connector”, to construct the four-lane tollway connection (pages 5-65 to 5-67). Although a final corridor for this facility has not yet been chosen, it is almost certain that it will pass less than a mile from the south border of the Quarry area.

D. Coffee Creek (partial)

The Council relies upon the facts and analysis in the Alternatives Analyses [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 58-60; 111; A-1 – A-4] and the Staff Report [Appendix A, Item (a), pp. 26] to support its conclusion that addition of a portion of the Coffee Creek Study Area [264 acres (97 net acres) of 442 in the study area] will provide for an orderly and efficient transition from rural to urban land use. The Council chooses this portion because it is almost entirely exception land (there is a 4.6-acre tract of resource at the northern edge), it can be planned in conjunction with land added to the UGB in December, 2002, for industrial use, urban services are available in the vicinity, and urbanization will have no effect on agricultural practices on adjacent land due to its isolation from agricultural activities.

1. Orderly Services

The Council relies upon the Coffee Creek Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Industrial Land Alternative Analysis Study (Appendix A, Item 6, pages 111 and Table A-2, respectively) for its determination that urban services can be provided to the Quarry area in an orderly and economic manner by extending services from existing serviced areas. Condition IIF(1) of Exhibit F allows four years for Title 11 planning for this area so that planning for urban services can be done in conjunction with such planning for the adjoining area added to the UGB for industrial use on December 5, 2002.

The Alternative Analysis Study sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the Coffee Creek area (p. 58-60; Table 1, p. 111). Serviceability ranges from “moderate” to “difficult” to serve and compares favorably with areas not included (such as Borland Road South and Wilsonville West).

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above for its conclusion that the area can urbanize efficiently, knowing that this portion of the Coffee Creek Study Area will be planned in conjunction with the area to the east, added to the UGB and designated for industrial use in December, 2002. The area lies adjacent to a principal north-south rail line that will make industrial use and movement of freight more efficient.

The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on this portion of the Coffee Creek area set forth in the Alternative Analysis Study, p. 58-60 and Table A-3). Because the Council included only the easternmost portion of the study area – the portion that borders the UGB on the west – the adverse consequences will be reduced. Title 11 of the UGMFP requires that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of this ordinance.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning considered Metro's adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F, Ordinance No. 04-1040B). The local government will eventually adopt provisions to implement Metro's Goal 5 program following the Council's adoption of that program, if the local government's ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the included portion of the Coffee Creek area would have no adverse consequences for nearby agriculture (p. 111). The area has quarry operations nearby and is isolated from commercial agricultural activity by stream drainages.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Coffee Creek Study Area protected by Washington County in its acknowledged comprehensive plan (p. 60). The quarries in the area are protected by aggregate overlays by Washington County. Under Metro's Title 11, current county land use regulations will remain in place until the county, or the City of Wilsonville or Tualatin, adopts new plan provisions and land use regulations to allow industrial uses in the area, at which time the county or city will apply Goal 5 to the area and re-consider the decision to protect the quarries under Goal 5.

Condition IG of Exhibit F requires the county or city to consider Metro's inventory of Goal 5 resources in its application of Goal 5 to the portion of Coffee Creek area included in the UGB. The area contains streams, wetlands and floodplains. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires the county or city to protect water quality and wetlands in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county or city to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county or city planning for the area.

6. Public Facilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Wilsonville or Tualatin from upzoning and from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of the area; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area.

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Coffee Creek Study Area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits the county or city from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and zoning ordinance to authorize urbanization of the area; and (2) requires the county or city to develop conceptual transportation plans and urban growth diagrams with the general locations of arterial, collector and essential local streets for the area.

8. Regional Framework Plan

This addition of industrial land will be planned in combination with adjoining industrial land to the east added by Ordinance No. 02-969B to comprise a more efficient industrial area. The Coffee Creek Study Area will provide employment to support the Tualatin and Wilsonville Town Centers, to the north and south respectively. Given that the developable portion of the area is exception land and is suitable for the types of industry likely to grow in the future, the Council includes the Coffee Creek area notwithstanding that this part of the region is relatively well-endowed with employment.

Adding the Coffee Creek area to the UGB, lying between and adjacent to the Cities of Tualatin and Wilsonville, following addition of the area to the east, keeps the form of the region compact and efficient.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan (“RTP”) adopted a “Priority System” of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements are improvements to Boones Ferry Road from Durham Road in the north to Elligsen Road in the south, east of the Coffee Creek Study Area.

The RTP also includes “The Tualatin-Sherwood Major Investment Study”, to complete environmental design for the I-5 to 99W principal arterial connector, and the “Tualatin-Sherwood Connector”, to construct the four-lane tollway connection (pages 5-65 to 5-67). Although a final corridor for this facility has not yet been chosen, it is almost certain that it will pass through or just to the north of the Coffee Creek area, likely enhancing its access to I-5. Finally, the principal north-south rail line that lies along the eastern boundary of the area will offer an additional mode of transport for movement of freight in the area.

E. Tualatin

The Council relies upon the facts and analysis in the Industrial Land Alternative Analyses Study [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 61-63; 111; A-1 – A-4] and the Staff Reports [Appendix A, Item (a), pp. 27-28] to support its conclusion that addition of a portion of the Tualatin Study Area will provide for an orderly and efficient transition from rural to urban land use. The Council chose this area because it is exception land (rural residential and rural industrial) with characteristics that make it suitable for industrial use. It lies within two miles of the I-5 corridor and within one mile of an existing industrial area, and portions of the area are relatively flat. These characteristics render it the most suitable exception area under consideration for warehousing and distribution, a significant industrial need facing the region.

The City of Tualatin and many residents of the area expressed concern about compatibility between industrial use and residential neighborhoods at the south end of the city. They have also worried about preserving an opportunity to choose an alignment between Tualatin and Wilsonville for the I-5/99W Connector; the south alignment for this facility passes through the northern portion of the Tualatin Study Area.

In response to these concerns, the Council placed several conditions upon addition of this area to the UGB. First, the Council extended the normal time for Title 11 planning for the area: two years following the identification of a final alignment for the Connector, or seven years after the effective date of Ordinance No. 04-1040B, whichever comes sooner. This allows Title 11 planning by Washington County, the cities of Tualatin and Wilsonville and Metro to accommodate planning for the Connector alignment. Second, the

Council states that, so long as the alignment for the Connector falls close to the South Alignment shown on the 2040 Growth Concept Map, it will serve as the buffer between residential development to the north (the portion least suitable for industrial uses) and industrial development to the south (the portion of the area most suitable for industrial use)

1. Orderly Services

The Council relies upon the Tualatin Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Industrial Land Alternative Analysis Study (Appendix A, Item (c), pages 111 and Table A-2, respectively) for its determination that urban services can be provided to the area in an orderly and economic manner by extending services from existing serviced areas.

The Alternatives Analysis (pp. 61-62) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the Tualatin Study Area. Serviceability ranges from “easy” to “difficult” to serve (Table 1, p. 111). Throughout Task 2 of periodic review the Council has found, however, that provision of services to almost every exception area is difficult and expensive. The City of Wilsonville anticipates further industrial development in the portion of the study area north and northwest of the existing city, in part due to the siting of the Coffee Creek Correctional Facility, and expects to be the service provider over time. Given the critical need for sites proximate to interchanges on I-5 and the rarity of such sites, the Council has decided to include the Tualatin Study Area notwithstanding.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above (Orderly Services) for its conclusion that the area can urbanize efficiently. The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

This area lies between two cities and among areas added to the UGB for industrial use in December, 2002, making urbanization of the area more efficient than projecting urbanization from the UGB into a rural area. Given the likelihood that the region will build the I-5/99W Connector through this area, industrial development in the area will ensure efficient use of that facility.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on the Tualatin Study Area set forth in the Alternative Analysis Study, pp. 62-63 and Table A-3). The analysis indicates that the consequences will be low to moderate, especially considering the requirements of Title 11 of the UGMFP that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of Ordinance No. 04-1040B.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning considered Metro’s adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F). The local governments will eventually adopt provisions to implement Metro’s Goal 5 program following the Council’s adoption of that program, if the local government’s ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Tualatin Study Area would have low adverse consequences for agriculture (Alternative Analysis Study, p. 62; Table A-4). Although there are a few agricultural uses in the study area itself, the area is designated entirely for rural residential and rural industrial uses, pursuant to exceptions from statewide planning Goals 3 and 4. The area is isolated from land designated for agriculture by the UGB, I-5 and mining operations to the west. Hence, it is unlikely that industrial use will conflict with agricultural activities on land designated for agricultural or forest use.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Tualatin Study Area protected by Washington County in its acknowledged comprehensive plan (pp. 62-63). There are aggregate mines in the vicinity; portions of Washington County's Mineral and Aggregate Overlay District B cover small portions of the study area in the northwest and southwest corners and the top central portion.

The county, or the City of Wilsonville or Tualatin upon annexation to one of the cities, will be responsible for protecting these resources when it amends its comprehensive plan and zoning ordinance to implement expansion of the UGB. Condition IG of Exhibit F requires the county or city to consider Metro's inventory of Goal 5 resources in their application of Goal 5 to the Tualatin Study Area. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires the county or city to protect water quality and floodplains in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county or city to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county or city planning for the area.

6. Public Facilities and Service

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County and the cities of Wilsonville and Tualatin from upzoning and from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of the area; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area.

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Tualatin Study Area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County and the cities of Tualatin and Wilsonville from upzoning and from land divisions into lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land added to the UGB; and (2) requires the county or city to develop conceptual transportation plans and urban growth diagrams with the general locations of arterial, collector and essential local streets for the area. Metro began this work with the evaluation of the serviceability of the area in the Alternative Analysis Study (pp. 61-62 and Table A-2) and consideration of how to provide services as part of the analysis required to satisfy Goal 14, factors 3 and 4.

Table A-2 recognizes that provision of transportation to new industrial uses in the area will be difficult. The Oregon Department of Transportation, Region 1 ("ODOT"), expects the volume-to-capacity ratio on I-5 in the vicinity of the North Wilsonville interchange to be "extremely poor" by 2025, and states

that the interchange “may need to be reviewed for impact” if the Council adds land to the UGB dependent upon the interchange. The “Priority System” in Metro’s RTP calls for improvement to Boones Ferry Road from Durham Road in Tualatin to Elligsen Road in Wilsonville and for construction of a four-lane tollway between I-5 and Highway 99W, the southern and most likely alignment of which passes through the study area. There is no planned improvement to the capacity of the freeway or the interchange in the RTP or either city’s TSP. In 2002, however, a joint ODOT/Wilsonville study concluded that in 2030, widening of I-5 to eight lanes would be required to meet interstate freeway capacity standards set by Metro and ODOT. This study will help Metro, ODOT, Wilsonville and Tualatin understand the improvements needed to accommodate industrial use in the study area. The 2004 Federal RTP also identifies a corridor refinement study for I-5 in the vicinity. These studies will inform Title 11 planning for the study area.

8. Regional Framework Plan

The Tualatin Study Area lies midway between the Tualatin and Wilsonville Town Centers, and is nearly as close to the Sherwood Town Center as to Tualatin and Wilsonville. Industrial development in the study area will provide additional employment to support businesses in those centers. The Council includes this area, notwithstanding that this part of the region is relatively well-endowed with employment, because it has more of the characteristics needed for warehousing and distribution than other areas considered. The Wilsonville South Area has many of the same characteristics. But it lies on the opposite side of the Willamette River and requires a trip on I-5 across the river to gain access to the Wilsonville Town Center. The Council concludes that addition of the north portion of the Tualatin Study Area provides better urban form to the city and the region than adding land on the south side of the Willamette River.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan adopted a “Priority System” of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements in the vicinity of the Tualatin Study Area are improvement to Boones Ferry Road from Durham Road in Tualatin to Elligsen Road in Wilsonville and construction of a four-lane tollway between I-5 and Highway 99W, the southern and most likely alignment of which passes through the study area.

F. Helvetia (Partial)

The Council relies upon the facts and analysis in the Industrial Land Alternative Analyses Study [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 104-06; 111; A-1 to A-4] and the Staff Reports [Appendix A, Item (a), p. 28] to support its conclusion that addition of a 249-acre portion of the Helvetia Study Area will provide for an orderly and efficient transition from rural to urban land use. The Council chose this area because it has several characteristics that render it among the most suitable sites under consideration for industrial use: a large parcels; relatively flat land; and proximity to a freeway interchange. The Urban Growth Report-Employment (UGR-E) identifies a specific need for large parcels (50 acres or larger) (Ordinance No. 02-969B, Appendix A, Item 4, page 25). This portion of the Helvetia Study Area contains one parcel between 50 and 100 acres.

Two-thirds of this area (162 acres) is designated for agriculture in Washington County’s comprehensive plan (predominantly Class II soil). The farmland portion lies between the existing UGB (to the south and east) and the exception land portion to the west. West Union Road separates the included farmland from excluded farmland to the north. The Council includes this farmland because the exception land portion (87 acres) contains some land suitable for industrial use. Also, among farmlands considered,

this farmland is already affected by nearby urban and rural residential use. Further, the Council found only two areas designated for agriculture of higher priority (Class IV or III soils) suitable for industrial use (Damascus West and Quarry Study Areas) (see discussion of West Union Study Area, below).

The Council considered including a portion of the Evergreen Study Area, which also contains a combination of exception land and Class II farmland, because it, too, contains several large parcels. The Council favored the Helvetia area because the farmland portion of the Evergreen area that lies between the UGB to the east, the exception land to the west and NW Meek Road to the north includes considerably more farmland than the included portion of the Helvetia Area (478 acres versus 162 acres in Helvetia). Further, unlike the exception land portion of Helvetia, the exception land portion of the Evergreen Study Area does not contain land suitable for industrial use.

The Council also considered inclusion of the West Union Study Area, which contains farmland of Class II and III soils. The Council chose the Helvetia area rather than the West Union area because the portion of the West Union area with higher-priority Class III soils is not suitable for industrial use (slopes greater than 10 percent), and this portion lies to the north of the portion with predominantly Class II soils (adjacent to the UGB). Also, the Council found no good barrier in the West Union area to separate farmland included from farmland excluded until Cornelius Pass Road to the north, which would enclose many more acres of farmland (862 acres) than the 162 acres in the Helvetia area.

The Council also considered Class II farmland in the Wilsonville East Study Area in order to find large parcels suitable for industrial use. The Council chose the Helvetia Study Area over the Wilsonville area because the former will be considerably easier to provide with public facilities and services (p. 111). As a result, inclusion of the Helvetia area has the support of the City of Hillsboro, while the City of Wilsonville opposes inclusion of the Wilsonville East area.

The Council considered two other study areas composed predominantly of Class II soils: the Noyer Creek and South Hillsboro areas. According to the report of the Metro Agricultural Lands Technical Workgroup led by the Oregon Department of Agriculture [“Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use”, Appendix A, Item (i)], both areas have higher value for commercial agriculture than the Helvetia area.

Finally, the Council considered Class II farmland south of Wilsonville, near the I-5 corridor on the south side of the Willamette River. The Council rejected this farmland because inclusion would constitute a projection away from the urbanization portion of the metropolitan region, toward Marion County to the south. Industrial development south of the river would also be separated from the services of the City of Wilsonville and the rest of the metropolitan region, connected only by a limited access (interstate highway) bridge across the river. Inclusion of the Helvetia area would better achieve the compact urban form sought by Policies 1 and 1.6 of the RFP and Policy 3 of the Regional Transportation Plan. The Oregon Department of Agriculture urged the Council not to add farmland south of the Willamette River because it would further introduce urban uses into that core area of the Willamette Valley’s commercial agriculture. Although the department also expressed concern about inclusion of the Helvetia area, it placed a higher priority on protection of farmland south of the Willamette River. The Council concludes that inclusion of the Helvetia area rather than the Wilsonville South Study area farmland better achieves Policy 1.12.2 of the RFP.

In short, of the Class II farmlands considered by the Council, this portion of the Helvetia Study Area best meets the identified need for industrial land and is most separated from nearby agricultural lands. Other than the exception lands that are part of this study area, there are no other exception lands that can help the region meet its need for larger parcels for industrial use.

1. Orderly Services

The Council relies upon the Helvetia Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Industrial Land Alternative Analysis Study (Appendix A, Item (c), pages 111 and Table A-2, respectively) for its determination that urban services can be provided to the area in an orderly and economic manner by extending services from existing serviced areas.

The Alternatives Analysis (pp. 104-05) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the larger Helvetia Study Area. Serviceability ranges from “easy” to “moderate” to serve the entire area (Table 1, p. 111). It will be easier to serve the smaller portion of the study area included by the Council because it is the portion closest to the existing UGB (borders on east and south) and services just to the east.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above (Orderly Services) for its conclusion that the area can urbanize efficiently. The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

This area borders the UGB on two sides, with employment and industrial uses on the urban sides of the UGB, making urbanization of the area for industrial use more efficient than projecting urbanization from the UGB into a rural area.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on the Helvetia Study Area set forth in the Alternative Analysis Study, pp. 105-06 and Table A-3). The analysis indicates that the consequences will be moderate. The requirements of Title 11 of the UGMFP that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of Ordinance No. 04-1040B will reduce adverse consequences from urbanization of the area.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning consider Metro’s adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F). The local government will eventually adopt provisions to implement Metro’s Goal 5 program following the Council’s adoption of that program, if the local government’s ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Helvetia Study Area would have high adverse consequences for nearby agriculture (Alternative Analysis Study, pp. 105-06; Table A-4). The analysis, however, is based urbanization of the entire Helvetia Study Area (1,339 acres) rather than just the portion included within the UGB (249 acres). Adverse consequences and incompatibility from urbanization of the included portion will be much reduced, given that the UGB borders this portion on the east and south sides, West Union Road borders the portion on the north side, and much of this portion (87 acres) is exception area lying between the included farmland portion and the excluded farmland portion to the west.

According to the report of the Metro Agricultural Lands Technical Workgroup led by the Oregon Department of Agriculture [“Limited Choices: The Protection of Agricultural Lands and the Expansion of the Metro Area Urban Growth Boundary for Industrial Use”, Appendix A, Item (i)], the included portion of the Helvetia area is less important to commercial agriculture in the region than other agricultural areas under consideration because it lies amid urban and rural residential uses: “However, the workgroup could not ignore the land use pattern both within the area, the location of the area within a small notch of the current urban growth boundary and the two hard edges provided by Helvetia and West Union Roads” (p. 11).

Ordinance No. 04-1040B, Exhibit F, imposes Condition IE upon urbanization of the area to reduce conflict and improve compatibility between urban use in the area and agricultural use on land to the north and west.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Helvetia Study Area protected by Washington County in its acknowledged comprehensive plan (p. 106). The county, or the City of Hillsboro upon annexation to the city, will be responsible for protecting these resources in the area when it amends its comprehensive plan and zoning ordinance to implement expansion of the UGB. Condition IG of Exhibit F requires the county or the City of Hillsboro to consider Metro’s inventory of Goal 5 resources in their application of Goal 5 to the Helvetia area. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires the county or city to protect water quality and floodplains in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county or city to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county or city planning for the area.

6. Public Facilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Hillsboro from upzoning or from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area.

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Helvetia Study Area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Hillsboro from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop conceptual transportation plans and urban growth diagrams with the general locations of arterial, collector and essential local streets for the area. Metro began this work with the evaluation of the serviceability of the area in the Alternative Analysis Study (pp. 104-05 and Table A-2) and consideration of how to provide services as part of the analysis required to satisfy Goal 14, factors 3 and 4.

The Oregon Department of Transportation (“ODOT”), Region 1, notes that the Shute Road interchange on Hwy. 26, to which most of the trips generated by development in the Helvetia area will go, “is already inadequate to accommodate the 2003 Urban Growth Boundary (“UGB”) expansion in this area.” Metro’s 2004 RTP includes an interchange improvement to serve the industrial land added to the UGB for industrial use in December, 2002, with partial funding. The RTP also identifies the need to widen several stretches of Hwy. 26 from four to six lanes. The county or city, together with Metro, will fully assess the effects of development on these facilities during Title 11 planning. Title 11 calls for a conceptual transportation plan as part of amendment of city or county comprehensive plans and land use regulations, to which statewide planning Goal 12 and the Transportation Planning Rule apply.

8. Regional Framework Plan

The Helvetia Study Area lies adjacent to, and will likely become part of the North Hillsboro Industrial Area. This industrial area is the anchor of the high tech cluster that runs from this tract to Wilsonville. It contains the largest concentration of high technology firms in the state. The area supports businesses in the Hillsboro Regional Center, other Centers on the west side of the region, and the Central City. Industrial development in the Helvetia Study Area will provide additional employment to support those centers. The Council includes this area, notwithstanding that this part of the region is relatively well-endowed with employment, because, as noted above, it the characteristics needed for the industrial sectors likely to grow during the planning period.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan (“RTP”) adopted a “Priority System” of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements in the vicinity of the Helvetia Study Area in Metro’s 2004 RTP is an interchange improvement to serve the industrial land added to the UGB for industrial use in December, 2002, with partial funding.

G. Cornelius

The Council relies upon the facts and analysis in the Industrial Land Alternative Analyses Study [Appendix A, Item(c) in Ordinance No. 04-1040B, pp. 84-87; 111; A-1 to A-4] and the Staff Reports [Appendix A, Item (a), p. 27] to support its conclusion that addition of this 262-acre portion of the Cornelius Study Area will provide for an orderly and efficient transition from rural to urban land use. Slightly more than half (56 percent) of the included portion is designated for agriculture in Washington County’s comprehensive plan (predominantly Class II soil). The farmland portion lies in two tracts separated by an exception area. A second tract of exception land borders the farmland on the east side. Together, these four adjacent tracts comprise the portion of the study area included in the UGB.

The Council chose this portion of the study area because it has characteristics that render it suitable for industrial use: large and mid-sized parcels and relatively flat land. The Urban Growth Report-Employment (UGR-E) identifies a specific need for large parcels (50 acres or larger) (Ordinance No. 02-969B, Appendix A, Item 4, page 25). The included portion of the study area contains one parcel between 50 and 100 acres [Appendix A, Item (a), p.30].

The Council also chose this area to help achieve Policies 1.2, 1.3.1 and 1.4 of the Regional Framework Plan (RFP), which call, among other things, for an equitable and balanced distribution of employment opportunities, income, investment and tax capacity throughout the region. The Council considered the fiscal and equity effects of including this area on the City of Cornelius. Given that the city

has the highest poverty rate, the lowest property tax revenue per capita, the lowest land improvement market value and the longest average commute in the region, the Council concluded that industrial development in this area would help achieve these policies better than inclusion of any other Class II agricultural land.

The Council considered including a portion of the Evergreen Study Area, which also contains a combination of exception land and Class II farmland, because it, too, contains several large parcels. The Council favored the Cornelius area for the reasons stated above, and because the farmland portion of the Evergreen area that lies between the UGB to the east, the exception land to the west and NW Meek Road to the north includes considerably more farmland than the included portion of the Cornelius Study Area (478 acres versus 147 acres in the Cornelius area).

The Council also considered inclusion of the West Union Study Area, which contains farmland of Class II and III soils. The Council chose the Cornelius area rather than the West Union area because the portion of the West Union area with higher-priority Class III soils is not suitable for industrial use (slopes greater than 10 percent), and this portion lies to the north of the portion with predominantly Class II soils (adjacent to the UGB).

The Council also considered Class II farmland in the Wilsonville East Study Area in order to find large parcels suitable for industrial use. The Council chose the Cornelius area over the Wilsonville area for the reasons stated above, and because the former will be considerably easier to provide with public facilities and services (p. 111). As a result, inclusion of the Cornelius area has the support of the City of Cornelius, while the City of Wilsonville opposes inclusion of the Wilsonville East area.

The Council considered two other study areas composed predominantly of Class II soils: the Noyer Creek and South Hillsboro areas. The Cornelius area is easier to provide with public services than either Noyer Creek or South Hillsboro. Inclusion of industrial land in the Cornelius area will better accomplish Policies 1.2, 1.3.1 and 1.4 of the RFP than inclusion of Noyer Creek or South Hillsboro.

Finally, the Council considered Class II farmland south of Wilsonville, near the I-5 corridor on the south side of the Willamette River. The Council rejected this farmland because inclusion would constitute a projection away from the urbanization portion of the metropolitan region, toward Marion County to the south. Industrial development south of the river would also be separated from the services of the City of Wilsonville and the rest of the metropolitan region, connected only by a limited access (interstate highway) bridge across the river. Inclusion of the Cornelius area would better achieve the compact urban form sought by Policies 1 and 1.6 of the RFP and Policy 3 of the Regional Transportation Plan. The Oregon Department of Agriculture urged the Council not to add farmland south of the Willamette River because it would further introduce urban uses into that core area of the Willamette Valley's commercial agriculture. Although the department also expressed concern for expansion of the UGB north of Council Creek in the Cornelius area (part of the included area lies north of Council Creek; part lies south), it placed a higher priority on protection of farmland south of the Willamette River. The Council concludes that inclusion of the Cornelius area rather than the Wilsonville South Study Area farmland better achieves Policy 1.12.2 of the RFP.

1. Orderly Services

The Council relies upon the Cornelius Study Area Goal 14 Analysis Summary and the Ratings for Transportation Services Feasibility contained in its Industrial Land Alternative Analysis Study (Appendix A, Item (c), pages 111 and Table A-2, respectively) for its determination that urban services can be provided to the area in an orderly and economic manner by extending services from the City of Cornelius.

The Alternatives Analysis (pp. 84-85) sets forth the likely service providers for sewer, water and storm-water services and assigns a serviceability rating for the entire Cornelius Study Area. Serviceability ranges from “easy” to “moderate” to serve the entire area (Table 1, p. 111). It will be easier to serve the portion of the study area included by the Council because it is the portion closest to the existing UGB (borders on south) and existing services.

2. Efficiency

The Council relies on the same information on provision of essential services mentioned above (Orderly Services) for its conclusion that the area can urbanize efficiently. The Council also relies upon its findings and conclusions above (part I, General Findings, section D, Alternatives: Increase Capacity of UGB) regarding actions it has taken to increase the efficiency of the use of employment land within the existing UGB.

This area borders the UGB to the south, with employment and industrial uses along a portion of the urban side of the UGB. The included portion also includes two exception area of predominantly rural residential use. Inclusion of the exceptions areas will, over time, lead to more efficient use of the areas.

3. Consequences

The Council relies upon the analysis of the consequences of urbanization on the Cornelius Study Area set forth in the Alternative Analysis Study, pp. 86-87 and Table A-3). The analysis indicates that the consequences will be moderate. The requirements of Title 11 of the UGMFP that comprehensive planning and land use regulations for the area protect the portions (streams, wetlands, floodplains and steep slopes) of the area subject to Title 3 of the UGMFP and the conditions in Exhibit F of Ordinance No. 04-1040B will reduce adverse consequences from urbanization of the area.

The Council has placed a condition on comprehensive planning for the area that the local government responsible for planning consider Metro’s adopted Goal 5 inventory during its planning (see Condition IG, Exhibit F). The local government will eventually adopt provisions to implement Metro’s Goal 5 program following the Council’s adoption of that program, if the local government’s ordinance do not already comply.

4. Compatibility

The Agricultural Analysis Consequences shows that urbanization of the Cornelius Study Area would have high adverse consequences for nearby agriculture (Alternative Analysis Study, pp. 84-85; Table A-4). The analysis, however, is based urbanization of the entire study area (1,154 acres) rather than just the portion included within the UGB (262 acres). Adverse consequences and incompatibility from urbanization of the included portion will be much reduced, given that the UGB borders this portion on the south side, and that the farmland portions of the included area border two exception areas, also included.

Ordinance No. 04-1040B, Exhibit F, imposes Condition IE upon urbanization of the area to reduce conflict and improve compatibility between urban use in the area and agricultural use on land to the north and west.

5. Natural and Cultural Resources

The Alternative Analysis Study addresses Goal 5 and 6 resources in the Cornelius Study Area protected by Washington County in its acknowledged comprehensive plan (p. 86). The county, or the City of Cornelius upon annexation to the city, will be responsible for protecting these resources in the area when it amends its comprehensive plan and zoning ordinances to implement expansion of the UGB. Condition IG of

Exhibit F requires the county or the city to consider Metro's inventory of Goal 5 resources in their application of Goal 5 to the area. Title 3 (Water Quality, Flood Management and Fish and Wildlife Conservation) of the UGMFP requires the county or city to protect water quality and floodplains in the area. Title 11 of the UGMFP, section 3.07.1120G, requires the county or city to protect fish and wildlife habitat and water quality. Title 11, section 3.07.1110, protects the status quo in the interim period of county or city planning for the area.

6. Public Facilities and Services

Under statewide Planning Goal 11, Metro is responsible for coordination of the preparation of public facility plans within the district. Metro will fulfill this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Cornelius from upzoning or from dividing land into resulting lots or parcels smaller than 20 acres until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop public facilities and services plans and urban growth diagrams with the general locations of necessary public facilities such as sanitary sewers, storm sewers and water lines for the area.

7. Transportation

Metro shares responsibility to ensure that its Task 2 decision for the Cornelius Study Area does not significantly affect a transportation facility or allow uses that are inconsistent with the identified function, capacity and performance standards of transportation facilities. Metro fulfills this responsibility through implementation of Title 11 of the UGMFP, which (1) prohibits Washington County or the City of Cornelius from upzoning and from land divisions into resulting lots or parcels smaller than 20 acres in the area until the county or city revises its comprehensive plan and zoning ordinances to authorize urbanization of land Metro brings into the UGB; and (2) requires the county or city to develop conceptual transportation plans and urban growth diagrams with the general locations of arterial, collector and essential local streets for the area. Metro began this work with the evaluation of the serviceability of the area in the Alternative Analysis Study (pp. 85 and Table A-2) and consideration of how to provide services as part of the analysis required to satisfy Goal 14, factors 3 and 4.

The Oregon Department of Transportation ("ODOT"), Region 1, notes that industrial development in the Cornelius area will worsen the level of service on the Tualatin Valley Highway between Cornelius and Hillsboro. The "Financially Constrained" and "Priority System" in Metro's Regional Transportation Plan ("RTP") include several projects that will address congestion in the corridor (Projects 3156, 3164, 3166, 3167, 3168 and 3171). The county or city, together with Metro, will fully assess the effects of development on these facilities during Title 11 planning. Title 11 calls for a conceptual transportation plan as part of amendment of city or county comprehensive plans and land use regulations, to which statewide planning Goal 12 and the Transportation Planning Rule apply.

8. Regional Framework Plan

The included portion of the Cornelius Study Area lies directly north of and adjacent to the City of Cornelius. The area is within one mile of the designated Main Street of Cornelius (there is no designated Town Center). Industrial development in the included area will provide additional employment to support the businesses on Main Street, and provide employment opportunities for the many residents of Cornelius who now travel to other parts of the region for work. As stated above, industrial development in this area will help achieve Policies 1.2, 1.3.1 and 1.4 of the RFP better than inclusion of any other land, including other farmland.

9. Regional Transportation Plan

Through its Joint Policy Advisory Committee on Transportation, Metro has coordinated transportation planning and funding of transportation improvements with local governments in the region. The Regional Transportation Plan (“RTP”) adopted a “Priority System” of improvements through the year 2020. The Priority System includes the most critical improvements needed to implement the 2040 Growth Concept. Among the improvements in the vicinity of the included portion of the Cornelius Study Area in Metro’s RTP are intersection safety improvements on the TV Highway couplet and improved transit service (see list of projects noted in section 8, above).

REQUIREMENT NO. 2:

REMAND ORDER ON SUBTASK 17: EITHER REMOVE TAX LOTS 1300, 1400 AND 1500 FROM THE BOUNDARY OF EXPANSION AREA 62, OR JUSTIFY THEIR INCLUSION UNDER GOAL 14.

Ordinance No. 04-1040A amends the UGB to remove Tax Lots 1300, 1400 and 1500, all in Study Area 62, from the UGB (Exhibit E). The Council concludes that there is no need to include these lots given the small surplus of land for residential use that resulted from expansion of the UGB by Ordinance No. 02-969B.

REQUIREMENT NO. 3:

REMAND ORDER ON SUBTASK 12B: PROVIDE DATA ON THE ACTUAL NUMBER DENSITY AND AVERAGE MIX OF HOUSING TYPES AS REQUIRED BY ORS 197.296(5) AND DETERMINE THE OVERALL AVERAGE DENSITY MUST OCCUR IN ORDER TO MEET HOUSING NEEDS OVER THE NEXT 20 YEARS AS REQUIRED BY ORS 197.296(7)

Ordinance No. 04-1040A further revises the Revised Housing Needs Analysis (“HNA”) to display data required by ORS 197.296(5) (Exhibit D). The data show the number, density and average mix of housing types arranged by type of buildable land (vacant, partially vacant, redevelopment and infill and mixed-use land). These data were subsets of aggregated data in the HNA, but were not displayed in the Revised HNA submitted to LCDC with the Task 2 Submittal on January 24, 2003.

The purpose for collecting the data is to help determine “the overall average density and overall mix of housing types at which residential development of needed housing types must occur in order to meet housing needs over the next 30 years.” ORS 197.296(7). Metro determined the overall density and mix of needed housing types in the Revised HNA submitted on January 24, 2003 (see pages 2-7, Figures 3.1, 3.2, 3.3, 5.1 and 5.3). [add text and explanation from earlier HNA] The data newly displayed in this revision do not affect Metro’s earlier determination.

SUPPLEMENTAL STAFF REPORT

*IN CONSIDERATION OF ORDINANCE
NO. 04-1040B, FOR THE PURPOSE OF
AMENDING THE METRO URBAN GROWTH BOUNDARY,
THE REGIONAL FRAMEWORK PLAN AND THE METRO
CODE TO INCREASE THE CAPACITY OF
THE BOUNDARY TO ACCOMMODATE GROWTH
IN INDUSTRIAL EMPLOYMENT*

ORDINANCE NO. 04-1040B

Date: June 21, 2004

Prepared by: Lydia Neill

INTRODUCTION

This staff report is intended to summarize the deliberations by the Metro Council and the Metropolitan Policy Advisory Committee (MPAC) that have taken place since April 2004. Discussions and recommendations by MPAC are highlighted in italics. This report will also introduce several technical memorandums that address issues raised during testimony at public hearings in May and June 2004. Discussions in this supplemental staff report will address the Metro Council's revision to the Chief Operating Officer's (COO) recommendation. The primary staff report dated April 5, 2004 contains information that formed the basis for the COO recommendation.

BACKGROUND

Metro is required to assess the capacity of the urban growth boundary (UGB) every five years under ORS 197.299(1). Metro is currently in Periodic Review with the Department of Land Conservation and Development (DLCD) under work program approval order #001243. As part of this review Metro is required to forecast and provide a 20-year land supply for residential, commercial and industrial uses inside the UGB. The Metro Council had forecasted a shortage of 38,700 dwelling units, 140 acres of commercial land and 4,285 acres of industrial land for the period 2002 to 2022. In December 2002 the Metro Council added 18,638 acres of land to the UGB that satisfied all of the demand for residential and commercial uses but only a portion of the overall need for industrial land.

A remand work order was issued by the Land Conservation and Development Commission (LCDC) due to the incomplete actions on industrial lands and several other issues. The remand order 03-WK Task 001524 requires Metro to fulfill the industrial land need, complete the Housing Needs Analysis by providing data on the number mix and housing types required by ORS 197.296(5), and either remove tax lots 1300, 1400 and 1500 adjacent to King City or provide a justification for their inclusion in the UGB by June 2004.

The 2002-2022 Urban Growth Report: An Employment Land Need Analysis Updated December 2002 (Employment UGR), identified a demand for 4,285 net acres of industrial land and a demand for 140 net acres of commercial land. The Metro Council's December expansion decision included roughly half of the industrial land need. The 2002 UGB decision added 2,850 net acres of job land to the UGB that is divided among three 2040 design types; 533 net acres of employment land, 818 net acres of industrial land and 1,499 net acres of Regionally Significant Industrial Area (RSIA) land.¹ Thus, within the 2002 UGB expansion there is a current industrial land need of 1,968 net acres and a commercial land surplus of 393 net acres.

¹ RSIA's are a 2040 design type that identifies industrial areas that have regional significance because of their location near the region's most important transportation facilities for the movement of traded sector freight.

The Employment UGR identified the demand for vacant industrial land by employment sector and distributed the demand by parcel size. These sectors represent the industries that are expected to grow over the next 20 years and include their associated demand for land. This demand allocation reflects past demand, development practices and existing land use policies. The general demand for vacant industrial land is distributed as follows:

- 70 percent warehouse and distribution
- 13 percent general industrial
- 17 percent tech/flex²

Fulfilling the Need for Industrial Land

Adopting Efficiency Measures- Title 4

As part of the tasks to complete Periodic Review, Metro examined ways to use land more efficiently and adopted policies to maximize the use of land within the UGB. In 2002, Metro adopted provisions in the Urban Growth Management Functional Plan, Title 4, that limits non-industrial uses in industrial areas. Subsequent to its adoption, local governments and industry representatives have come before the Metro Council to make the case that traditional land use categories are now less relevant to understanding industrial uses because many industrial activities including research and development, office and manufacturing often occur in the same facility. Amendments to Title 4 are intended to preserve land for industrial uses by restricting the amount and types of commercial uses that currently locate on industrial land.

Changes to Title 4 will preserve the transportation capacity for the movement of goods and services and direct other types of employment to centers, employment areas, corridors, main streets and station communities. Both RSIA's and industrial areas place limitations on the size of the retail commercial uses not serving the industrial area. Allowances are made for locating training facilities in industrial areas and commercial uses in airport locations. A discussion of the legislative changes to Title 4 are included on pages 7 and 8.

Impacts of Adopting Title 4 on the UGR

New Title 4 regulations specifically limit the amount and square footage of retail and office uses justify the savings of industrial land discussed in the Employment UGR. The Employment UGR estimates a savings of 1,400 acres of industrial land from implementing new measures and mapping of RSIA lands.³ Table 1 discusses the supply of industrial land and the impact of the Title 4 policy changes to reduce the deficit of industrial land.

Reductions to the Industrial Land Need

Commercial Land Surplus

The Employment UGR identified a commercial land surplus of 393 acres. The surplus is based upon the available supply of land for commercial purposes and an assumption that a percentage of commercial activities would continue to take place on industrially zoned lands. Testimony received during the discussion of revisions to Title 4, argued the traditional building types accommodating office and industrial uses are merging based on the needs of a knowledge-based economy. Approximately 30 percent of the land need identified in the Employment UGR is for tech-flex and general industrial uses. These uses have higher job densities that are consistent with office type buildings. Based on this fact additional

² Tech-flex development is a building type that provides flexible space to accommodate a variety of users from light assembly, product storage and research.

³ Employment UGR, page 46.

flexibility has been incorporated into Title 4 regulations to accommodate the need for industrial office uses. Concurrently, these same types of office, industrial uses, (i.e. software development etc.) could also locate on commercial land in traditional office building types. Therefore, the surplus of commercial land is being applied to help satisfy the overall need for industrial lands.

Adjustments to the Commercial Refill Rate

This adjustment to the refill rate is reflective of the changes taking place in the industrial marketplace. As discussed above the industrial economy is transitioning from traditional manufacturing to more knowledge and information based economy which contains more office type uses and results in higher floor area ratios. A two percent adjustment to the commercial refill rate applied in the Employment UGR reduces the overall need for industrial land by 174 acres and reflects this change in the marketplace. An increase in the refill rate from 50 to 52 percent represents the observed refill rate. The observed rate was obtained from metroScope modeling work completed in 2002.

Table 1. Industrial Land Need Adjustments

Supply of Industrial Land	Net Vacant Acres
Industrial Deficit	1,968
<i>Application of the commercial land surplus</i>	393
<i>Less adjustment based on increasing the commercial refill rate</i>	174
<i>Less adjustments:</i>	
- <i>City of Oregon City (Comprehensive plan industrial)</i>	74
- <i>City of Wilsonville (Comprehensive plan industrial)</i>	127
- <i>Re-instatement of area south of Gresham</i>	20
Remaining Industrial Land Need	1,180

Employment UGR Conversion Rate

It was brought to Metro’s attention by the City of Wilsonville has asserted that Metro has misapplied the commercial conversion rate in the 2002-2022 Employment UGR calculations to determine the need for industrial land. A discussion of the how a rate of 15-20 percent was derived begins on page 16 of the Employment UGR. The rate was developed by performing an analysis of the covered geocodes of commercial uses located on industrially zoned land. The study found that 2 out of 10 jobs in industrial areas had a commercial standard industrial code (SIC). The confusion lies in calculating a conversion rate of 44 percent by including the marginal increases of land instead of all of the industrially zoned land supply to compute the correct rate of 22 percent.

Adjustments Based on Zoning

Both the City of Wilsonville and Oregon City have brought to Metro’s attention that several areas located within the current UGB have comprehensive plan designations of industrial but local zoning that does not reflect the future intent. Both cities use a two map system that anticipate rezoning of property consistent with the comprehensive plan. It is Metro’s practice to assess land based on zoning, not comprehensive plan designation. It was determined that it was appropriate to count these acres as industrially zoned because of the legislative intent. Since Metro has a surplus of housing units based on the 2002 decision, this change does not affect the housing need. The addition of 201 net acres of industrial land shown in Table 1. Industrial Land Need Adjustments.

The area south of the City of Gresham (20 acres) is described as a re-instatement after its recommended removal by the COO. This acreage is part of the Springwater industrial area (designated as an RSIA) that is currently under concept planning. When this area was added to the UGB in 2002 it received a 2040 designation of inner neighborhood. The concept planning for the broader area indicated that this area

should be planned for industrial development and receive a 2040 designation of RSIA. The 20 year housing supply is not affected because Metro had a surplus of 666 net acres of residential land.

Completing Periodic Review

After adjustments the remaining industrial land need is 1,1180 net acres. The Metro Council expanded the UGB by adding 1,047 acres of land to substantially satisfy the need for Industrial land over the next 20 years. These lands area located in the following areas: Damascus West, Tualatin, Beavercreek, Quarry, Coffee Creek, Cornelius and Helvetia. The areas are shown in Table 3. Metro Council UGB Expansion Areas, were chosen because they meet the requirements in Goal 14 in the following order:

- Exception lands that meet the suitability factors identified for warehouse and distribution; general industrial and tech flex uses;
- Successively lowest capability farmlands which meet the suitability factors or;
- Located on lower priority farmland but are necessary to meet specific industry needs.

Specifics of the suitability factors are outlined in the April 5, 2004 staff report. Departure from either the COO recommendation or the MPAC recommendation is discussed below. Careful consideration was paid to the potential impacts on farmland and farm industry operations.

Table 2. Chief Operating Officer’s Recommendation

EXPANSION AREAS	Total Acres	Net Acres	Dominant Earthquake Zone ⁴	SUITABILITY FACTORS		
				Access	Proximity	Slope less 10%
<i>Damascus West</i>	102	69	D	✓	✓	✓
<i>Tualatin (MPAC-partial)</i>	646	339	D	✓	✓	✓
<i>Quarry (partial)</i>	354	236	D	✓	✓	✓
<i>Borland Rd N. (partial)</i>	575	164	A	✓	✓	✓
<i>Beavercreek. (partial)</i>	63	30	D	--	✓	✓
<i>Coffee Creek (partial)</i>	264	97	D	✓	✓	✓
<i>Wilsonville East (partial)</i>	641	460	B	✓	✓	✓
<i>Cornelius (partial)</i>	206	91	B	✓	✓	✓
<i>Helvetia (partial)</i>	249	149	A	✓	✓	✓
Additional Areas						
<i>Evergreen</i>	985	730	A	✓	✓	✓
West Union	368	133	A & B	✓	--	✓
TOTAL	3,100	1,635				

**Areas shown in bold/ italics were included in MPAC’s June 9th recommendation*

Soil Classifications of Areas Under Consideration

Soil classifications of all areas under study. The soils were mapped to facilitate studying and choosing appropriate lands for UGB expansion that conform to Oregon Revised Statute 197.298. ORS 197.298 establishes a hierarchy of lands based on soil quality which is divided into tiers. These tiers establish a priority for urbanizing land with exception land being the first priority followed successively by better quality soils. The tier system used for analysis examined the class of soils in each area and determined which soil class was most prominent. As study area boundaries have changed over the course of the analysis the predominant soil type changed in some cases. Table 3. Metro Council UGB Expansion Areas, shown on page 10 contains the predominant soil type unique to each area. Attachment 1 contains a complete discussion of the soil classes in all areas.

⁴ Based on 1997 Department of Geology and Mineral Study. Rating of A-D with D being the lowest hazard area.

Industrial Land Supply Available to Meet Demand

The need for industrial land is classified by parcel size. The majority of the need for industrial land is contained in the smaller lot size categories that range from under 1 acre up to 25 acres. A need has been identified for large parcels to accommodate warehouse and distribution, general industrial and tech flex uses (25 acres up to 100 acres). Some of the areas under consideration due to their existing lotting patterns fulfill the large lot need better than other areas. Assembly of large lots can be reasonably accomplished if there are adjacent parcels of sufficient size or are under the same ownership. An aggregation study of these areas which is contained in the April 5, 2004 staff report, demonstrated that the need for large parcels can be met in the areas slated for UGB expansion. The best potential for addressing large lot needs can be found in Damascus West, Quarry, Coffee Creek, Helvetia and Cornelius areas.

Assessment of Earthquake Hazards

All of the areas included in the UGB were evaluated for their relative earthquake hazard potential. This evaluation was based on the 1997 Oregon Department of Geology and Minerals Study. The areas were ranked from A through with D being the lowest hazard potential. The western portion of the region that contains the Cornelius, Helvetia areas have the highest hazard potential. The higher hazard potential in these areas will be addressed during Title 11 concept planning by the responsible city or county pursuant to Metro Code 3.07.1120(G) and Statewide planning Goal 7. The hazard potential is shown in Table 2 and a full discussion of this study is included in Attachment 2.

COO Recommendation - Areas Excluded

Assessment of Areas Excluded from Consideration

A full discussion of this analysis of all lands under study that were excluded from consideration is included in the staff report dated April 15, 2004 and in the 2003 Alternatives Analysis and Addendum.

Borland Road Area- North of I-205

The Borland Road area has not been included in the UGB based on additional information contained in the record and further examination by staff. Although this area is composed entirely of exception land, a number of factors make it suitable for industrial use. The area previously under consideration contains 575 gross acres of land with a number of conflicting uses (schools, churches, rural residential uses) and slopes/natural resources and yields only 164 net developable acres of land. The developable land is insufficient to allow formation of a cohesive industrial neighborhood and too small and too far from the existing UGB to justify the extension of urban services (see "Formation of Industrial Neighborhoods", Appendix A, Item (u) of Ordinance No. 04-1040B).

Previous work by staff to reduce the total number of acres under consideration from 68,334 acres of land to a more manageable 29,000 acre study area applied the following decision rules. The decision rules included: 1) non-contiguous to the UGB, 2) predominance of lots under 5 acres in size, 3) large areas of steep slopes and floodplains, 4) less than 300 acres and failure to meet both the proximity to other industry (1 mile) or access requirements (2 miles within an interchange). The Borland Road area has access to I-205 but is not located adjacent to a developed industrial area. Based on possible access to I-205 this area was thought to be suitable for warehouse and distribution uses. A baseline size was established for industrial neighborhoods of 300 acres. This 300 acre threshold was obtained by analyzing metroScope results and comparing the sizes of different industrial areas located within the UGB. The Borland Road area has little chance of forming a 300 acre industrial neighborhood due to the fragmented buildable lands available in this area.

On June 9, 2004 MPAC recommended that this area be removed from consideration for UGB expansion.

Wilsonville East

The Wilsonville East area which contains over 400 net acres was removed from consideration due to servicing concerns raised by the City of Wilsonville and impacts on an existing single family neighborhood located south of the site. This site contains class II agricultural land. The Metro Council chose the Helvetia study area which also contains class II soils and exception lands over the Wilsonville East area due to the serviceability and because the area contained exception lands. The Helvetia area is particularly well suited to satisfy the demand for tech flex or general industrial land.

On June 9, 2004 MPAC recommended that this area be removed from consideration for UGB expansion.

Additional Areas Added to the COO Recommendation

No additional areas were added to the COO recommendation.

On June 9, 2004 MPAC recommended that the Evergreen area be considered by the Metro Council to satisfy the need for industrial land.

The Metro Council considered the inclusion of the Evergreen site to meet the need for industrial land. Deliberations weighed the potential impacts on the farm economy and the issue of establishing logical boundaries between urban and farm uses in this area.

Expansion of the Cornelius Area

The Metro Council expanded the Cornelius area (206 to 262 gross acres) to provide an additional 36 net acres of industrial land. Inclusion of this area will provide for an orderly and efficient transition from rural to urban use. Approximately 56 percent of the area is designated for agricultural use in the Washington County Comprehensive Plan and it contains class II soils. A total of 56 gross acres are isolated from the agricultural lands located north of Council creek. The Council chose this land because a portion of this land is located adjacent to an existing industrial area located south of Council Creek and contains large flat parcels suitable for industry.

The Employment UGR identifies a specific need for large parcels (50 acres or larger) (Ordinance No. 02-969B, Appendix A, Item 4, page 25). The included portion of the study area contains one parcel between 50 and 100 acres (Appendix A, Item (a), p.30).

The Council also chose this area to help achieve Policies 1.2, 1.3.1 and 1.4 of the Regional Framework Plan (RFP), which call, among other things, for an equitable and balanced distribution of employment opportunities, income, investment and tax capacity throughout the region. The Council compared the fiscal and equity effects of including this area on the City of Cornelius. Given that the City of Cornelius has the highest poverty rate, the lowest property tax revenue per capita, the lowest land improvement market value and the longest average commute in the region, the Council concluded that industrial development in this area would help achieve these policies better than inclusion of any other Class II agricultural land.

On June 9, 2004 MPAC recommended that the expanded Cornelius area be considered by the Metro Council to satisfy the need for industrial land.

Other Changes to the COO Recommendation

The COO recommendation called for removal of a small area south of Gresham based upon impacts to the Green Corridor Agreement with the City of Sandy. This area includes 90 gross acres of land that was proposed in the 2002 UGB expansion for residential use. The area will remain in the UGB and be assigned a 2040 designation as RSIA consistent with the area north of the site (Springwater Industrial

Area) which was also added to the UGB in 2002. The area provides approximately 20 net acres of land for industrial purposes.

On June 9, 2004 MPAC did not recommend that this area remain in the UGB.

Assigning 2040 Design Types and Conditions

All areas included in the UGB must be assigned a 2040 design type of either Industrial or RSIA. Concept planning as required in Title 11 of the Functional Plan will determine the location and extent of the boundaries of all of the industrial areas. The 2040 design types are included on maps of all expansion areas in Ordinance No. 04-1040B in Exhibit E and the specific conditions are contained in Exhibit F.

Generalized and specific conditions pertaining to all areas included in the UGB are found in Exhibit F.

The Council added or revised conditions recommended by the COO to address concerns raised in testimony following the April 15, 2004, COO recommendation. New conditions address compatibility between industrial use and nearby residential use, coordination of the timing of comprehensive planning and transportation planning, and improved protection of the future right-of-way for the I-5/99W Connector.

The Oregon Department of Transportation (ODOT) submitted general information about the likely effects of new industrial development on lands added to the UGB on a number of state transportation facilities in the region. Of particular concern to ODOT are areas added in the vicinity of the North Wilsonville interchange on I-5 in Wilsonville and of the Shute Road interchange on U.S. Highway 26 at Hillsboro. ODOT believes that adoption of an “interchange area management plan”(IAMP), as described in the Oregon Highway Plan and outlined in ODOT rules (OAR 734-051-0125), would protect the capacity and function of the interchanges and improve their management. ODOT prefers adoption of an IAMP at the time of Title 11 planning, prior to urban development.

Local governments believe IAMPs are more likely to add value to what statewide planning Goal 12 (Transportation) and the Transportation Planning Rule (TPR) already require if the IAMPs are adopted at the time that plans and commitments are made for improvements to the interchanges. They worry that limitations on industrial development that might be written into an IAMP prior to commitment of funding for improvements to the interchanges might, in light of budgetary constraints, become permanent or long-range limitations, denying the region of the full benefits of industrial development near the interchanges.

The Council shares ODOT’s concern that new industrial development in the region not cause the region’s transportation system to fail or fall below standards. The Council understands that new development, without timely investment in the region’s transportation system, will likely degrade the system. The Council expects, however, that, given the high priority state government places on making industrial sites ready for development, the region (Metro and other local governments), with the aid of state government, will find the resources to make the necessary improvements. In pursuit of those improvements, Metro will encourage and facilitate the adoption of IAMPs in cooperation with local governments at the earliest appropriate time in the process of approval of improvements to the Shute Road and North Wilsonville interchanges.

Policy Changes

Part of Metro’s review of the UGB includes examining ways to obtain more efficient utilization of land currently inside of the UGB. The proposed Title 4 amendments are one way of demonstrating to LCDC that Metro is achieving efficiencies inside of the UGB to meet the need for land in addition to expanding the UGB. The Metro Council adopted new measures to protect and maintain the supply of industrial land for future industrial uses in Ordinance 02-969B, adopted December 5, 2002. Title 4 Industrial and Other

Employment Areas regulations were amended in order to increase the capacity of industrial areas for industrial uses and to encourage non-industrial uses to locate in Centers and other more appropriate 2040 design type areas.

Metro staff, after consulting with cities, counties and other interests, developed a set of factors to consider in the identification of RSIA's. Metro staff worked with cities and counties in the region to apply the proposed factors to designated Industrial Areas within their jurisdictions. Several local governments, Portland, Gresham, Wilsonville and Clackamas County, submitted recommended Industrial Areas for consideration as RSIA's. Striving for region-wide consistency, Metro staff also applied the factors to areas in cities and counties that chose not to submit candidate areas. The factors are:

- *Distribution* - Area serves as support industrial land for major regional transportation facilities such as marine terminals, airports and rail yards;
- *Services* - Availability and access to specialized utilities such as specialty gases, triple redundant power, abundant water, dedicated fire and emergency response services;
- *Access* - Within 3 miles of I-5, I-205, I-84 (within the UGB), State Route 224 (within the UGB);
- *Proximity* - Located within close proximity of existing like uses; and
- *Primary Use* - Predominantly industrial uses.

Considering these factors and much input from local governments, the Metro Council by Ordinance No. 04-1040B (Exhibit C) adopted a generalized map of RSIA areas. Title 4 is amended to include a limitation on retail uses for single users of 5,000 square feet in Industrial areas and 3,000 square feet in RSIA areas, and added a performance based transportation requirement for non-industrial offices. The 3,000 and 5,000 square foot limitations as it relates to commercial eating establishments refers to the size of the seating area and not to kitchen or storage areas. The Title 4 language changes are included in Exhibit B of Ordinance No. 04-1040B. The map depicting RSIA's is included in Attachment 3.

On April 14, 2004 MPAC recommended that Title 4 be amended to limit non-industrial retail uses to a maximum of 5,000 square foot for individual uses and 20,000 square foot for single buildings in both RSIA's and industrial areas. This recommendation was incorporated into ordinance No. 03-1021B for Metro Council consideration. Other provisions were consistent with the language in ordinance No. 04-1040B.

Regional Framework Plan Amendments

The Regional Framework Plan is amended to add policy language to guide UGB decisions and minimize impacts on the agricultural industry. Comments from participants at the symposium called "Agriculture at the Edge" spurred the proposed policy changes. Expansion of the UGB has different impacts on nursery operations, farm related businesses and individual operations. Changes to Chapter 1, Land Use Policy 1.12 provide greater certainty for farmers regarding urbanization and reduce potential conflicts between farm operations and urban uses. The changes the Regional Framework Plan provide the following policy guidance:

- When choosing land among lands with the same soil class, chose land less important for commercial agriculture, and
- Develop agreements with neighboring cities and counties to protect agriculture.

On April 24, 2004 MPAC recommended that the original proposal introduced by Councilor Hostica in Ordinance No. 04-1041 included defining the region's urbanizable area by restricting future urban growth boundary expansions to an area north of the Willamette River and east of Pudding River as well as containing the additional language to address the impacts on the agricultural industry and additional criteria to choose land for urbanization.

The Metro Council considered this recommendation to establish a hard boundary at the Willamette River and chose to defer this issue until a comprehensive region-wide discussion can take place to consider other areas that may be effected by similar circumstances. There are number of areas in the region where a policy of establishing a hard edge could be used effectively. The Metro Council expressed a desire to explore the use of this concept more fully in upcoming work that may take a longer view of planning for the region's growth.

Fulfilling The Remaining Periodic Review Requirements

Housing Needs Analysis

A revised Housing Needs Analysis report was prepared pursuant to the remand work order. The report addresses densities by housing type. The supplemental information provided in this report does not materially change the conclusions found in the UGR. The supplemental study does not change the overall density or mix of housing types needed for the next 20 years. Revised refill rates are in the range of 25-30 percent.

KNOWN OPPOSITION

The selection of lands for inclusion into the UGB has been hotly debated in a number of areas for both inclusion and exclusion from the UGB. Details of the comments received throughout the workshops and public hearing processes are detailed in the Public Comment reports, Volume I and II dated May 2004 and the addendums to the original reports dated June 2004 contain comments up through the final hearing on June 24, 2004.

LEGAL ANTECEDENTS

Title 4 is part of the adopted and acknowledged Urban Growth Management Functional Plan. Authority to amend the 2040 Growth Concept map comes from ORS 268.380 and ORS 268.390(5). UGB evaluation and amendment requirements are found in ORS 197.298 and 197.299.

ANTICIPATED EFFECTS

Adoption of Ordinance No. 04-1040B will result in fulfilling the requirements in Metro code section 3.07.420I, which requires Metro to adopt a map of Regionally Significant Industrial Areas with specific boundaries that is derived from the Generalized Map of Regionally Significant Industrial Areas adopted in Ordinance No. 02-969B. Amendments to Title 4 address implementation issues and provides local governments with clear instructions as to the Metro Council's policy intent on preserving industrial lands. This ordinance also satisfies the three requirements of LCDC's Partial Approval and Remand Order #03-WK Task 001524. The effective date of the new Title 4 regulations is September 24, 2004. Local governments will have two years following LCDC's acknowledgement to adopt a local map and make changes to their codes.

Adoption of amendments to the UGB provide the industrial land necessary for the continued economic growth over the next 20 years.

BUDGET IMPACTS

The UGB and Metro Code amendments become effective September 2004. Any additions to the UGB require FTE for monitoring and minor participation in Title 11 concept planning. Metro has a commitment of 1.43 FTE dedicated to ongoing concept planning in Hillsboro, Damascus, Gresham and the City of Tualatin. Additional FTE and potential grants to local governments may be needed to assist in the concept planning process. Implementation of Metro Code changes requires a corresponding amendment of local planning ordinances to implement the intent of these policies. Compliance monitoring is already included in the 2004/ 2005 budget. Community Development staff currently

monitors all ongoing zone, comprehensive plan and code changes at the jurisdictional level as well as other project responsibilities.

DECISION

The Metro Council expanded the UGB by adding 1,047 acres of land to substantially satisfy the need for Industrial land over the next 20 years. The removal of tax lots 1300, 1400 and 1500 adjacent to King City and the completion of the addendum to the Housing Needs Analysis addresses all of the outstanding issues in LCDC’s Partial Approval and Remand Order #03-WK Task 001524.

Table 3. Metro Council UGB Expansion Areas

EXPANSION AREAS	Total Acres	Net Acres	2040 Design Type	Soil Class
Damascus West	102	69	Industrial	class II & III
Tualatin	646	339	Industrial	class IV & III
Quarry (partial)	354	236	Industrial	class VII
Beavercreek	63	30	Industrial	class IV & V
Coffee Creek (partial)	264	97	Industrial	exception land
Cornelius (partial)	262	127	RSIA	class II
Helvetia (partial)	249	149	RSIA	exception land & class II
TOTAL	1,940	1,047		

Attachments:

- Attachment 1- Dominant Soil Classification for Proposed UGB Expansion Areas, dated June 15, 2004
- Attachment 2- Earthquake Hazard Memorandum, dated June 15, 2004
- Attachment 3- Title 4 Map

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M E M O R A N D U M

600 Northeast Grand Avenue
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97232-2736
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METRO

Date: June 16, 2004

To: Lydia Neill, Principal Regional Planner

From: Amy Rose, Assistant Regional Planner

Re: *Dominant soil classifications for proposed UGB expansion areas*

Background

The Metro Council is currently in the process of selecting land for inclusion in the urban growth boundary (UGB) for industrial use. The selection of appropriate land is dictated largely by Oregon Revised Statute (ORS) 197.298 that sets forth a hierarchical, tier-based system of land categorization, which indicates the order land should be considered for inclusion in the UGB based on comprehensive plan designations. Resource land is further prioritized on soil classification, which indicates the capability level of the farmland and ultimately its place in the hierarchy of land. The hierarchical tiers of land identified in ORS 197.298 are defined as follows:

- Tier 1 – exception land contiguous to the UGB and non-high value resource land completely surrounded by exception land.
- Tier 1a – exception land not contiguous to the UGB (within the one mile extent of study area boundaries).
- Tier 2 – marginal land, a unique classification of non-resource land in Washington County that allows dwelling units on EFU land.
- Tier 3 – resource land that may be needed to serve exception land.
- Tier 4 – resource land, majority of class III & IV soils, some class I & II soils.
- Tier 5 – resource land, majority class I & II soils, some class III & IV soils.

Purpose

The purpose of this memorandum is to identify the dominant soil classification and resulting tier category under ORS 197.298 for each of the resource land areas proposed for inclusion in the UGB for industrial use. The dominant soil classification has been determined using GIS soil data, displayed on a map dated October 30, 2002 in the record and was only undertaken for study areas identified as resource land. This information is presented in tabular form.

Soil Classifications by study area

Recommended Expansion Areas	Total Acres	Net Acres	Tier	Dominant Soil Classification
Damascus West	102	69	Tier 4	Class 3 & 4
Quarry (p)	354	236	Tier 4	Class 7
Beavercreek (p)	63	30	Tier 4	Class 4 & 6
Wilsonville East (p)	641	460	Tier 5	Class 2
Revised Wilsonville East	412	295	Tier 5	Class 2
Cornelius (p)	206	91	Tier 5	Class 2
Revised Cornelius	56	36	Tier 5	Class 2
Helvetia (p)	249	149	Tier 5	Class 2
West Union (p)	368	133	Tier 5	Class 2
Evergreen	985	730	Tier 5	Class 2
Noyer Creek	381	266	Tier 5	Class 2
Hillsboro South	791	695	Tier 5	Class 2

*Analysis was only undertaken for study areas identified as resource land.

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M E M O R A N D U M

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METRO

DATE: June 16, 2004

TO: Dick Benner, Senior Metro Attorney

FR: Tim O'Brien, Senior Regional Planner

RE: ***RELATIVE EARTHQUAKE HAZARD FOR PROPOSED INDUSTRIAL LAND EXPANSION AREAS***

Background

In 1997 the Oregon Department of Geology and Mineral Industries (DOGAMI) produced data on the relative earthquake hazard for land in the Portland metropolitan region including a significant portion of land outside the Urban Growth Boundary (UGB). The information included individual hazard factors of liquefaction, slope instability, and amplification, as well as a composite relative earthquake hazard map based on the individual factors. Metro's Data Resource Center (DRC) mapped the relative earthquake hazard data utilized in this analysis. The map information does not cover all of the potential expansion areas nor has the information been updated since 1997.

Analysis

The relative earthquake hazard composite map is separated into four zones, A, B, C, and D, with A being the highest hazard, and D the lowest hazard. The dominant zone for each of the proposed expansion areas is reported in the table below, along with additional comments.

Relative Earthquake Hazard

Expansion Area	Dominant Zone	Comments
Damascus	D	Small areas of C & B
Beavercreek	D	Significant portion of C and two pockets of B
Borland Road	A	One large area of B southeast of Borland Rd./Stafford Rd. intersection
Wilsonville East	B	Significant portions of C & D
Coffee Creek	D	Areas of A, B & C. No information for southwest corner of expansion area
Tualatin	D	Significant areas of B & C
Quarry	D	Pockets of C and minor area of B
Cornelius	B	A few pockets of A scattered throughout area
Helvetia	A	Two pockets of B, one in the center and one at the very top of the area
Evergreen	A	Some B, no information for northern portion of area
West Union	B & A	Some areas of C, area of A along stream corridor

RELATIVE EARTHQUAKE HAZARD...

June 16, 2004

Page 2

Summary

Information for two of the areas, Evergreen and Coffee Creek, is incomplete. In general the areas are either at the high or low hazard end of the range. The Borland Road North, Helvetia, Evergreen and West Union expansion areas contain the most Zone A classified land and thus have the highest earthquake hazard status. The Damascus, Beaver Creek, Coffee Creek, Tualatin, and Quarry expansion areas contain mostly Zone D classified land and thus have the lowest earthquake hazard status.

The Council has decided not to include the North Borland, Evergreen or West Union Areas (areas with the highest hazard). The small hazard areas mapped in the Helvetia Area (also high) and other areas included in the UGB will be addressed in Title 11 planning by the responsible city or county, pursuant to Metro Code Section 3.07.1120G and statewide planning Goal 7.

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Title 4 Industrial and Employment Areas

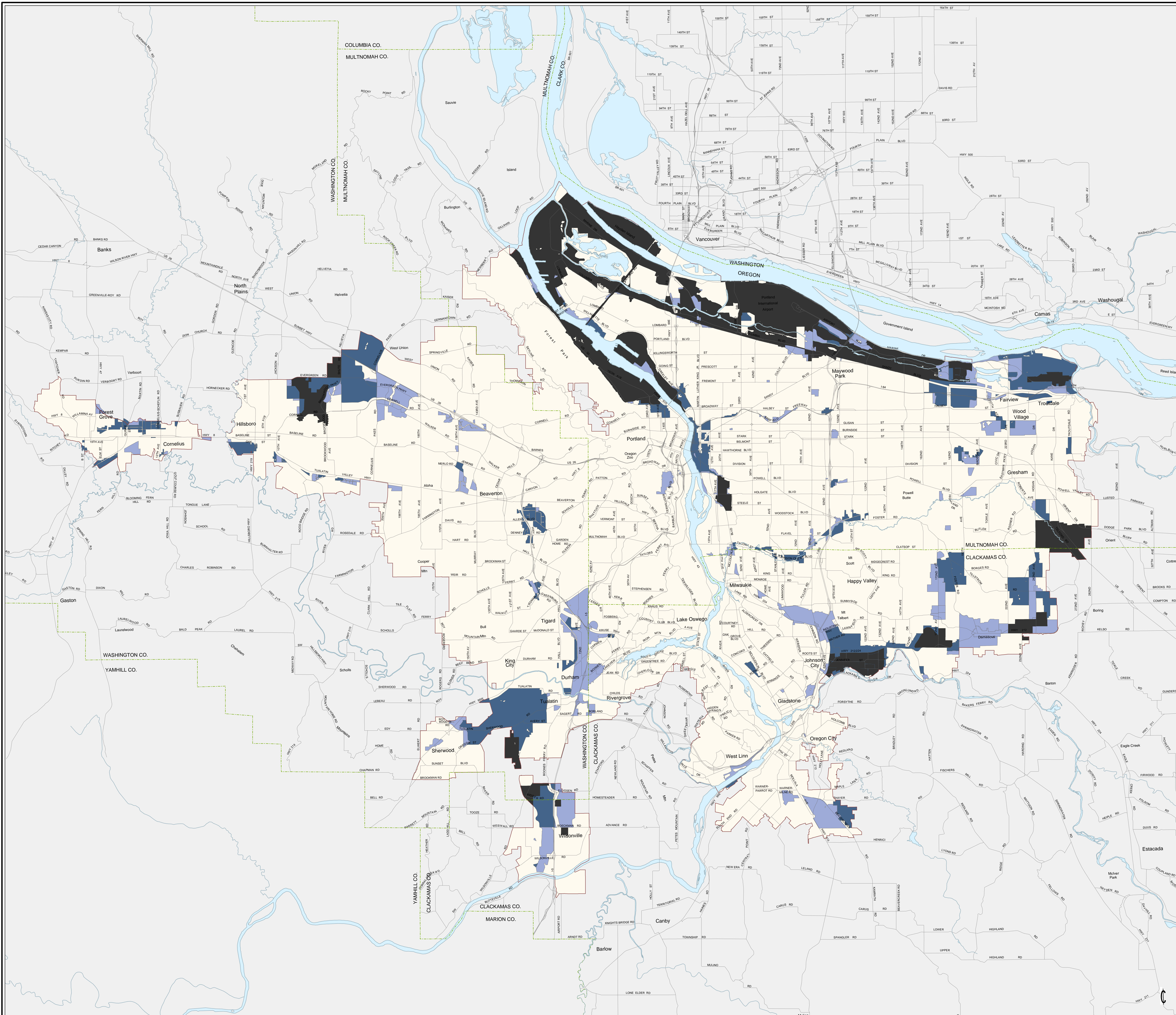
Ordinance No. 04-1040B

Exhibit C

Attachment 3

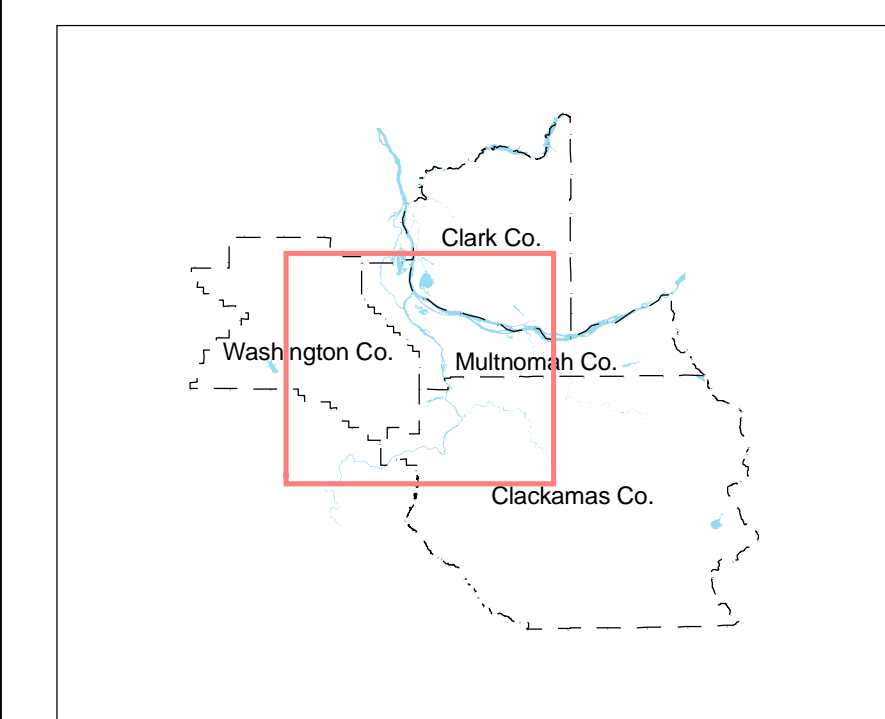
June 24, 2004

-  Employment Land
-  Industrial Land
-  Regionally Significant Industrial Areas



WARNING: Some maps combine data layers of differing map accuracies, e.g. flood plains can be based on tax lots. When this occurs, the map is not reliable to correctly show data at the tax lot level.

The information on this map was derived from digital databases on Metro's GIS. Care was taken in the creation of this map. Metro cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the accuracy of the information or fitness for a particular purpose, accompanying this product. However, notification of any errors will be appreciated.



Location Map



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BASALT CREEK CONCEPT PLAN

Attachment A: Basalt Creek Concept Plan and
Technical Appendices (Final)

Basalt Creek Technical Appendices can be accessed here:

https://www.ci.wilsonville.or.us/sites/default/files/fileattachments/planning/page/84121/a_bccp_technical_appendices_final.pdf

Basalt Creek
Concept Plan



JULY 2, 2018

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Appendix A: Existing Conditions Report

Appendix B: Public Involvement Plan

Appendix C1: Scenario Planning for Basalt Creek

Appendix C2: Scenario Spreadsheets

Appendix D: Title 11 Compliance Memo

Appendix E1: Guiding Principles Memo

Appendix E2: Ten Considerations for Success

Appendix F: Buildable Lands Assessment Summary

Appendix G: Market Analysis

Appendix H: Basalt Creek Concept Plan Transportation Technical Analysis and Solutions Memo

Appendix I: Basalt Creek Concept Plan Infrastructure Technical Memorandum

Appendix J: Basalt Creek Transportation Refinement Plan (2013)

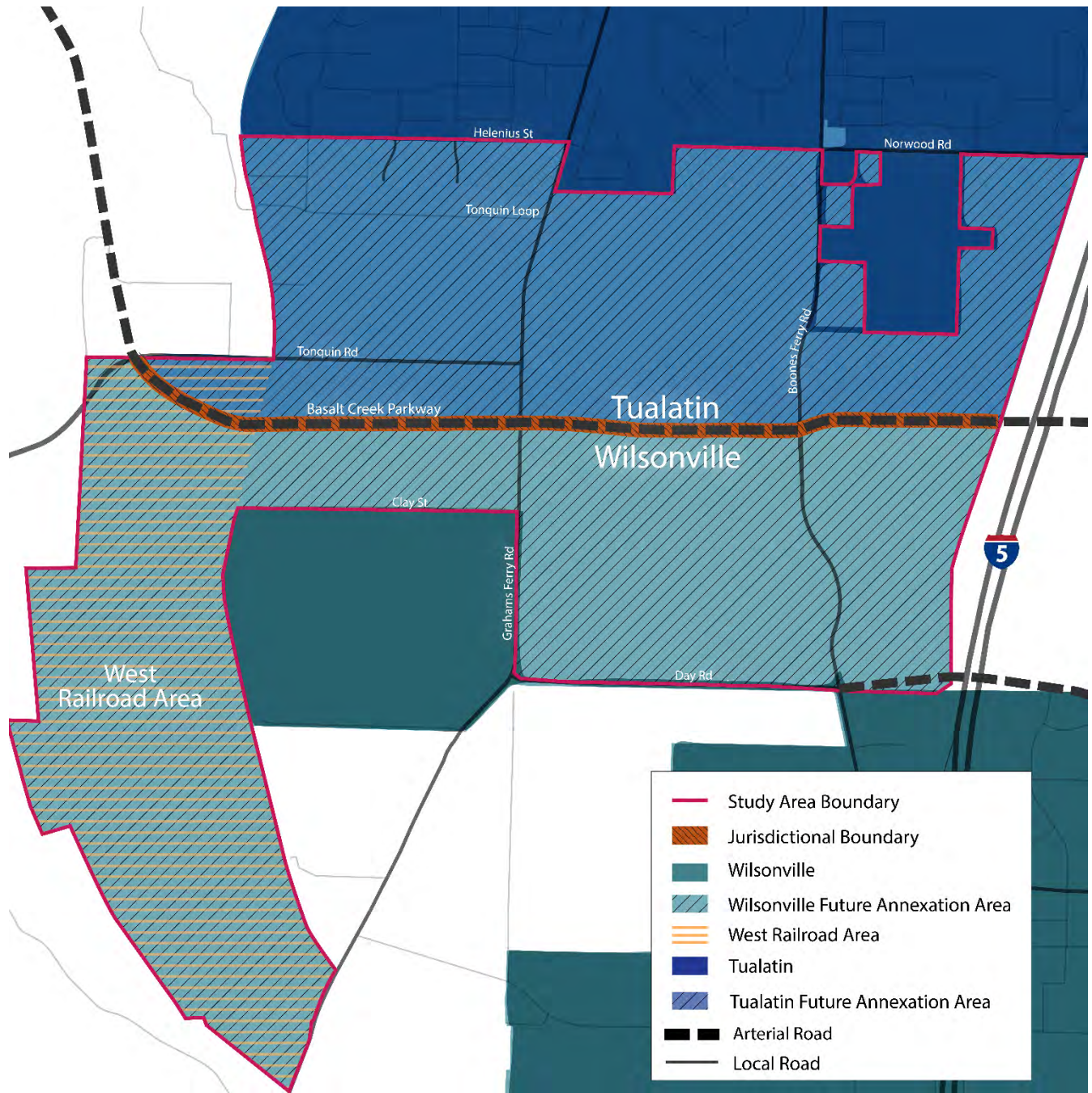
Appendix K: Acknowledgements

Introduction

The Basalt Creek Planning Area

The Basalt Creek Planning Area consists of 847 acres located in Washington County between the Cities of Tualatin and Wilsonville. The Planning Area is irregularly shaped, generally oriented east-west with an extension southward at the western edge, which is commonly referred to as the West Railroad Area. The West Railroad Area is divided from the rest of the Planning Area by the Portland and Western Railroad (PNWR) and the Coffee Creek Correctional Facility. The rest of the Basalt Creek Planning Area is bound by Norwood and Helenius Roads to the north, Interstate 5 (I-5) to the east, Coffee Lake Creek to the west, and Day Road to the south until it reaches Coffee Creek Correctional Facility, where the boundary turns north on Graham’s Ferry and then westward again on Clay Road. The area also has distinctive natural features, particularly its namesake - Basalt Creek - and the surrounding wetlands habitat running north-south through the eastern half of the Planning Area. The primary existing land uses in Basalt Creek are rural agriculture, industrial, and rural residential consisting of low-density single-family housing. Washington County recently completed construction of a portion of the Basalt Creek Parkway, extending 124th Avenue and connecting Tualatin-Sherwood Road to Grahams Ferry Road. In the future, the Parkway will run east-west across the Planning Area between Grahams Ferry Road and Boones Ferry Road, and eventually extend over I-5. The parkway will be a high-capacity major freight arterial with limited access to local streets providing industrial access from the Tonquin, Southwest Tualatin, and Basalt Creek Planning Areas.

Figure 1 Basalt Creek Planning Area and jurisdictional boundaries.



A more detailed description of the Planning Area, including natural and historic resources, existing land uses and regulatory context can be found in the Existing Conditions Report (Appendix A).

What is a Concept Plan?

A concept plan identifies a vision and guides future land use and transportation decisions for the planning area. It helps ensure the area has the land capacity to contribute to meeting local and regional land use and transportation goals. Concept plans also ensure compliance with state land use goals,

regional policies, and other plans, including existing transportation plans. A concept plan sets the framework for future development and outlines an implementation strategy for future provision of urban services (water, sanitary sewer, and storm water systems), public services (such as transit, parks, and open space), and protection of natural and cultural resources.

Basalt Creek Concept Plan

The Basalt Creek Concept Plan guides development in the Basalt Creek Planning Area over the next twenty years. To accomplish this, the plan:

- Establishes a vision for urbanization of the Basalt Creek Planning Area that will meet local and regional goals
- Coordinates future land use, transportation and infrastructure investments between Tualatin, Wilsonville, and Washington County
- Establishes a new jurisdictional boundary between Tualatin and Wilsonville (to determine which parts of the Planning Area may be annexed into and served by each city)
- Identifies preferred land uses across the area
- Recommends high-level designs for transportation and infrastructure systems to support future development consistent with local, regional and state goals
- Sets specific action items and implementation measures

Figure 2 Basalt Creek Planning Area in regional context.



In 2004, Metro identified the Basalt Creek Planning Area as a good candidate for industrial development because it is near I-5, adjacent to Wilsonville's industrial area to the south, and contains large, flat sites suitable for industrial users. Metro passed an ordinance in 2004 to annex land into the existing Urban Growth Boundary (UGB), which included the Basalt Creek Planning Area, to ensure a sufficient regional supply of land for employment growth over the next twenty years. Based on Metro's 2014 Employment and Housing Forecast, Metro projected the region would grow by 474,000 people and 365,000 jobs by

2035. The Basalt Creek Planning Area was expected to accommodate about 1,200 new housing units and 2,300 new jobs (mostly industrial, with some service jobs and few retail jobs). A detailed explanation of these figures and the Industrial Land Alternative Analysis can be found in the Existing Conditions Report (Appendix A, starting on page 17).

In the Metro region, areas brought into the UGB are required to have a land use and transportation Concept Plan before urban development can occur. The intent of the Basalt Creek Concept Plan is to meet this requirement and provide a roadmap for the development of the area that is consistent with state, regional and local land use planning laws. This Concept Plan involved a collaborative effort between two local jurisdictions – the Cities of Tualatin and Wilsonville.

While several concept plans were developed over the last decade for other UGB annexation areas (e.g. Southwest Tualatin Plan, Tonquin Employment Area Plan, and Coffee Creek Industrial Area), Basalt Creek is somewhat unusual. Its large size, location between (rather than at the edge of) other urbanized areas, and requirement to be jointly planned by two different cities—each with their own identity, goals and local governance—make it different from most other concept plans.

While the process and context were unique, the final Basalt Creek Concept Plan incorporates the key elements consistent with other concept plans and meets all state and regional requirements for a concept plan.

Table 1 Summary Table of Basalt Creek Concept Plan Elements

Element	Description
Jurisdictional Boundary	Follows the alignment of the Basalt Creek Parkway centerline with Tualatin to the north and Wilsonville to the south.
Land Use and Development	Land uses in Wilsonville focus on employment, while Tualatin has a mix of employment and housing. Housing in the northern part of the area is meant to buffer existing residential neighborhoods from non-residential land uses. There is a small retail node just east of the Basalt Creek Canyon and north of the jurisdictional boundary in the Planning Area, which will serve residents and workers. The land suitability analysis influenced the most appropriate locations for employment-based land uses. Land use types and densities were balanced to meet obligations for providing regional employment capacity while limiting negative impacts on congestion and traffic levels.
Transportation	Major new roads and improvements will be constructed as laid out in the 2013 Basalt Creek Transportation Refinement Plan (TRP), which is also coordinated with the 2014 Metro Regional Transportation Plan (RTP). Basalt Creek Parkway, portions of which are currently under construction, will be a major east-west arterial, with limited access (connecting only at Grahams Ferry and Boones Ferry Roads), creating a new connection between I-5 and 99W. Further roadway improvements—such as adding capacity to north-south collectors, widening Day Road to five lanes, and two additional I-5 crossings at Day and Greenhill—will be needed to handle future traffic levels as the area is built out. Local roads connecting to this network will be planned and built by property owners as the area develops.
Bicycle and Pedestrian Framework	Opportunities for bike and pedestrian connections are identified, and additional bike/pedestrian facilities will be integrated into new and updated road projects in accordance with State, County and City standards.

Transit	Transit service in the area will be coordinated between TriMet and SMART. Service will build on existing bus routes to enhance service and provide good connectivity both north-to-south and east-to-west through the Planning Area.
Parks & Open Space	The Basalt Creek Canyon natural area spans both cities and there are opportunities for regionally-connected trails and open space in the Planning Area. The Cities will each work to create a park plan for the area as part of their respective citywide plans and will coordinate on trail planning particularly as it relates to the Basalt Creek Canyon.
Natural Resources	The Cities recognize that the Basalt Creek Canyon is a significant natural resource and have agreed to coordinate on a joint approach to natural resource management practices. There are also significant riparian and upland habitat areas in the West Railroad Area. All natural resources in the Planning Area are mapped on Figure 13.
Water	Each city will provide its own drinking water infrastructure within its jurisdiction, with connections to existing water lines.
Sewer	Each city will provide sanitary sewer service for development within its jurisdiction to the extent reasonably possible with the understanding that a future agreement may address potential cooperative areas. Tualatin will coordinate with its provider – Clean Water Services (CWS) – to extend service to this area.
Stormwater	New stormwater infrastructure will be primarily integrated with the local road network. Tualatin, Wilsonville and CWS acknowledge they must follow requirements established for their respective stormwater MS4 permits. Much of the area is in a basin that drains toward Wilsonville. Each City will serve its own jurisdictional area. The Cities and CWS will adopt an Intergovernmental Agreement that addresses areas where cooperative stormwater management is needed.
Implementation Strategies and Tools	Recommendations for a public facilities phasing plan include conceptual overviews of the recommended facilities and Class 5 concept level costs and a general overview of possible funding strategies. The development phasing will include recommended near and long-term strategies for land use development. Implementation recommendations include sequential action items necessary for implementing the plan and readying the Basalt Creek Planning Area for future development.

The Planning Process

The Basalt Creek Concept Plan was developed through several years of planning that included extensive research and analysis and a variety of opportunities for input from stakeholders and citizens. The public was engaged at key points and invited to participate through a visioning workshop, an open house, online surveys, and community outreach meetings. The full Public Involvement Plan can be found in Appendix B.

Decision Making Process

The Tualatin and Wilsonville City Councils were the ultimate decision-making body for the final Basalt Creek Concept Plan. Joint Council meetings were held involving both City Councils at important project milestones. This role included approval of the guiding principles, selection of the preferred land use scenario, and identification of the future jurisdictional boundary and key elements of the plan. Individual City Council meetings were also held to provide periodic updates and discuss measures, ordinances, and resolutions specific to each city to adopt and implement the Basalt Creek Concept Plan. To ensure the greatest level of cooperation and collaboration with local and regional partners, the planning process

included a project management team with staff from both cities, an advisory Agency Review Team (ART), and both cities' Planning Commissions.

Joint Council

Joint City Council meetings were held at key decision-making stages in the project with the Joint Council serving as the final decision-making body for the plan. There were five Joint Council meetings between October 2013 and December 2015. The purpose of Joint Council meetings was to approve Guiding Principles, determine jurisdictional boundaries, select a preferred land use scenario, and identify key elements for the final concept plan. All Joint Council meetings were advertised and open to the public. Themes from the Joint Council meetings were further developed into the Guiding Principles and included:

- Meeting regional responsibility for jobs & housing
- Capitalizing on the Planning Area's assets
- Protecting existing neighborhoods
- Maintaining cities' unique identities
- Exploring creative approaches to land use, including integration of employment and housing
- Ensuring appropriate transitions between land uses
- Integrating high-quality design and amenities for employment

Project Management Team

The Project Management Team (PMT) was composed of each city's project managers, department directors, relevant staff, and project consultant (see Appendix K for full list of members).

The PMT met regularly to check the status of major deliverables, track and maintain a regular project schedule, coordinate materials for individual and Joint Council work sessions and meetings, plan public events and outreach strategies, and develop consistent messaging for project outcomes. The Project Consultant team representatives participated in the PMT meetings on a bi-weekly basis as needed. The plan's content was guided and produced by the project consultant team and reviewed by the PMT.

Agency Review Team

The Agency Review Team (ART) represented local service providers and regional partners, who advised staff members of both cities about regulatory and planning compliance (see Appendix K for full list of members). Input gathered from the ART was incorporated into the Concept Plan and included in regular staff updates to the Planning Commissions and City Councils. Involvement was required for some key agencies that needed to approve or concur with the Concept Plan, while other agencies were invited to participate in the planning process as their advice was needed on specific issues. Metro, CWS, Washington County, and the Sherwood, Tigard-Tualatin and West Linn-Wilsonville school districts participated in the ART to provide support and concurrence with the Concept Plan.

In addition to the above-mentioned, ART member agencies included the Oregon Department of Transportation (ODOT), Tualatin Valley Fire & Rescue, and the Bonneville Power Administration (BPA). Other agencies were invited to the planning process when their specific advice was necessary, specifically the City of Sherwood, City of Tualatin (including Planning, Community Development, Building, Community Services, Economic Development, Engineering, Parks and Recreation, and Public

Works departments/divisions), City of Wilsonville (including Planning, Community Development, SMART Transit, Public Works, Engineering, Parks and Recreation, Natural Resources, and Building departments/divisions), Clackamas County, Northwest Natural, Portland General Electric, and Tri-Met. This collaborative analysis and joint decision-making set a framework for the Basalt Creek Concept Plan to have the greatest possible chance for success for the community.

The ART met three times throughout the project – in June and September of 2014, and then again in February 2016. The first meeting provided an opportunity to present an overview of the Basalt Creek Concept Plan project and process to the ART and inform members of key milestones and decision points where their input would be needed. The project consultant also presented the proposed methodology for the Existing Conditions report, particularly soliciting feedback on the market analysis, infrastructure analysis, and transportation analysis components. The second meeting served to solicit feedback from ART members on the draft Existing Conditions report, clarify issues surrounding infrastructure, provide an overview of public feedback, and present the land suitability analysis for review. The third meeting was held on February 19, 2016 to further discuss transit, parks and open spaces, schools, parks, and trails.

Information Gathering

The project consultant conducted research on the existing conditions and future needs in the Planning Area, as well as reviewed previous planning efforts affecting the area. This research included land use, transportation, the real estate market, geology, water and sewer infrastructure, stormwater, natural resources and parks. The Existing Conditions Report provides additional background information in Appendix A.

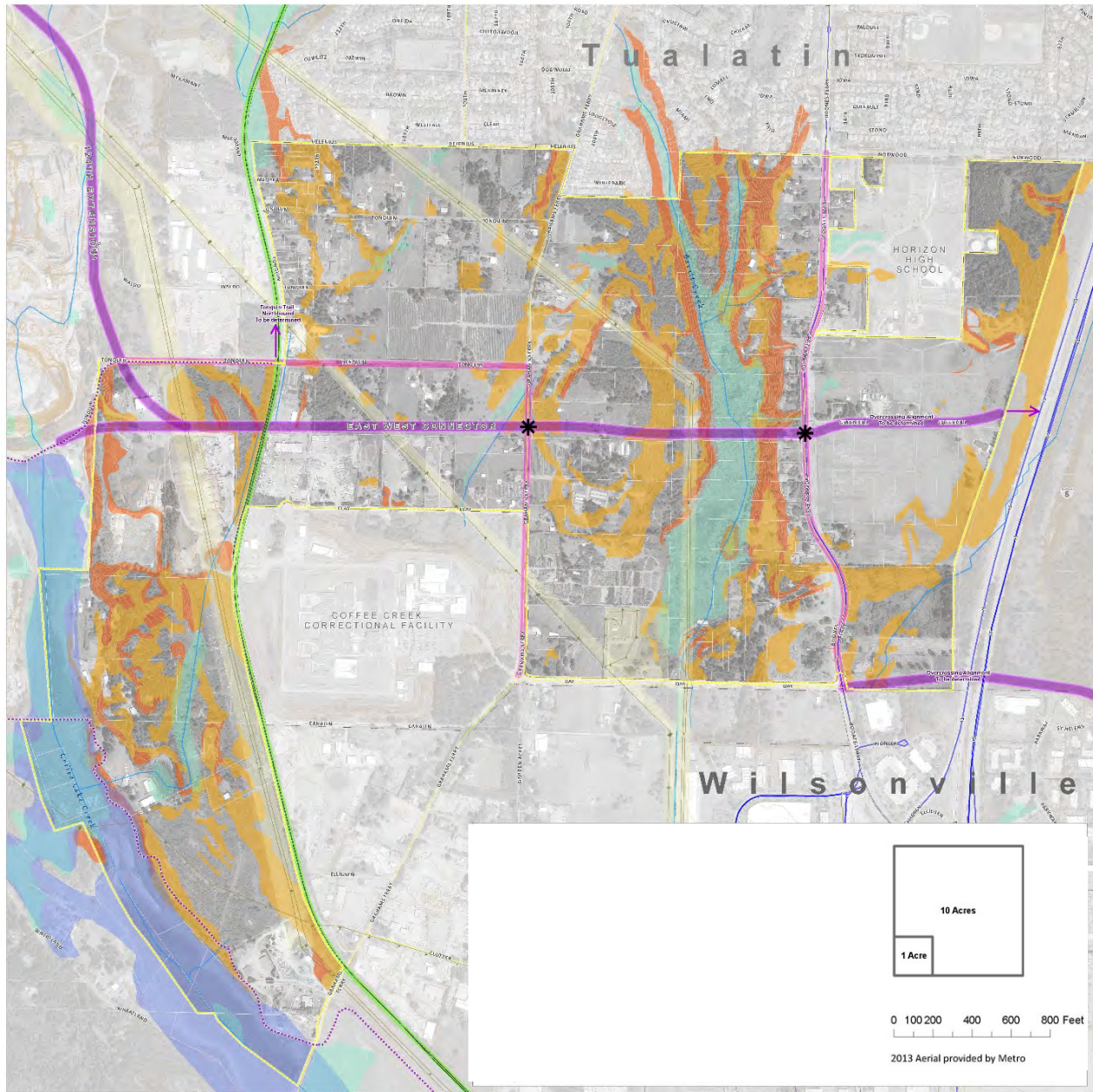
Public Involvement Plan

A Public Involvement Plan, developed by the PMT, was used to guide outreach strategies and events throughout the planning process (Appendix B).

Public Workshop

The planning process began with a community workshop for the Basalt Creek Concept Plan on June 17, 2014. This was a visioning workshop and open house attended by roughly 40 people and solicited input on priorities and preferences for future land use and transportation in the Planning Area. Key outputs included initial scenarios that identified important issues for the area, including a desire to keep the Basalt Creek Canyon as open space, the need for residential buffer areas, traffic challenges and ideas for new parks. Results indicated a preference for appropriate transitions between land uses and protection of existing neighborhoods, but an openness to a range of employment and commercial uses. Instant polling at the workshop was combined with the results of the online survey for a total of 160 responses from participants living both inside and outside the Planning Area. Survey results included a strong interest in public access to natural resources and were less focused on housing or industrial warehousing. This participation informed the establishment of Guiding Principles for the project.

Figure 3 Example of the Basalt Creek Planning Area Base Map used for workshop activity. Participants used these maps to draw and design a vision for future uses of the Basalt Creek Planning Area.



Basalt Creek



Stakeholder Interviews/Focus Groups

The Basalt Creek concept planning process included over a dozen focus group meetings and stakeholder interviews with developers and property owners in June and July 2014. Developer discussions included industrial, office, retail, residential, and mixed-use development. Knife River, Coffee Creek Correctional, Ibach Citizen Involvement Organizations and the Chamber of Commerce from each City also provided input. These discussions focused on future industrial development types, housing preferences, land assembly, and employer amenities. Property owners expressed a desire for flexibility in land uses and concern over how development will impact quality of life in the area. Developers were concerned with industrial development types changing, along with changing housing preferences, the land assembly challenge, and what employers will consider amenities in the area. These discussions informed the Concept Plan's market analysis, land suitability analysis, building prototypes, development types and land use placements for testing different land use scenarios for the Planning Area.

Open House

A second open house was held on April 28, 2016 to share the draft Concept Plan elements, including land use, road network and improvements, transit, bike, pedestrian and trail network improvements, parks, natural areas, and infrastructure systems. Members of the public were invited to share feedback on the Concept Plan generally as well as specific options for future parks, natural areas, and the bike, pedestrian and trail network. Participants expressed general support for the preferred alternative presented at the Open House, and during instant polling, shared a desire to use the area for recreation, neighborhood parks and conservation areas.

Email and Website Updates

The Project Management Team (PMT) typically sent monthly updates to those on the interested parties list via email and to property owners via postal mail, which included approximately 300 people. Council and Planning Commission work sessions and updates were scheduled and held throughout the project, including before critical milestones and Joint Council meetings, all of which were open to the public and notice provided on City websites and the project website.

Scenario Testing and Concept Plan Development

What is Scenario Planning?

Scenario planning is a tool used to estimate the likely future effects of growth and development patterns in a specific area. This information helps local governments make decisions about what type of land use, transportation and infrastructure plans and policies will best meet community needs in the future. Scenario planning helps identify challenges and opportunities for desired growth and allows exploration of different approaches to achieve the community vision for an area. Unlike a plan, scenarios are very specific, intending to model likely future land uses. Learning from these, a plan can be developed to allow for several beneficial scenarios.

Scenario Planning for Basalt Creek Planning Area

Scenarios were used to understand how different land use decisions, infrastructure investments, other regulations and policies might impact the future outcomes in Basalt Creek – and how well they achieve

the guiding principles. The scenarios that were designed and tested for the Basalt Creek Planning Area integrated many different variables (such as different land uses and service areas) and the relationships between those variables. By modifying the scenarios, the impact of different sets of decisions were able to be better understood.

The scenario testing for Basalt Creek sought to answer questions about the implications of various development and infrastructure options. Taken together, these questions formed objectives for the scenario evaluation.

- Where should the boundary between Tualatin and Wilsonville be?
- What combination of land uses is most appropriate for the area?
- What infrastructure is needed to support future development, and what will be the cost of that infrastructure?
- Which agencies will provide public services to different parts of the area?
- How will traffic generated by new development in this area impact traffic flows and congestion levels, both locally and regionally?
- How will the benefits and costs of serving the area be balanced fairly between Tualatin and Wilsonville?

The project team created and evaluated a Development Base Case and tested Alternative Development Scenarios. These development scenarios used existing buildings from both jurisdictions to model potential future development and reflect existing zoning and development regulations in the Envision Tomorrow modeling program (see Appendices C1 and C2).

During the scenario development process, jurisdictional boundary discussions were ongoing and different scenarios considered different boundary alternatives. A series of five scenarios were developed in an ongoing iterative process that tested the following variables: the location and amount of different land uses, the location of the jurisdictional boundary, location of service boundaries, and design of infrastructure systems. The PMT also developed performance measures associated with the Guiding Principles, in addition to local and regional goals, to compare the different scenarios. As a complex set of conditions, the variables tested were interrelated and needed to be combined in scenarios to understand how changes in one variable impacted the others.

These scenarios were vetted by the project's PMT and each City Council, and then fully analyzed for the transportation, infrastructure, and land use implications. Based on these analyses, discussions among the PMT, and feedback from the Joint Councils, a preferred scenario was developed. The preferred scenario became the basis for the Basalt Creek Concept Plan.

Final Plan Development

The final phase of the project included further refinement of the Concept Plan using the preferred scenario, setting the jurisdictional boundary, and drafting an implementation strategy for the Concept Plan. The final Basalt Creek Concept Plan was designed to meet all the requirements associated with areas added to the urban growth boundary (see Title 11 Compliance Memo in Appendix D) and was forwarded to Metro for review. The Councils from the City of Tualatin and the City of Wilsonville each adopted the Concept Plan by resolution. Comprehensive Plan amendments and implementation strategies and tools are to be consistent with this Plan.

Concepts that Shaped the Plan

Guiding Principles represent the collective interests and goals for the Basalt Creek Planning Area as agreed to and established by the Joint Council. They provided a framework for gathering input and developing transparent and meaningful measures that helped inform the decision-making process for this plan (see Appendix E for Guiding Principles Memo which provides further descriptions).

1. Maintain and complement the Cities' unique identities
2. Capitalize on the area's unique assets and natural location
3. Explore creative approaches to integrate jobs and housing
4. Create a uniquely attractive business community unmatched in the metropolitan region
5. Ensure appropriate transitions between land uses
6. Meet regional responsibility for jobs and housing
7. Design cohesive and efficient transportation and utility systems
8. Maximize assessed property value
9. Incorporate natural resource areas and provide recreational opportunities as community amenities and assets

In addition to the Guiding Principles, during a Joint Council meeting, the Councils also identified ten key elements for successful implementation of the Basalt Creek Concept Plan that relate to key functions such as the sewer, water, and transportation services, land use and natural resources in the area. These considerations informed the key elements of the Concept Plan (see Appendix E for 10 Considerations of Success for further descriptions).

Planning Area Conditions

The project consultant team conducted research on the existing conditions and future needs in the Planning Area, as well as reviewed previous planning efforts affecting the area. The project team studied land use, transportation, the real estate market, geology, water and sewer infrastructure, stormwater, natural resources and parks.

Planning Context and Urban Growth Boundary

The Portland Metropolitan Area Urban Growth Boundary (UGB) includes three counties and 24 cities. Metro administers the UGB, which includes a mandatory six-year assessment of whether it includes sufficient land to accommodate 20 years of expected development for residential and job growth.

During the 2004 analysis, Metro identified a shortfall of industrial land and a study identified good candidates for industrial development by looking at soil classification, earthquake hazard, slope steepness, parcel size, accessibility to regional transportation and necessary services, and proximity to existing industrial uses. Several areas of land identified as good candidates for industrial development were added to the UGB by Metro via Ordinance 04-1040B in 2004, two of which comprise the Basalt Creek Planning Area. The current 2040 Growth Concept Map identifies the Basalt Creek Planning Area as industrial, but the Ordinance does provide some flexibility to include housing in the Planning Area. The

Ordinance identified outer neighborhood as a potential land use in the northern portion of the Planning Area, to provide some housing and a buffer for existing residential neighborhoods in Tualatin.

The industrial designation from Metro is defined within the Regional Framework Plan's Glossary as "an area set aside for industrial activities. Supporting commercial and related uses may be allowed, provided they are intended to serve the primary industrial users. Residential development shall not be considered a supporting use, nor shall retail users whose market area is substantially larger than the industrial area be considered supporting uses."

The Land

Landscape Context

The general character of the area's landscape was shaped by the Glacial Lake Missoula Ice Age floods, a series of cataclysmic floods that shaped the landscape of the Columbia River Gorge and the Willamette Valley during the last Ice Age. The Ice Age Tonquin Trail Master Plan describes the area as "comprised of upland prairie fragments, and oak and madrone woodlands. Rare wildflowers are found near basalt hummocks (scablands) to the west of the Planning Area, and rare reptiles (pond turtles) and amphibians (northern red-legged frogs) live in the kolk ponds." Remains from the Ice Age floods that can be seen in and around the Basalt Creek Planning Area include glacial deposits, scablands, kolk ponds (ponds formed by eddies during the Missoula Floods), and flood channels. The terrain includes significant slopes of more than 25% and with a change in elevation from 250 ft above mean sea level (amsl) to a maximum elevation of 350 ft amsl.

Existing Land Use

The primary existing land uses in the Basalt Creek Planning Area are rural agriculture, industrial and rural residential consisting of low-density single-family housing. There are areas of agricultural uses, including a nursery, landscaping supply, and blueberry farms. Existing industrial land users include gravel quarries and cement manufacturing in the northwest corner of the Planning Area. The existing housing in the area consists of detached single-family on large lots. A significant portion of single-family homes are located on the eastern edge of the Basalt Creek Canyon along Boones Ferry Road.

Adjacent Land Uses

The Planning Area is bounded to the north by Tualatin residential neighborhoods, to the south by Wilsonville commercial and industrial uses, I-5 to the east, and to the west by Coffee Lake Creek, wetland habitat, and rural and industrial lands.

- The southernmost residential neighborhoods of Tualatin, including recently-built subdivisions such as Victoria Gardens, are located to the north of the Planning Area. These neighborhoods are zoned a mix of low- and medium-low density residential and are comprised primarily of high-quality, detached, single-family homes. Also, to the north is the 30-acre campus of Horizon High School (a private high school). The campus is bordered on three of its sides by the Planning Area.
- To the west, the Planning Area is bordered by unincorporated portions of Washington County including the Southwest Tualatin Concept Plan area where active quarries and an asphalt plant are located. Further west of the Southwest Tualatin Concept Plan area is the Tonquin Employment Plan area which falls within the City of Sherwood's urban planning area. Most of this land is undeveloped or vacant at this time.

- South of the Planning Area are existing and planned commercial, office and industrial uses located within the City of Wilsonville. The employment areas around SW Commerce Circle, Ridder Road, and 95th Avenue include advanced manufacturing, clean tech, warehouse, distribution, and logistics businesses. The Coffee Creek Planning Area abuts the Basalt Creek Planning Area along the south side of Day Road and south and west to the existing Wilsonville city boundary. The City adopted a Master Plan and Industrial Form-based Code for this area to create a high caliber business district.
- Adjacent to the southern border of the Planning Area is Coffee Creek Correctional Facility. This is a state-owned correctional facility with 1,250 female inmates, and a fluctuating number of male inmates (around 400) undergoing intake until they are transferred to another facility. The Correctional Facility employs 435 people with day and nighttime shifts comprising a 24-hour workforce.

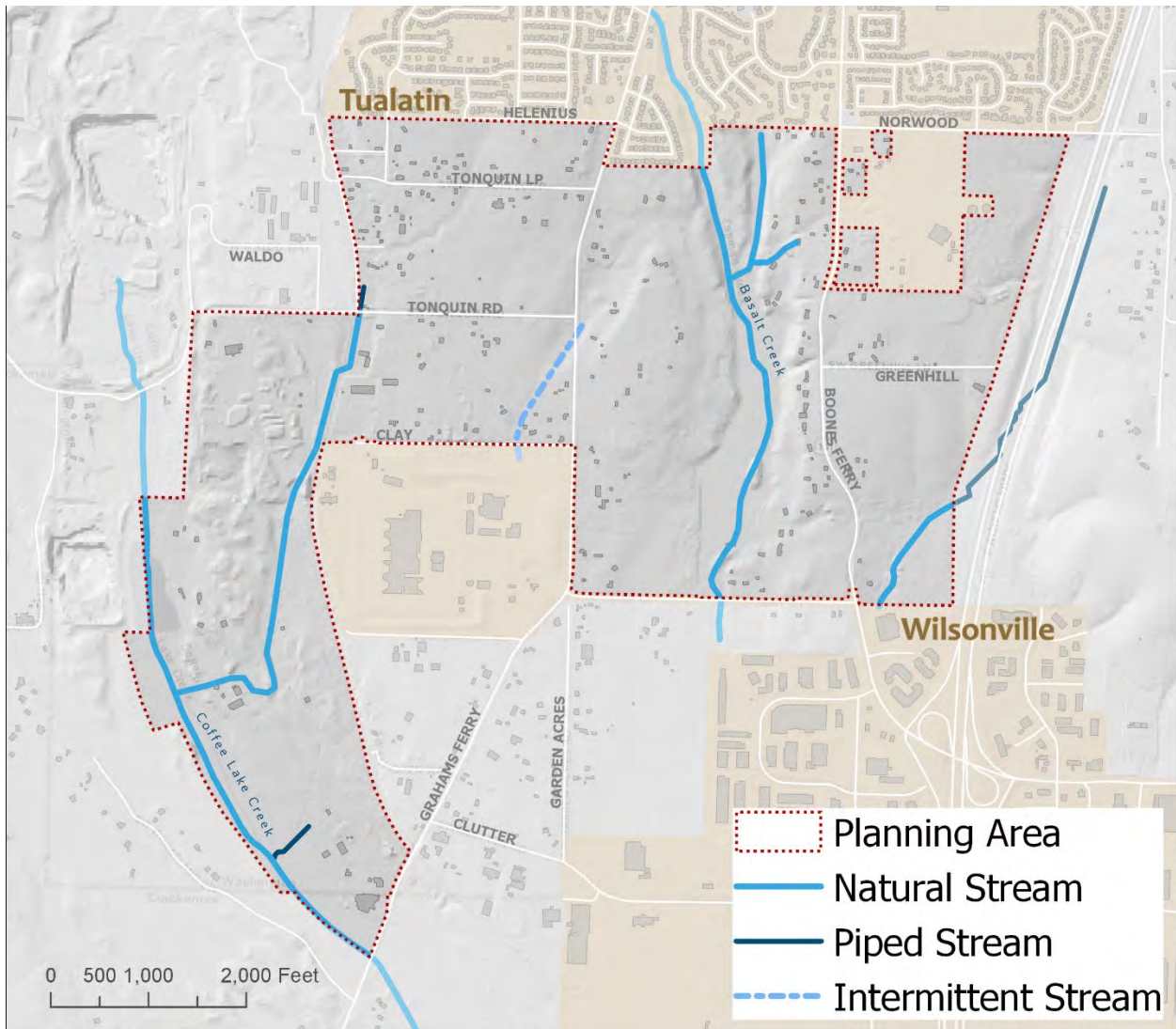
Natural Resources

Wetlands, floodplain, upland habitat, streams, open water and riparian areas provide important natural resources in the planning area. Within the Basalt Creek Canyon and Coffee Lake Creek basin, there are open water, emergent and scrub-shrub wetlands. The small, forest patches scattered throughout the planning area provide travel corridors and habitat for a variety of species including Red-legged Frogs and the Pileated Woodpecker. Land suitability studies for this area identified constrained lands including 18,845 feet of natural streams; 1,402 feet of underground or piped streams, defined as water that flows under the surface in a definite channel; and 789 feet of intermittent streams in the Planning Area.

There are two main streams in the Planning Area, Basalt Creek (also known as Seeley's Creek or Tappin Creek) and Coffee Lake Creek and its east tributary, which run through the West Railroad Area. There is also an underground, piped stream near I-5 along the eastern edge of the Planning Area. Coffee Lake Creek forms the western boundary of the Planning Area. There are also 69 acres of wetlands (8% of the Planning Area), including 49 acres of open water in the Planning Area.

There are 116 acres of land designated by Metro as Water Quality and Flood Management Areas. Following Metro's designations and associated regulations, local jurisdictions determine development rules and requirements that affect these areas. Clean Water Services, who regulates environmental lands in the City of Tualatin and elsewhere in Washington County and the City of Wilsonville, have local ordinances in place that go beyond the level of conservation otherwise required by Metro. Existing local standards from each City would apply upon annexation of property into either Wilsonville or Tualatin.

Figure 4 Map of Streams by Category.



Buildable Lands Assessment

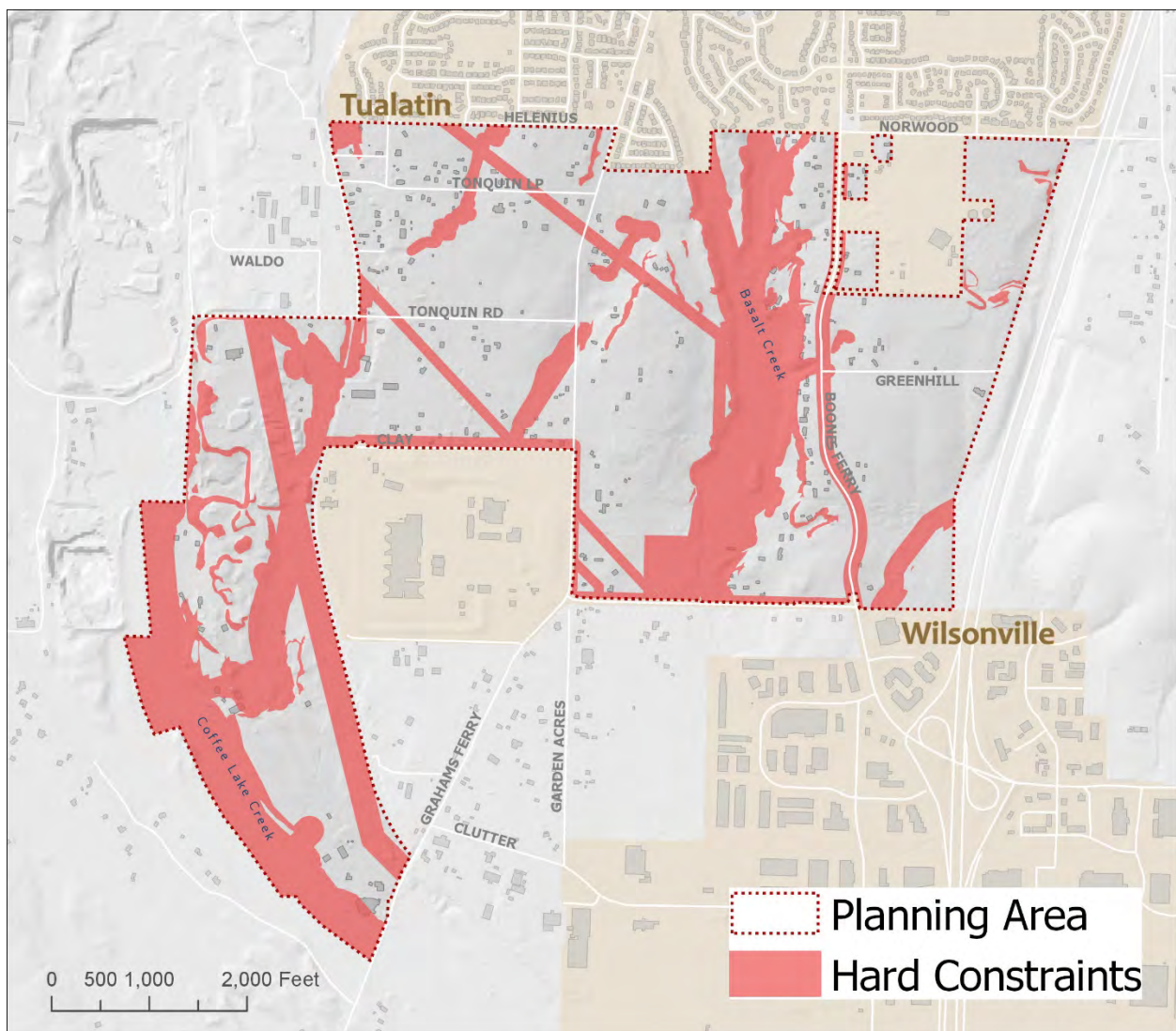
A buildable lands assessment for the Basalt Creek Planning Area (see Appendix F) screened out parcels where there is limited or no development potential to identify the places where development is most suitable given the environmental and regulatory context. There is a range of factors that influence development potential within the Planning Area, but they can be divided into two categories: hard and soft constraints. Hard constraints are either physical attributes or legal requirements that prohibit new development. These areas are excluded from the analysis. Soft constraints are where physical attributes or legal requirements allow some development with guidance on appropriate land uses and development densities. Assumptions regarding the amount of development in these areas followed Metro guidelines calling for restrained development.

Land Suitability Analysis

Determining the development capacity for the Planning Area starts with the buildable lands assessment and then further analyzes the land supply to estimate development capacity on any given parcel. The Planning Area includes land that is constrained by streams and easements. This land supply analysis then evaluates existing land uses, as provided by tax lot data via Metro's Regional Land Information System (RLIS), visual surveys of the area via aerial photographs and online tools such as Google Earth, and site visits for verifying stream conditions and alignments.

After completing this more detailed review of the land supply to determine development suitability, the land suitability analysis is combined with the buildable lands assessment to remove constrained land and to create a geographically referenced database of developable land within the Planning Area.

Figure 5 Map of Hard Constraints within the Basalt Creek Planning Area.

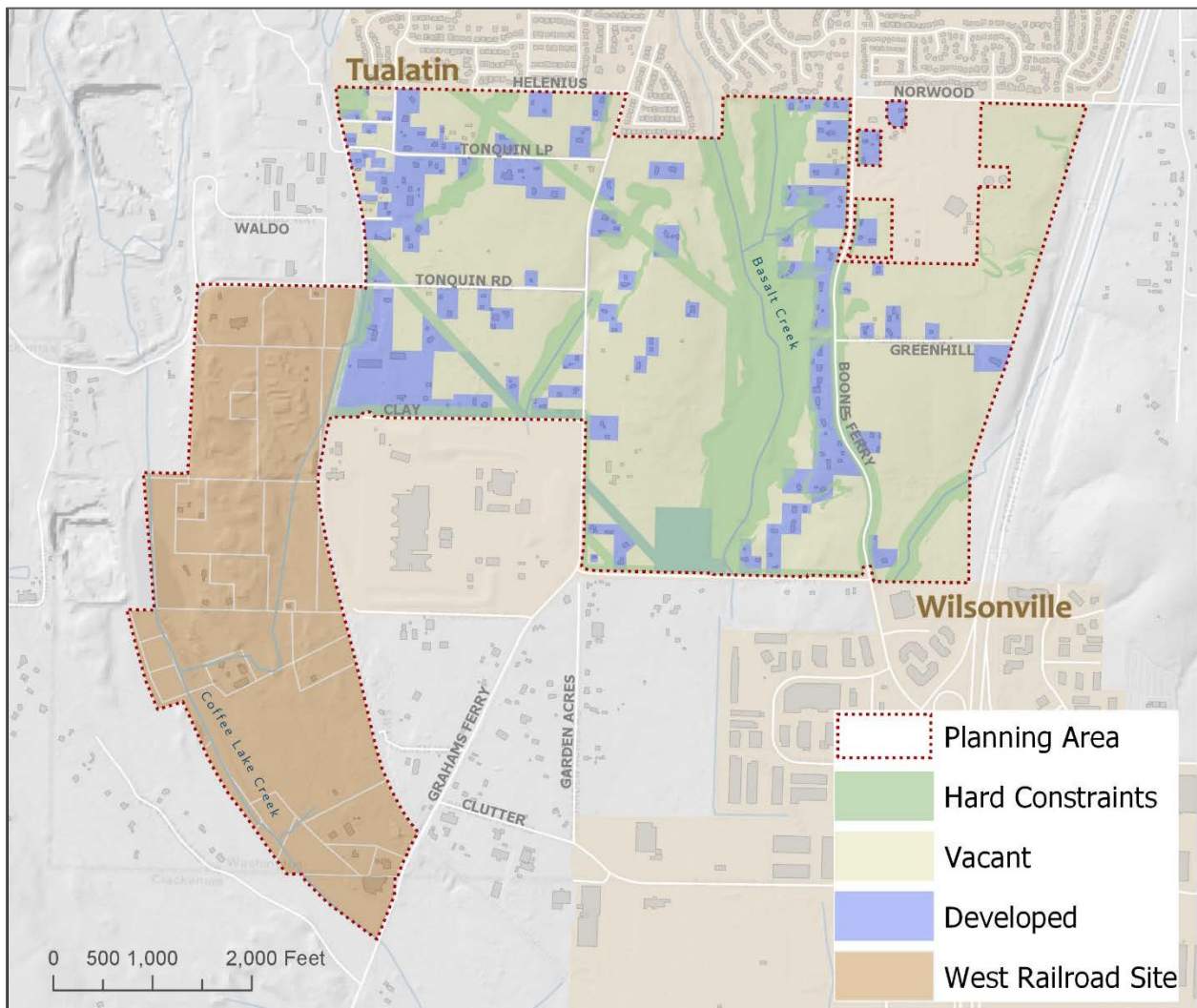


The goal is to classify every parcel within the Planning Area into one of the categories described below:

Table 2 Land Supply within the Basalt Creek Planning Area by Type and with Acreage.

Land Supply by Type and Acreage		
Land Type	Acres	Description
Vacant Land	331	Unconstrained land that is ready to build with no major structures located on the site
Developed Land	125	Land already built upon which includes acreage covered by roadways
Constrained Land	153	Land that cannot be built upon due to environmental or other hard constraints
West Railroad Area	238	Excluded from development plan due to large amount of constraints and limited access
Total Land Supply	847	

Figure 6 Land Supply by Type.



There were no redevelopment assumptions incorporated in this analysis. The values associated with the existing buildings were high enough to preclude redevelopment for purposes of determining the development types used during scenario testing. Thus, the developable land estimate for the Planning Area is 331 acres. This analysis forms the foundation for determining land use and development capacity on each parcel in the Planning Area. The development plan for the Basalt Creek Planning Area excludes the West Railroad Area from development due to the large amount of constraints on the land and limited access.

Infrastructure and Services

Roadways

The Concept Plan looked at the existing transportation system and the planned transportation system developed as part of the TRP, which includes phased investments to support regional and local transportation needs through 2035. The plan provides 18 transportation investments broken into short, medium and long-term projects, all of which are important to ensure that the transportation network functions at acceptable levels over time. The key element is the East-West Connector to the 124th Avenue extension, the future and partially constructed Basalt Creek Parkway.

Sanitary Sewer

Currently, no sewer service is provided to the Planning Area. Existing homes use septic systems. Wastewater conveyance to the south of the Planning Area is under jurisdiction of the City of Wilsonville. Sewer service to the north of the Planning Area in Tualatin is provided by the City of Tualatin and Clean Water Services.

The nearest treatment facility to the north of the Planning Area is the CWS Durham Advanced Wastewater Treatment Facility (AWTF). Eight gravity sewer mains exist near the north Planning Area boundary that could provide connection points for wastewater from the Basalt Creek Planning Area into the Tualatin collection system. The Victoria Woods Pump Station and associated force main are also located just to the north of the Planning Area boundary. From these connection points, wastewater flows by gravity toward the AWTF, crossing the Tualatin River via the Lower Tualatin Pump Station in Tualatin Community Park. Pump stations will be required to lift flows from the Planning Area into the existing gravity system. Expansion of the service district area to include Tualatin's portion of the Basalt Creek Planning Area needs to be approved by Clean Water Services at time of Annexation.

The nearest treatment facility to the south of the Planning Area is the City of Wilsonville Wastewater Treatment Plant (WWTP), located approximately 3.2 miles south of the Planning Area. This facility was recently expanded to accommodate growth within the current city limits and allow for additional buildout to accommodate growth outside the city limits in Urban Growth Boundary expansion areas. Approximately half (300 acres) of the Basalt Creek Planning Area was accounted for in the year 2030 build-out capacity assessment conducted as part of the facility expansion.

The City of Wilsonville's Coffee Creek Master Plan identifies a new sanitary main line to be constructed. After the adoption of that plan, more analysis was completed and determined the appropriate location of the sanitary sewer line to be along Garden Acres Road from Ridder Road and extending north to near Day Road and then continuing up Grahams Ferry Road. A second sanitary sewer line will extend from Garden Acres east and north to Day Road extending east to Boones Ferry Road. These lines are intended to provide conveyance of wastewater within the Coffee Creek area and are also intended to serve flows

from the Basalt Creek Planning Area to the WWTP. The Sanitary Sewer Collection System Master Plan has analyzed a range of potential flows from the Planning Area.

The Tualatin Sanitary Sewer Master Plan Update is currently being updated and includes the Basalt Creek Planning Area as a sewer basin. The City of Wilsonville updated its Sanitary Sewer Collection Systems Master Plan (MSA, 2014) which included the Basalt Creek Planning Area as a contributing area. The resulting updated master plans identify the improvements needed to increase the capacity of each system to convey flow from the Basalt Creek Planning Area.

Drinking Water

The Basalt Creek Planning Area currently has no municipal water infrastructure in place. Tualatin currently purchases its municipal water from the Portland Water Bureau. The City of Wilsonville Water Treatment Plant draws its potable water from the Willamette River. Based on the topography, the Basalt Creek Planning Area could be served from the south through The City of Wilsonville's distribution system or from the north through the City of Tualatin's distribution system. Lower elevations of the Basalt Creek Planning Area can be adequately served through existing lines in Wilsonville's Pressure Zone B.

Stormwater

Existing stormwater infrastructure consists of roadside drainage ditches and culverts. Culverts in the Planning Area are under the jurisdiction of Washington County and may not have capacity for future urban conditions. Culverts to the south of the Planning Area are part of the City of Wilsonville stormwater system. The City of Tualatin has jurisdiction over the stormwater conveyance system to the north of the Planning Area. Culverts may need to be upsized to provide adequate capacity for runoff from new impervious areas, unless onsite retention or infiltration is required when the location of public drainage or the topography of the site make connection to the system not economically feasible.

Basalt Creek itself flows to the south into Wilsonville as part of the Coffee Lake Creek Basin. Basalt Creek discharges into the Coffee Lake wetlands. Coffee Lake Creek flows south from the wetlands and combines with Arrowhead Creek before discharging to the Willamette River.

The City of Wilsonville's 2012 Stormwater Master Plan identifies capital improvement Project CLC-3 to restore a portion of the Basalt Creek channel, west of Commerce Circle, to increase capacity. The master plan also identifies Project CLC-1 for construction of a wetland for stormwater detention purposes, north of Day Road, to serve an area that includes the Basalt Creek Planning Area. The July 2014 Updated Prioritized Stormwater Project List identifies CLC-3 as a mid-term project (6 to 10 years) and CLC-1 as a long-term project (11 to 20 years).

Locations where stormwater runoff from the Basalt Creek Planning Area could connect to existing stormwater infrastructure will require evaluation of the conveyance systems at time of development.

Schools

The Planning Area falls within the Sherwood School District, which has an estimated enrollment of 5,158 and includes four elementary schools, two middle schools, Sherwood High School, and Sherwood Charter School. Most of these schools are within three miles of the edge of the Basalt Creek Planning Area.

The Planning Area is near Tualatin High School, one of two high schools in the Tigard-Tualatin School District. The district also includes three middle schools and ten elementary schools. It serves 12,363 students overall. Horizon Christian High School (private) has 160 students enrolled on their campus with a vision of serving up to 1,000 students in the future. Existing parks, libraries, and schools are mapped in the Existing Conditions Report (see Appendix A).

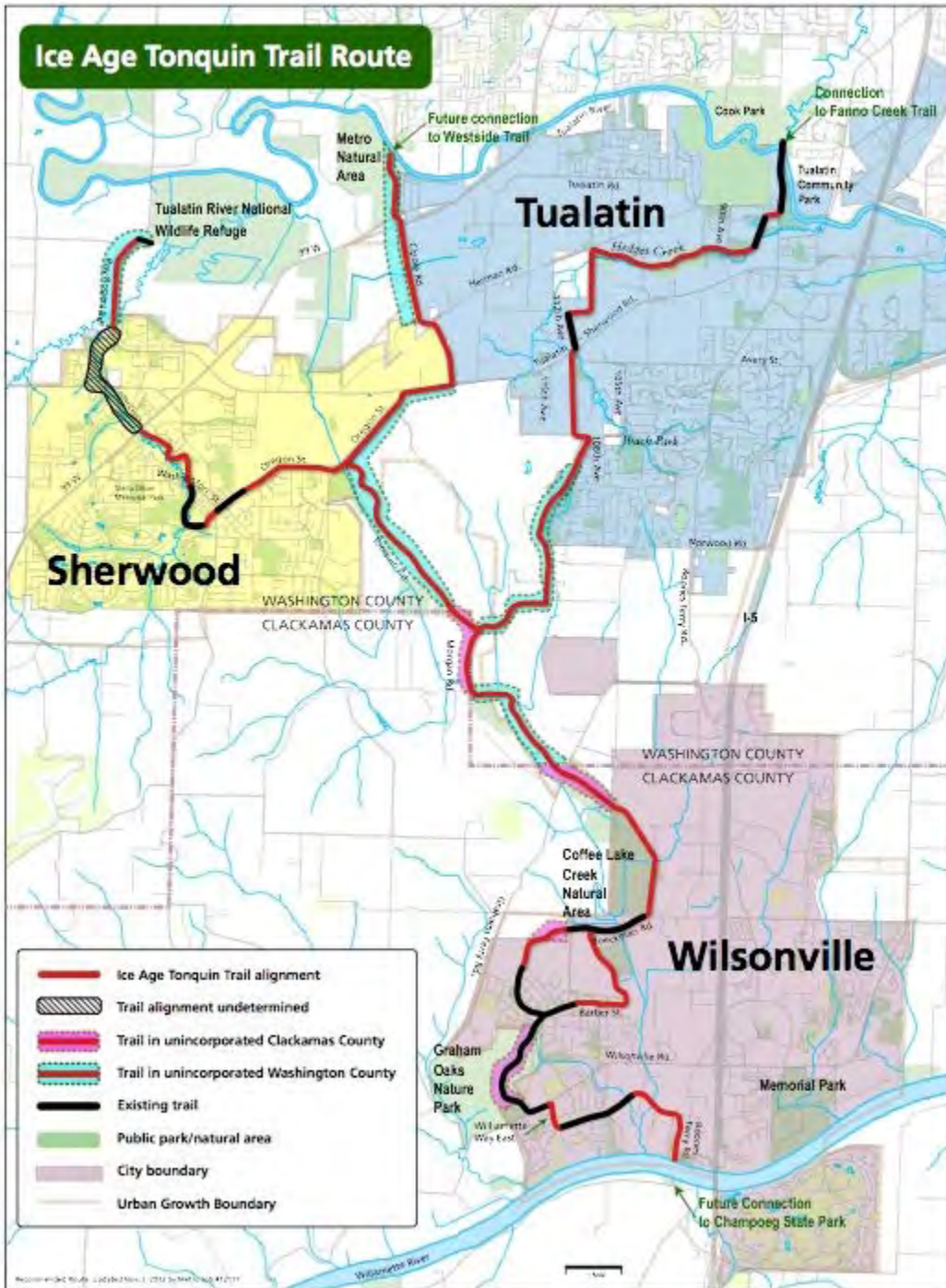
Parks

No parks currently exist within the Planning Area. Wilsonville Parks owns and maintains 16 different public parks, the closest of which is Canyon Creek Park located in Northeast Wilsonville on the other side of I-5. It has 1.41 developed acres and 6.87 acres of natural area popular for picnics and walking. The Other Wilsonville parks are located approximately 2 miles south of the Planning Area, including Graham Oaks Nature Park, which will be connected to the Planning Area when the regional Ice Age Tonquin Trail is complete. City of Tualatin Parks and Recreation owns and maintains 9 different parks, with Ibach Park being the closest to the Planning Area. Ibach includes an award winning and nationally recognized playground that incorporates Tualatin's pre-historic, Native American, and pioneering past, with information on the cultural and natural history of the area.

Trails

Metro's Ice Age Tonquin Trail Master Plan provides a framework for local and regional jurisdictions to embark on trail implementation efforts. The proposed trail alignments show about 22 miles of trails connected through Tualatin, Wilsonville and Sherwood, and includes a section traversing the Basalt Creek Planning Area.

Figure 7 Map from the Ice Age Tonquin Trail Master Plan



Market Analysis

A market analysis (Appendix G) to identify the expected development potential for the Basalt Creek Planning Area as a future industrial and urban growth area was conducted by Leland Consulting Group.

The Planning Area is contiguous with several other employment and industrial areas in the southwestern part of the Portland metropolitan region. The market area for the Concept Plan includes the cities of Tualatin, Wilsonville, and Sherwood, as well as some surrounding areas. Each of these three cities is expecting business expansion and job creation. Viewed together, these areas comprise one of the largest industrial and employment clusters in the region.

Both Tualatin and Wilsonville have seen significant industrial and office development during the past three decades. Industry clusters in which both cities are already highly competitive are expected to continue and provide significant business and job growth in the future. These include advanced manufacturing, corporate and professional services, health care and related fields, and other specific industrial clusters such as food processing and light manufacturing. The amount of industrial development (including warehousing, production, flexible office/industrial space, high tech, etc.) in both cities is significantly larger than the amount of office development. Office development—nationally and regionally—is not expected to bounce back from the recession with the same resiliency as industrial space.

Employment development in the Planning Area will benefit from a number of competitive advantages. A major feature and competitive advantage of this “Southwest Metro” employment cluster in general, and the Basalt Creek Planning Area in particular, is its immediate access to I-5, the west coast’s most important transportation route. Additional advantages are access to I-205, Highway 217, nearby arterial roads, and transit service, a growing and educated workforce, and established and expanding industry clusters nearby. Employment corridors are located along transportation arterials that include the 124th Avenue Extension and the Basalt Creek Parkway located east west along the future jurisdictional boundary.

The market area’s location and current demographics are also encouraging for new housing development. The Planning Area is immediately south of several south Tualatin residential neighborhoods, which contain attractive parks, street trees, and schools. The neighborhoods create a positive environment for residential development along the northern edge of the Basalt Creek Planning Area.

The Planning Area is already served by several major regional and sub-regional retail nodes located nearby—Bridgeport Village, central Tualatin, and Wilsonville’s Argyle Square. Any commercial space built in the Basalt Creek Planning Area will primarily serve residents and employees, as is consistent with Metro’s employment area designation.

Concept Plan for Basalt Creek

Concept Plan Overview

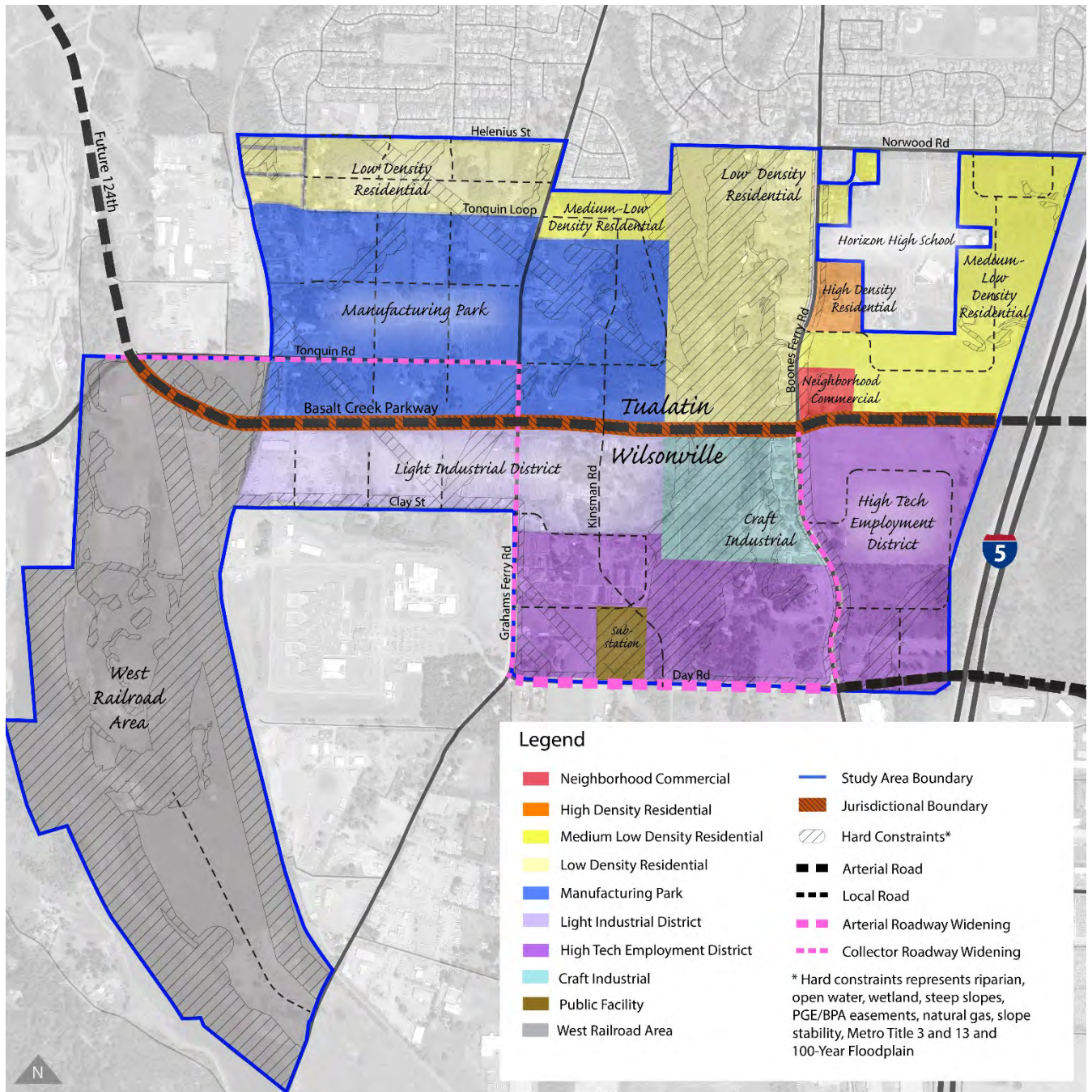
The Basalt Creek Concept Plan guides development within the Planning Area over the next twenty years. It identifies preferred land uses across the area and coordinates future land use, transportation and infrastructure investments between Tualatin, Wilsonville, and Washington County. The partnership between the two cities which shaped this Plan must continue during implementation to drive successful development in the future.

In Ordinance No. 04-1040B, the Metro Council concluded that the Basalt Creek Planning Area can be planned for industrial use given there are urban services in the vicinity and that urbanization will have no effect on agricultural practices on adjacent land due to its isolation from agricultural activities. The Metro Council identified the area as the most suitable exception area under consideration for warehousing and distribution, a significant industrial need facing the region. The land use framework for the Concept Plan supports job growth in the area, while preserving natural space, buffering residential areas, and improving connectivity throughout the Planning Area.

Key considerations and conclusions informed the Basalt Creek Concept Plan:

- While there is a unified Concept Plan for the Basalt Creek area, it was also important to customize the land use types and implementation measures for each city.
- Natural features, topography, and future roads identified in the Basalt Creek TRP influenced infrastructure service areas and the jurisdictional boundary.
- Operating separate infrastructure systems along the jurisdictional boundary affords each jurisdiction the ability to develop and manage their own public utility systems.
- The topography and geology in this area may present development challenges and infrastructure costs may be higher than average.
- Various employment types impact performance of the transportation system differently; for example, retail uses generate more trips than industrial or warehousing.
- There are uncertainties in estimating assessed value and property tax revenue of future development due to unpredictability of the market and the extent to which the modeled development types will be built over time; likewise, it is difficult to accurately estimate SDC revenue for future development.
- The West Railroad Area has significant environmental, infrastructure, and transportation constraints and costs to serve new development; this area is likely to take longer to develop than the rest of the Planning Area. When there is development interest, future planning would need to be conducted.

Figure 8 Basalt Creek Land Use Concept Map



Key Elements of the Concept Plan

- Jurisdictional Boundary Determination
- Land Use and Development
- Transportation
- Transit
- Bicycle, Pedestrian and Trail
- Parks and Open Space
- Natural Resources
- Water
- Sewer
- Stormwater
- Implementation & Phasing

Jurisdictional Boundary, Land Use and Development

The Basalt Creek Planning Area is divided between the Cities of Tualatin and Wilsonville, and the Basalt Creek Parkway serves as the jurisdictional boundary between the two. Of the 847 acres in the Basalt Creek and West Railroad Areas, approximately 367 acres will be in the Tualatin planning area and 480 acres will be in the Wilsonville planning area. The land use patterns in the Concept Plan are responsive to the setting and to the existing conditions. Since the area is well suited and intended for industrial and housing uses, much of the Planning Area is designated for employment land uses. The Concept Plan land use pattern also anticipates the inclusion of transitional areas via development design standards to buffer new industrial land from adjacent existing uses and neighborhoods.

The land use designations on the map represent real-world development types. Each development type (i.e. Manufacturing Park) is defined by a set of buildings, which are based on real buildings in each of the cities. Tualatin's land use designations which are north of the jurisdictional boundary are consistent with its current development code, and Wilsonville's land use designations, south of the jurisdictional boundary, are consistent with its current development code.

Using the land suitability analysis, and looking at adjacent land uses, the project team identified appropriate land use designations for properties within the Planning Area. These land use designations were further refined, and appropriate densities selected to provide for regional employment capacity and housing while also maintaining traffic counts consistent with the TRP.

Tualatin land uses include a mix of residential and employment development types, with the housing land use designations in the northern and northeastern portions of the Planning Area. The Plan calls for a small retail node just east of the Basalt Creek Canyon located to serve residents and workers.

Wilsonville land uses include a mix of employment development types and a modest opportunity for live/work housing. These land uses support adjacent and nearby industrial areas such as the Coffee Creek Industrial Area and provide flexibility to meet a range of market demands. These uses could also be a good fit for the City's Industrial Form-based Code, recently adopted for the Coffee Creek Industrial Area, if the City wanted to extend it north into the Basalt Creek Planning Area.

Development Types

Table 3 Summary of Development Types Identified for Basalt Creek Planning Area by Jurisdiction

Jurisdiction	Land Use Designation	Buildable Acreage	Households		Employment	
			Count	Density per Gross Acre	Count (jobs)	Jobs per Gross Acre
Tualatin	High Density Residential	3.36	67	19.9	-	-
	Medium-Low Density Residential	59.83	374	6.3	-	-
	Low Density Residential	24.83	134	5.4	-	-
	Neighborhood Commercial	2.89	-	-	33	11.3
	Manufacturing Park	92.95	-	-	1,897	20.4
	Functionally Unbuildable	10.37	-	-	-	-
	Tualatin Subtotal	194.23	575		1,929	
Wilsonville	Craft Industrial	1.25	6	4.8	27	21.7
	Light Industrial District	35.30	-	-	581	16.5
	High Tech Employment District	94.47	-	-	1,916	20.3
	Functionally Unbuildable	5.62	-	-	-	-
	Wilsonville Subtotal	136.64	6		2,524	
Total		330.87	581		4,453	

Tualatin

Employment. The Concept Plan allocates substantial land as Manufacturing Park, which is expected to accommodate 1,897 new jobs, calculated based on the expected square footage of development in this area and the average square footage needed per employee. The Manufacturing Park is located along the northern edge of the future Basalt Creek Parkway on the land west of Basalt Creek Canyon, including both sides of Tonquin Road and Graham’s Ferry (as shown on the above map).

Housing. Most of the remaining land north of the proposed Basalt Creek Parkway (beyond employment land) is allocated to a mix of residential uses at varying densities. The Concept Plan organizes residential land uses into two general areas that are intended to have easy access to services and be connected to parks, schools, and natural areas.

1. The plan focuses the lowest density housing (a mixture of low-density and medium-low density) along the northern portion of the Planning Area and low density along the west side of Boone's Ferry Road, adjacent to existing neighborhoods of Tualatin. This land is expected to accommodate 134 new households.
2. The eastern portion of the Tualatin future annexation area is anticipated to be a mixture of high and medium-low density residential; the land immediately east of Boones Ferry Rd is intended for high density housing; The remainder of the land east and south of Horizon School is planned for medium-low density residential. This eastern subarea is expected to accommodate 407 new housing units in Tualatin. This land is near the intersection between Boones Ferry Road and the new Basalt Creek Parkway.

Commercial. Neighborhood Commercial is planned north of the jurisdictional boundary and east of the Basalt Creek Canyon at, or near, the northeast corner of the intersection of Boones Ferry Road / Basalt Creek Parkway. It is intended to serve residents and workers.

Wilsonville

High-Tech Employment District. Most of the buildable acres in the Planning Area south of the proposed Basalt Creek Parkway are devoted to a mix of higher-density employment land. The High-Tech Employment District is expected to accommodate the largest number of jobs (1,916) with a mix of warehousing, manufacturing and office buildings. This land use is in the southern and eastern sections of the Planning Area, covering all Wilsonville land east of Boones Ferry Road and most of the land south of Clay Street extending to Day Road and bordered to the west by Coffee Creek Correctional Facility.

Craft Industrial. The southwest corner of the intersection of Boones Ferry Road and the new Basalt Creek Parkway is planned as Craft Industrial, which allows for a mix of smaller-scale commercial uses, which may include live-work units. These envisioned development types respond to the topography on those parcels and their location directly south across the Parkway from residential land and southwest of the neighborhood commercial node across the Parkway in Tualatin. Craft Industrial is a better fit with those surrounding uses, providing a transition to the higher intensity employment uses to the south. This area allows less than 20 percent residential use and is expected to accommodate 27 new jobs and 6 new housing units in the form of live-work units.

Light Industrial District. This land is located across the southern edge of the future Basalt Creek Parkway just north of Coffee Creek Correctional Facility and will be able to accommodate 581 new jobs primarily in warehousing and light manufacturing.

West Railroad Future Planning Area

The West Railroad Area is divided from the rest of the Planning Area by the Portland and Western Railroad (PNWR) and the Coffee Creek Correctional Facility. The area is heavily constrained by wetlands habitat (as seen in Figure 5), steep slopes, and fragmented property ownership. Initial estimates show it would be costly to serve this area with adequate water, sewer, and transportation infrastructure due to

its location. These initial cost estimates for the infrastructure are included in Appendix H (Basalt Creek Concept Plan Transportation Technical Analysis and Solutions Memo) and Appendix I (Basalt Creek Concept Plan Infrastructure Technical Memo). Topography and the PNWR line also create a relative separation between this area and the rest of the Basalt Creek Planning Area as well as access issues for freight trucks. Given these constraints, the area has potential for resource conservation and future public access to nature. Additional land uses may be appropriate but will need further analysis.

Because it is considered to have much lower development potential than the rest of the Planning Area, a future land use scenario was not created for this area at this time – it is being considered an area for future study and consideration. Once development and the extension of infrastructure occurs in the rest of Basalt Creek as well as the Coffee Creek Industrial Area, additional analysis should be completed on infrastructure service costs and appropriate land uses. The West Railroad Area is south of the Basalt Creek Parkway and in the City of Wilsonville future annexation area. Wilsonville’s Comprehensive Plan amendment to adopt this Concept Plan will include a designation of Area of Special Concern for the West Railroad Area. The area will require master planning before any development occurs.

Transportation

Key Transportation Solutions

The TRP sets the layout of major new roads and improvements for the area. Prior to land annexing into either city, a cooperative funding strategy needs to be agreed upon between the City of Wilsonville, the City of Tualatin, and Washington County to build out the transportation network as set forth in the TRP. The network must also coordinate with plans for the area as set out in the Metro Regional Transportation Plan.

The Basalt Creek Parkway, of which the segment between 124th Avenue/Tonquin Road to Grahams Ferry Road is already under construction, is the major east-west arterial through the area. The Parkway allows for limited local access providing important freight connections between Tonquin, Southwest Tualatin, and Basalt Creek Employment Areas to I-5. It also serves as a future jurisdictional boundary between Tualatin and Wilsonville.

Additional road improvements are necessary to handle projected traffic levels as the area develops, including adding capacity to north-south collectors and Day Road as well as two additional I-5 crossings (at Day Road and Greenhill). As the area develops, property owners will plan and build local roads connecting to this network. These roadway improvements will include enhanced bike and pedestrian facilities and connections to the future transit system.

Roadway Network

The roadway network for the Basalt Creek Concept Plan is shown in Figure 9. The transportation network includes projects considered likely to be in place by 2035. Metro’s model for forecasting depends partly on the projects planned for the Basalt Creek Planning Area, as well as those planned for the region (Metro’s 2035 Gamma model). Metro’s 2014 RTP, which lists projects reasonably likely to be funded by 2040, informed this analysis. Table 4 shows potential capacity-related projects from the 2014 RTP list. The projects in the RTP originate from the Basalt Creek TRP (see Figure 10 below).

The planned roadway network includes the projects and facilities described in Table 4 below, with one exception. The East-West Arterial Overcrossing is not included on Figure 9 as that segment of the Basalt Creek Parkway is anticipated to be constructed after 2040. Figure 9 also depicts where local connections may be needed to provide access and circulation to existing development and developable parcels. Both Level of Service (LOS) and Volume to Capacity (V/C) performance measures are shown. Level of service (LOS) ratings and volume-to-capacity (v/c) ratios are two performance measures of intersection operations.

Level of Service: relates the traffic service to a given flow rate of traffic and divides the quality of traffic into six levels ranging from Level A to Level F. A represents the best traffic where the driver has the freedom to drive with free flow speed and Level F represents the worst quality of traffic.

Volume-to-capacity (v/c) ratio: A decimal representation (between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. A lower ration indicates smooth operations and minimal delays as the ratio approaches 1.0 congestion increases and performance is reduced. Above that the intersection is at capacity and considered failing.

Table 4 2014 RTP Projects Assumed for 2035 Forecasting

Project Number	Project and Description	TRP Time Period	In Place by 2035?
10736	124 th Ave. Extension (Tualatin-Sherwood Rd. to Grahams Ferry Rd.) – new two-lane roadway extension	2014-2017	Yes
11243	Day Rd. (Grahams Ferry Rd. to Boones Ferry Rd.) – widen to five lanes	2018-2024	Yes
10588	Grahams Ferry Rd. (Helenius St. to county line) – widen to three lanes	2025-2032	Yes
10590	Tonquin Rd. (Grahams Ferry Rd. to Oregon St.) – widen to three lanes	2025-2032	Yes
11438	Tonquin Rd./Grahams Ferry Rd. – add traffic signal	2025-2032	Yes
11469	124 th Ave. Extension (Tualatin-Sherwood Rd. to Grahams Ferry Rd.) – widen to five lanes	2025-2032	Yes
11470	East-West Arterial (Grahams Ferry Rd. to Boones Ferry Rd.) – new five-lane roadway extension	2025-2032	Yes
11487	Boones Ferry Rd. (East-West Arterial to Day Rd.) – widen to five lanes	2025-2032	Yes
11488	Boones Ferry Rd./Commerce Circle/95 th Ave. – Intersection improvement and access control	2025-2032	Yes
11489	Boones Ferry Rd./I-5 Southbound – add second southbound right turn lane on ramp	2025-2032	Yes
11490	Day Rd. Overcrossing (Boones Ferry Rd. to Ellgsen Rd.) – new four-lane roadway extension/overcrossing of I-5	2033-2040	Yes
11436	East-West Arterial Overcrossing (Boones Ferry Rd. to east side of I-5) – new four-lane roadway extension/overcrossing of I-5	2033-2040	No

Source: <http://www.oregonmetro.gov/regional-transportation-plan>

Figure 9 Transportation Preferred Alternative 2035

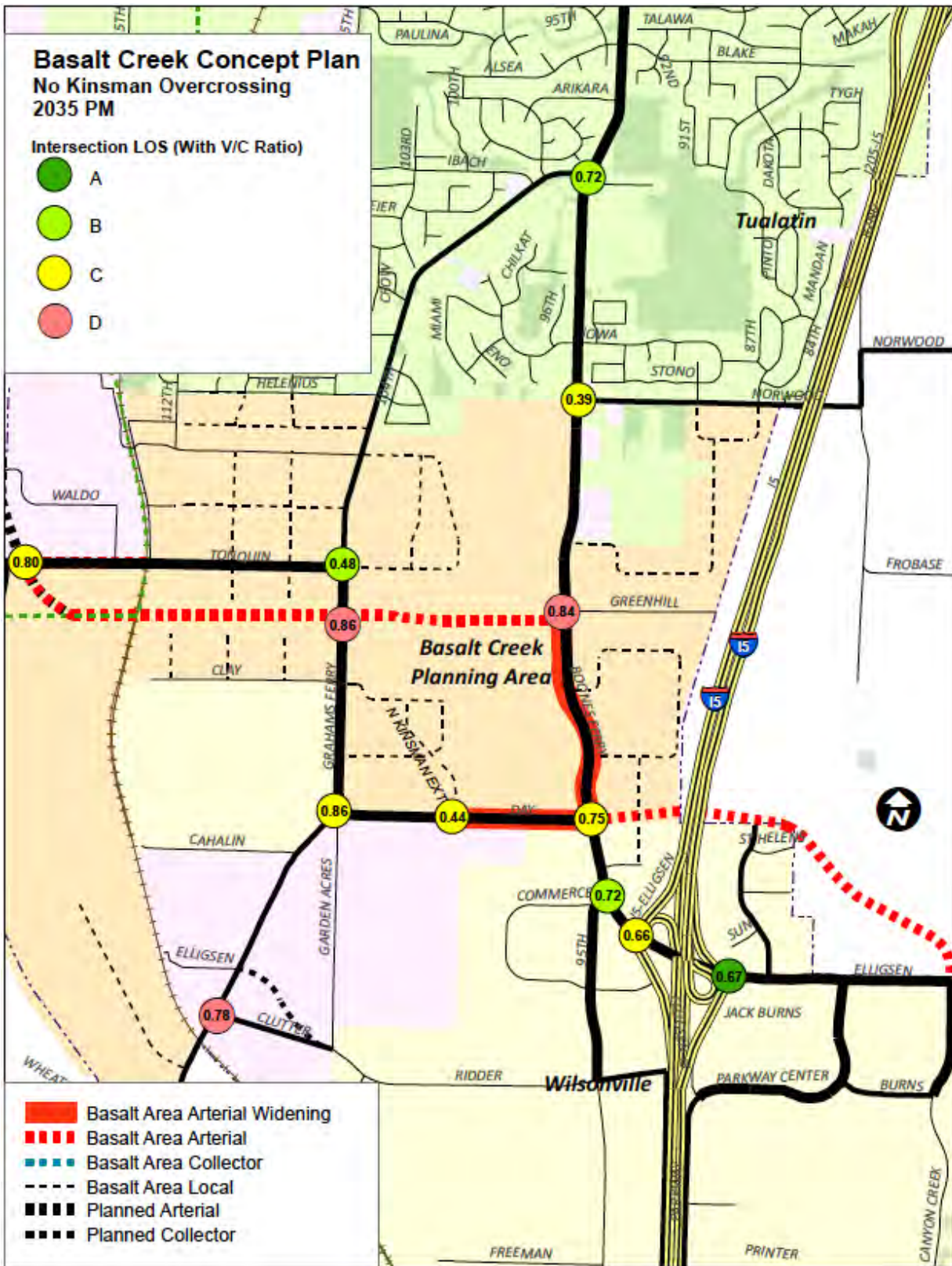
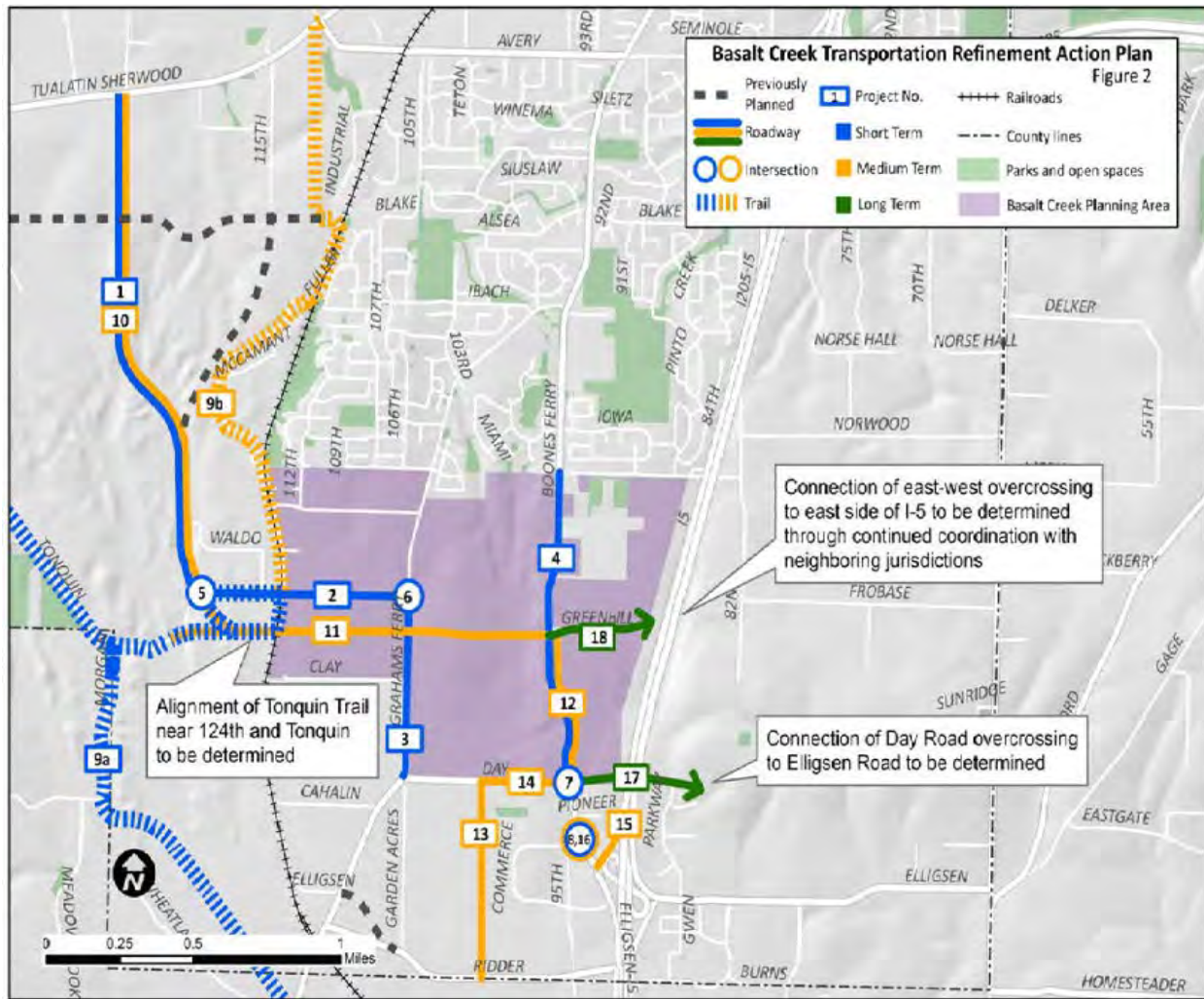


Figure 10 Basalt Creek Transportation Refinement Plan



See Appendix J for more information on the full project list.

The Concept Plan analyzed alternatives regarding future development – and therefore trip generation -- in the Basalt Creek/West Railroad area. The land uses assumed for the Concept Plan are key inputs in traffic forecasting and future traffic operations. Assumptions about regional land use (and intensity of trip generation) beyond the Concept Plan area in 2035 also have a strong impact on forecasting and future operations. Table 5 outlines the trip generation by land use in the Planning Area. The trips generated by the land uses in the Concept Plan are consistent with the trip generation assumed in the TRP and the 2014 RTP.

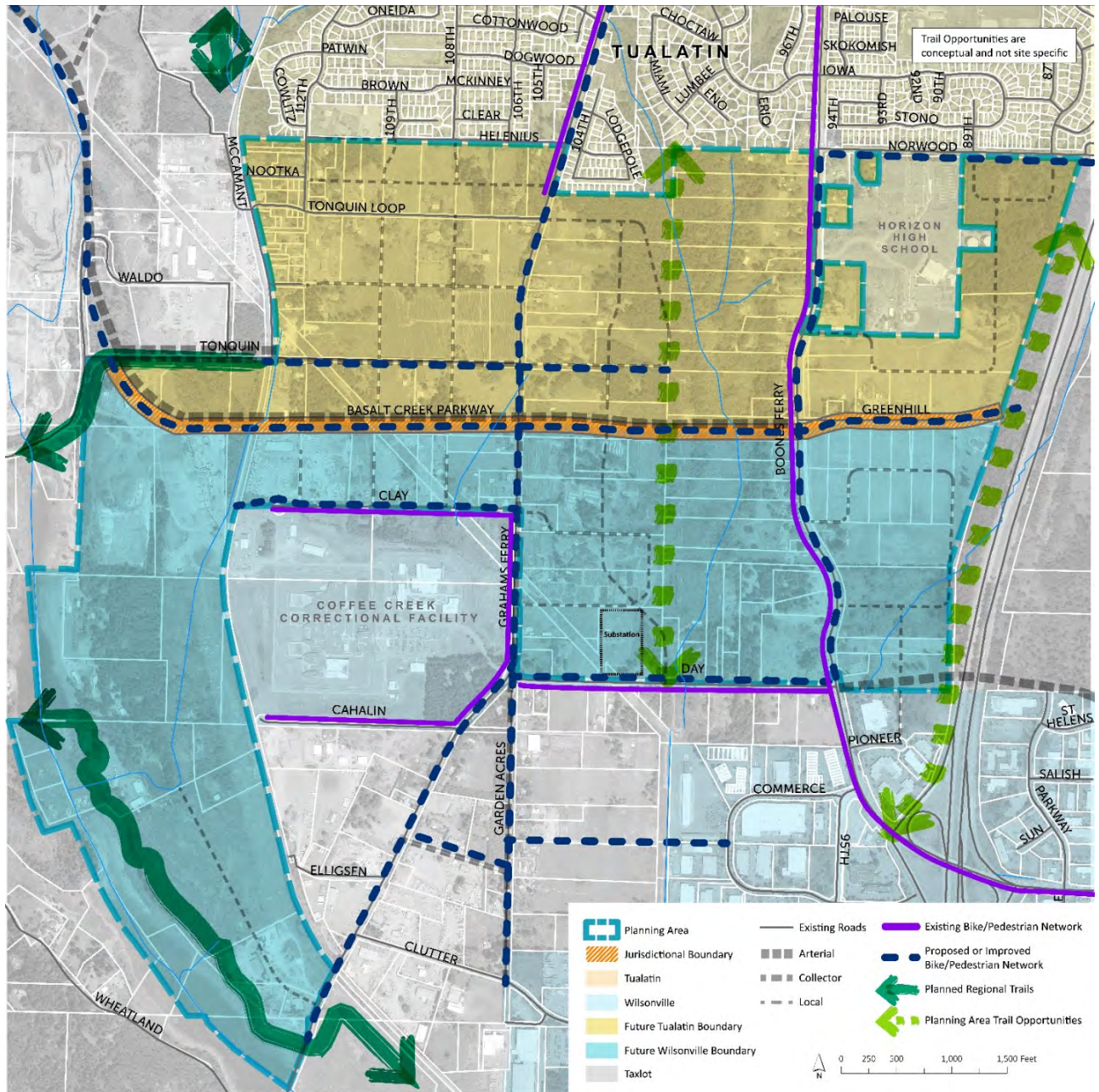
Table 5 Trips by Land Use Designation

Jurisdiction	Land Use Designation	Trips	Trips per Acre
Tualatin	High Density Residential	42	12.52
	Medium-Low Density Residential	236	3.94
	Low Density Residential	85	3.41
	Neighborhood Commercial	24	8.26
	Manufacturing Park	725	7.80
	Tualatin Subtotal/Average	1,111	5.72
Wilsonville	Craft Industrial	16	12.95
	Light Industrial District	218	6.17
	High Tech Employment District	717	7.59
	Wilsonville Subtotal/Average	951	6.96
Planning Area	Planning Area Average		6.23
	Total Trips	2,062	

Bicycle and Pedestrian Framework

As noted in the existing conditions, the bicycle and pedestrian network is incomplete in the Planning Area. Additional bike and pedestrian facilities will be integrated into new and updated road projects in accordance with State, County and City standards and in conjunction with predicted traffic flows. The map below illustrates the location of these proposed upgrades, along with identified trail opportunities that would further enhance connectivity in the Planning Area and to surrounding areas.

Figure 11 Bikes, Trails, and Pedestrian Network Map



While existing bike and pedestrian facilities run along Boones Ferry Road, Day Road, and sections of Grahams Ferry Road, planned improvements will increase safety and completeness. The additional facilities will offer significant east/west connections along the new Basalt Creek Parkway and Tonquin Road as well as an important north/south connection along the length of Graham’s Ferry Road within the Planning Area. These improvements will make connections between the proposed neighborhood commercial area on Boones Ferry Road with residential neighborhoods and employment areas as well as the future transit network. Given the nature of the Basalt Creek Parkway, an over or underpass may be preferred or necessary to make the best bike/pedestrian connections in the Planning Area.

Coordination between the cities, Washington County, Metro, ODOT, and possibly BPA will be necessary for a feasibility study, implementation and funding.

Most participants polled at the April 2016 Open House suggested they would like to use future bike and pedestrian facilities to access recreation or for exercise, with almost half anticipating using these facilities at least once a week. These new connections will not only provide improved connectivity but also valuable access to local recreational areas, trails, and natural areas.

With the conservation of significant natural areas, the plan outlines opportunities to connect these spaces to pedestrian and bike facilities in key locations to create active and passive recreation, outdoor education, and public art amenities. The two main opportunities for trails within the Basalt Creek Planning Area are a Basalt Creek Canyon Ridge Trail and the I-5 easement Trail, which are shown in Figure 11 as Planning Area Trail Opportunities marked by large light green arrows. When trail alignments are considered in the future, access to the natural resource will not take priority over protection and enhancement.

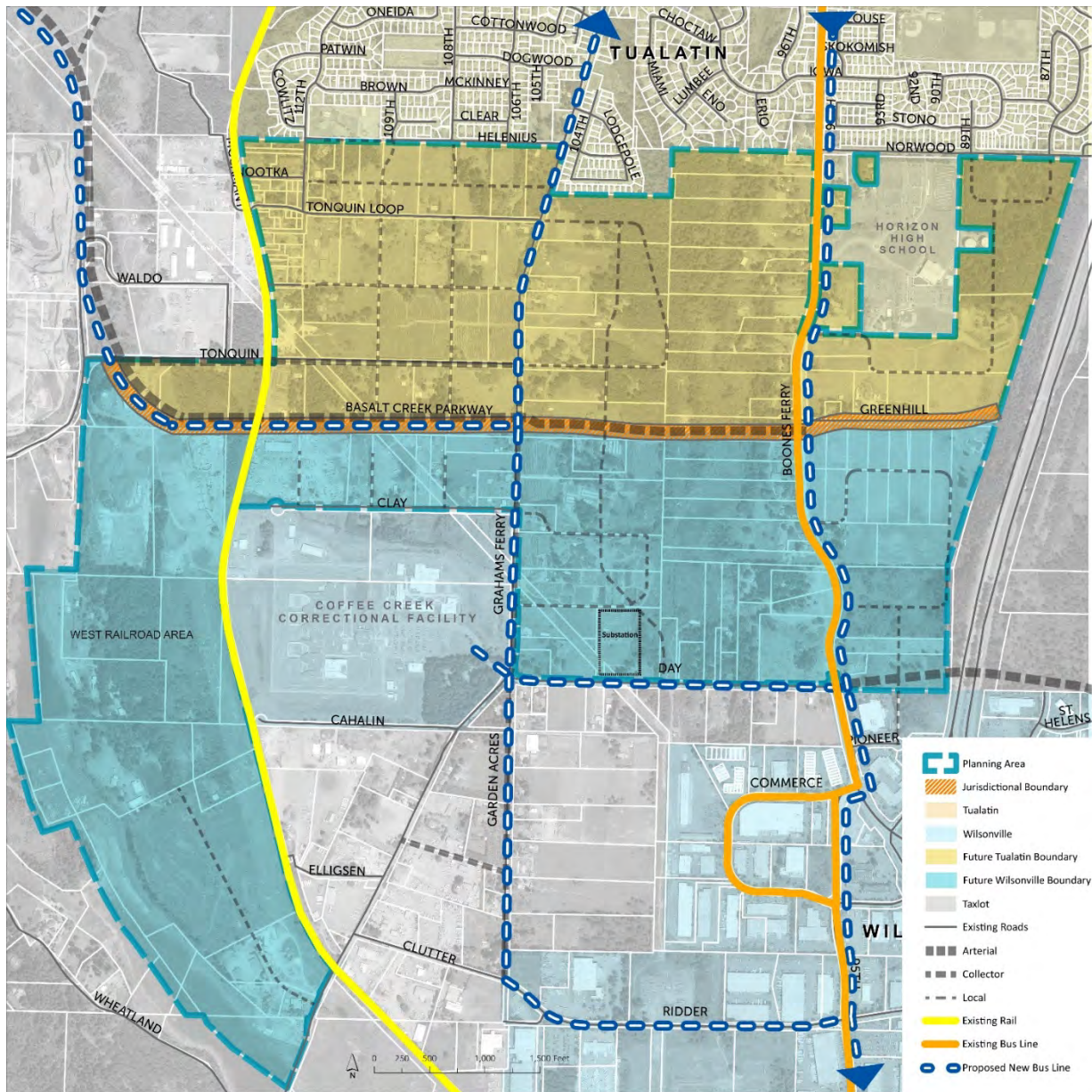
Currently, Basalt Creek Canyon is a barrier to east/west movement through the Planning Area. A north/south connection to the west of the Canyon would further improve the network and make connections to east/west roads that run north and south of the Canyon. The Basalt Creek Canyon Ridge Trail opportunity would be located upland, not within Basalt Creek, near or along the ridge of the Basalt Creek Canyon. This trail could be connected to the regional trail network by extending Tonquin Road with bike/pedestrian facilities across Graham's Ferry to the new ridge trail. There is also opportunity to create a trail parallel to I-5 in the ODOT regional easement that would provide an additional north/south connection that would connect to existing bike and pedestrian facilities.

Decision-making on investments should prioritize connections that link pedestrian and bike networks to transit stops and near locations with higher planned density. Potential funding sources for improving the bike/pedestrian network include Washington County (MSTIP) and Metro (i.e. MTIP, RFFA, SW Corridor, Natural Area Bonds).

Coordination with Metro, Tualatin Community Services Department, and the Wilsonville Parks and Recreation Department will be necessary to establish a local trail network with regional connections. Metro's Ice Age Tonquin Trail Master Plan provides a framework for local and regional implementation of the regional Ice Age Tonquin Trail, which is intended to complement the Ice Age Floods National Geological Trail Planning (the national trail will be a network of driving routes with spurs for biking and walking, from Montana to the Pacific Ocean). The preferred alignment for the regional Ice Age Tonquin Trail includes a section bordering the Basalt Creek Planning Area as part of a 22-mile trail alignment through Wilsonville, Tualatin, and Sherwood with trail facility types varying by location based upon landscape and setting. The Ice Age Tonquin Trail is intended to connect in the north to the Tualatin River Greenway Trail, Fanno Creek Trail, and the Westside Trail, and to the south to the Willamette River.

Future Transit Framework

Figure 12 Future Transit Framework



The creation of additional bus lines along existing and new routes in the Basalt Creek Planning Area will be necessary to increase connectivity and to support the job and household growth envisioned for this area. Transit service in the area requires coordination between TriMet and SMART to enhance service along existing bus routes and to provide effective connections north-to-south and east-to-west through the Planning Area. This service would also provide access to surrounding and regional employment centers and residential neighborhoods. Transit service should facilitate riders commuting to and from work and visiting major local destinations such as the Wilsonville and Tualatin Town Centers. As such, transit service should reflect development and density patterns as the area grows.

SMART and TriMet routes will be integrated with the bike, pedestrian, and trail services with key access points along Grahams Ferry Road, Boones Ferry Road, Day Road, SMART Central, and the Correctional Facility. All extensions will comply with ADA requirements. SMART will continue to serve Wilsonville, including the areas annexed within the Planning Area into Wilsonville. The Cities will work with TriMet to integrate with SMART service. Lawmakers and staff will work together to ascertain the impacts of and process for a possible service boundary change.

The existing Portland and Western Railroad (PNWR) runs along the western side of the Basalt Creek Planning Area. In addition to transporting freight, it also provides the Westside Express Service (WES), a commuter rail line serving Beaverton, Tigard, Tualatin and Wilsonville. WES runs on weekdays during the morning and afternoon rush hours, with trains every 30 minutes, connecting commuters to both the TriMet and SMART transit systems. The feasibility of a new WES station serving the Basalt Creek Planning Area should be studied with increased development and ridership demand.

Civic Uses

The Basalt Creek Concept Plan does not quantify the specific need or locations for civic uses such as libraries, parks and elementary schools within the Planning Area, but a minimum park space of a 15- to 20-acre Neighborhood Park is needed to serve Tualatin residents and businesses in the Planning Area. The facilities for provision of schools and parks will be determined and funded as development occurs in the area and will be based on level of service standards for the subsequent population expansion. However, during scenario planning, assumptions were built into the model for the size and capacity of residential development types to serve as a guide. The development scenarios assumed school districts, cities, and other service providers would use their site selection and land acquisition processes to acquire the land needed for these facilities. Locations of any necessary facilities will be determined through a collaborative planning effort between the cities and service providers, as such they are not included on any plan maps. Cities have decided to provide library services for the Basalt Creek population through existing libraries that will be sized to accommodate the additional demand.

Schools

Capacity is the main concern for school planning. The school district will calculate the need for new schools based upon demographic and density estimates for future development in the Basalt Creek Planning Area according to operational standards related to the number of students allowed per school. The final development scenario estimates 1,156 future households in the Basalt Creek Planning Area.

The Planning Area currently falls within the Sherwood School District. This district has an estimated enrollment of 5,158 and includes four elementary schools, two middle schools, Sherwood High School, and Sherwood Charter School.

The Basalt Creek Planning Area is located in the Sherwood School District and in 2016 the voters in the District approved ballot measure 34-254 approving a bond. This bond project will allow the District to accommodate an additional 2,000 students district-wide (according to information on the District's website <http://www.sherwood.k12.or.us/information/bond-visioning-process>).

Provision of any new schools will be coordinated with representatives of all nearby school districts for capital planning. The Planning Area is located very close to Tualatin High School. The Tigard-Tualatin

School District has an estimated enrollment of 12,363, and includes ten elementary schools, three middle schools, and two high schools. A private high school, Horizon Christian, is located within the Planning Area and currently serves 160 students but plans significant expansion in the future.

The addition of hundreds of new households can be expected to impact existing school districts, but at this time no district has indicated that they plan to locate any new facilities within the Planning Area. Although, the Basalt Creek Planning Area could provide opportunities for shared facilities, such as parks and recreation spaces.

Parks and Open Space

One of the guiding principles of the Basalt Creek Concept Plan is to protect key natural resources and sensitive areas while making recreational opportunities accessible by integrating new parkland, open spaces, natural areas and trails in the Planning Area and connecting to existing regional networks.

The Planning Area provides an interesting opportunity for different types of parks, given the variety of land uses and the extensive Basalt Creek Canyon natural area: active and passive neighborhood parks, pocket parks, and even perhaps a large community or regional facility. It also provides opportunities for jogging, hiking, or other outdoor recreation by area employees and nearby residents.

Cities will determine specific locations of facilities as part of citywide parks planning and implementation, and will adopt funding methods for acquisition, capital and operating costs for parklands in the Basalt Creek Planning Area, including the use of their current System Development Charges for parks. Locating parks near schools, natural areas or other public facilities is preferable, especially when it provides an opportunity for shared use facilities. As in any park development, the acquisition is best done in advance of annexation and extension of services, with development of the parks occurring as the need arises.

At the time of this writing, both cities are going through a Park and Recreation Master Plan update. This update has considered the Basalt Creek Planning Area in the types of services and facilities that will be needed to serve residents and businesses in this area. Each City will include their respective portions of the Basalt Creek area in their independent Parks and Recreation Master Plan.

Natural, Historical and Cultural Resources

Overview

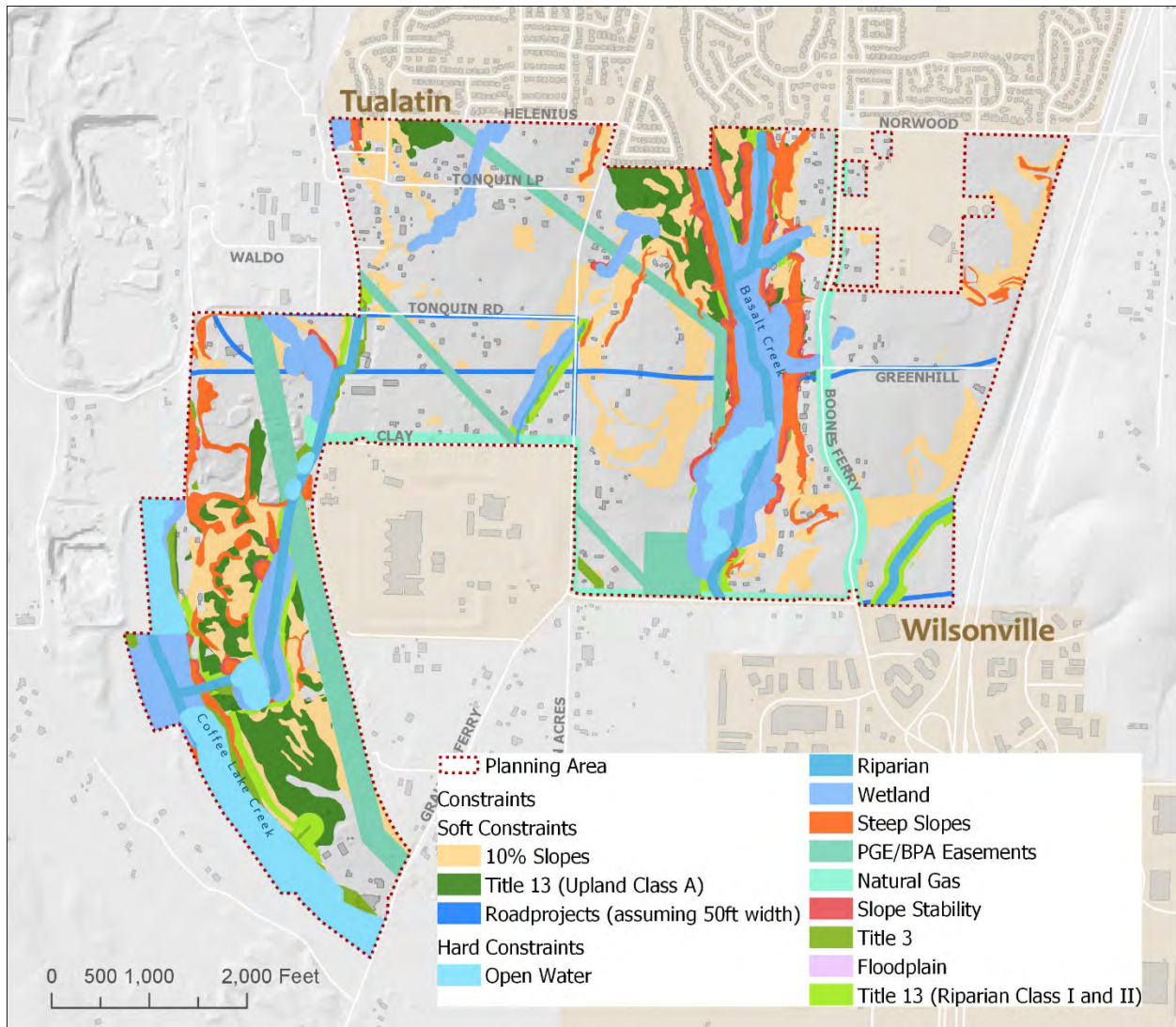
The future vitality of the Basalt Creek Planning Area hinges on development that efficiently locates job growth on the land most suited for it, while preserving and capitalizing on the natural and cultural resources in the area. The identification of environmentally sensitive lands followed the regulatory framework described briefly below and is illustrated on the Natural Resources Map (Figure 13) and in the Existing Conditions Report (Appendix A starting on page 86).

Developable lands for all scenario planning incorporated these findings. Since Clean Water Services and Wilsonville have local regulations compliant with state and regional environmental protection requirements, and in some cases that go above and beyond basic requirements, the constraints analysis used them as a foundation for determining the necessary buffering around a natural feature.

Environmental constraints are summarized below and unless otherwise noted were fully excluded from the developable land input in the scenario testing for the Basalt Creek Concept Plan:

- Open Water
- Streams
- Wetlands
- Floodplains (50% reduction of developable area)
- Title 3 Water Quality and Flood Management protections
- Title 13 Nature in Neighborhoods (20% reduction of developable area in areas designated Riparian Habitat Classes I and II)
- Steep Slopes (25% slopes and greater)

Figure 13 Natural Resources Map



Regulatory Framework for Conserving Natural Resources

Oregon Statewide Planning Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces

Goal 5 protects natural resources and conserves scenic and historic areas and open spaces by directing local governments to adopt protection programs. Titles 3 and 13 of Metro’s Urban Growth Management Functional Plan implements Goal 5 in the Portland Metro region.

Metro Title 3: Water Quality, Flood Management and Fish and Wildlife Conservation

Title 3 requires local jurisdictions to limit or mitigate the impact of development activities on Water Quality and Flood Management Areas which includes wetlands and riparian areas. An inventory was conducted in 2001. There are 116 acres of land in the Basalt Creek Planning Area that have been designated by Metro as Water Quality and Flood Management Areas under Title 3. These lands are restricted for development and buffered by a vegetated corridor. Any development within the vegetated corridor must be mitigated by environmental restoration and/or stormwater retention and water quality measures. As a result of Title 3, these lands were excluded from the developable lands input in the scenario testing.

Table 6 Title 3 Wetlands by Category and Acres

Category	Acres	Description
Open Water	49 acres	Includes 50 ft. buffer
Streams	31 acres	Includes 15 to 50 ft. buffers
Wetlands	69 acres	Includes 25 to 50 ft. buffers

Metro Title 13: Nature in Neighborhoods

Title 13 requires local jurisdictions to protect and encourage restoration of a continuous ecologically viable streamside corridor system integrated with upland wildlife habitat and the urban landscape. Metro’s regional habitat inventory in 2001 identified the location and health of fish and wildlife habitat based on waterside, riparian and upland habitat criteria. These areas were named Habitat Conservation Areas.

Table 7 Title 13 HCA Categories with Acreage

HCA Categories	Acres	Description
Riparian Wildlife Habitat Class I	130	Area supports 3 or more riparian functions
Riparian Wildlife Habitat Class II	31	Area supports 1 or 2 primary riparian functions
Riparian Wildlife Habitat Class III	7	Area supports only secondary riparian functions outside of wildlife areas
Upland Wildlife Habitat Class A	103	Areas with secondary riparian value that have high value for wildlife habitat
Upland Wildlife Habitat Class B	72	Area with secondary riparian value that have medium value for wildlife habitat
Upland Wildlife Habitat Class C	37	Areas with secondary riparian value that have low value for wildlife habitat

Designated Aquatic Impact Areas	52	Area within 150 ft. of streams, river, lakes, or wetlands that are not considered regionally significant natural resources but could have some adverse impacts
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Development in Title 13 areas is not prohibited but generally discouraged within the Basalt Creek Planning Area. Areas designated Riparian Habitat Classes I and II require 20% reduction in developable lands. Low impact design and mitigation strategies would be important to any development that might happen to maintain the function of these important ecological areas.

Both the City of Wilsonville and Clean Water Services have local ordinances in place that go beyond the level of conservation required by Title 3 and existing local standards from each City would apply upon annexation of a Planning Area property into either Wilsonville or Tualatin. Future development in Tualatin must comply with Clean Water Services’ Design and Construction Standards & Service Provider Letters (SPLs) for impacts in sensitive areas such as vegetated corridors surrounding streams and wetland habitat, including the Tualatin River Watershed and the entire City of Tualatin. Within the City of Wilsonville, the Significant Resource Overlay Zone (SROZ) includes floodplains, wetlands, riparian corridors, and vegetated corridors. Impact areas are generally considered to be the areas within 25 feet of a Significant Resource area. Development can only be permitted through review of a Significant Resource Impact Report (SRIR) analyzing the impacts of development within mapped significant resource areas.

Natural Resource Protection and Enhancement Strategies

Most of the land with environmental constraints is in or near Basalt Creek Canyon and the West Railroad Area. To protect the natural areas, the Cities have agreed to management practices consistent with Metro Title 3 and 13. The Canyon is very valuable to the area and it needs to be protected, while also having visual or physical public access points in appropriate locations to connect to the bicycle, pedestrian and recreational facilities in the area and to serve the needs of residents and local employees. Future protection and enhancement opportunities may include: controlling invasive plant species, such as reed canary grass, Himalayan blackberry and English ivy, reintroducing native plants into aquatic and upland habitats, retaining and installing snags and woody debris. Important species include Red-legged Frogs, the Pileated Woodpecker, Oregon white oak, Ponderosa pine, and Geyer willow (see Appendix A for more information).

Cultural Resources

Community members through the planning process have identified the old Carlon Schoolhouse as a historically significant landmark. It sits off Grahams Ferry Road near Day Road and was in use as a school until the late 1800s. While the area has an interesting geologic history, it has not been identified as a resource for any significant archaeological artifacts.



Figure 14 Picture of the Carlon Schoolhouse from Tualatin Life Newspaper on August 19, 2014 by Loyce Martinazzi

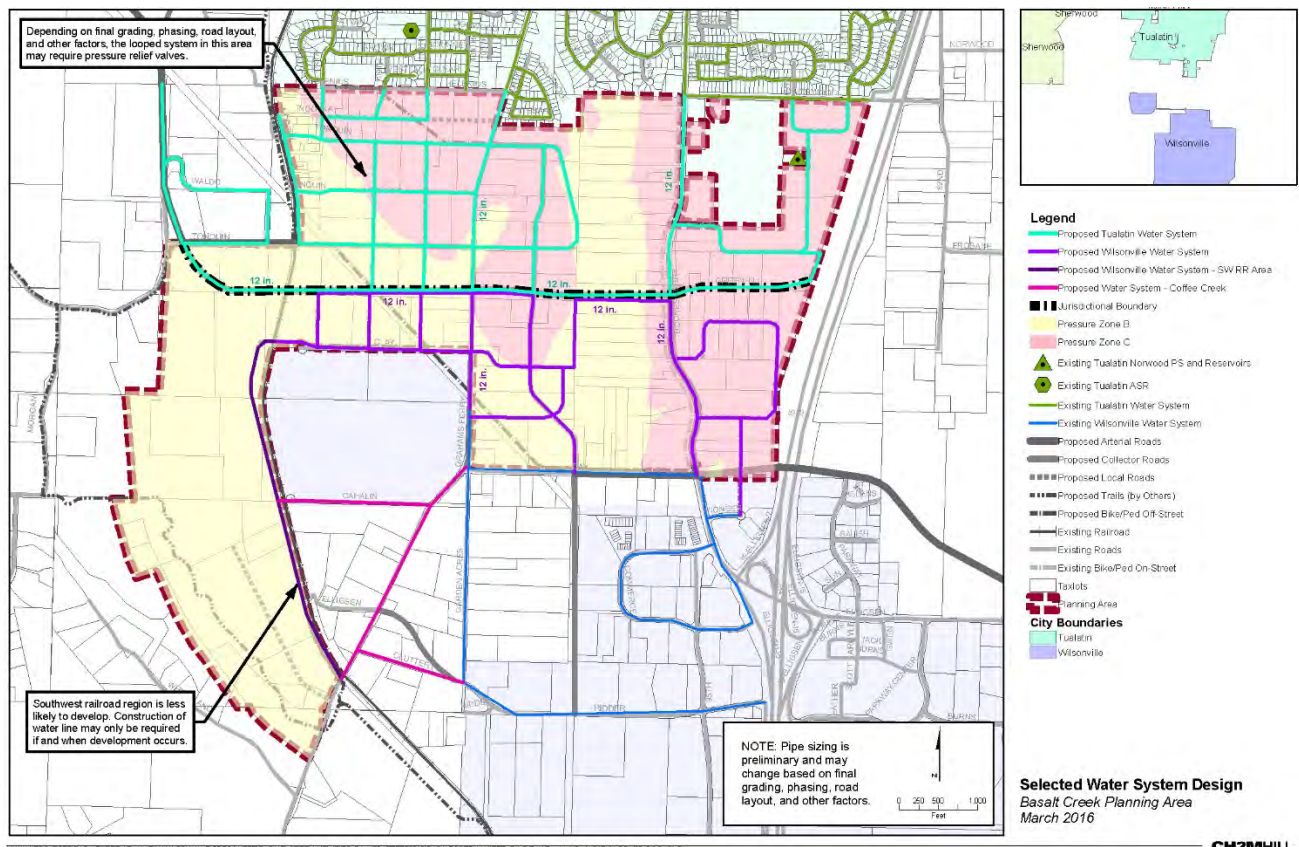
Infrastructure

For the conceptual infrastructure systems, high level planning calculations were completed to estimate water demand and sewer flows (Appendix I). These values can vary widely depending on the actual future development. Each City's individual master plans will be used to provide demand and flow projections when further planning the area.

Water

The conceptual water systems designed to serve the Basalt Creek Planning Area are shown below in Figure 15. The systems are independent looped systems that will not be connected to each other. Water lines for each city may be located along the proposed east-west arterial road, the future Basalt Creek Parkway, and other roadways throughout the Planning Area.

Figure 15 Water Systems Concept for Basalt Creek Planning Area



The existing service zones (levels B and C) from both communities provide sufficient pressure to provide service within each city's planning area. The Tualatin pressure zones B (ground elevations 192 feet to 306 feet) and C (ground elevations 260 feet to 360 feet) will serve the Basalt Creek Planning Area. To provide service to Wilsonville's pressure zone C area (ground elevations 275 feet to 410 feet), the City has identified a need to install a booster pump station to serve the higher elevation areas (above approximately 285 feet) south of Greenhill Road. The booster pump station is one of the CIP projects listed in the 2012 Wilsonville Water Master Plan and has been included in the City's city-wide cost estimates.

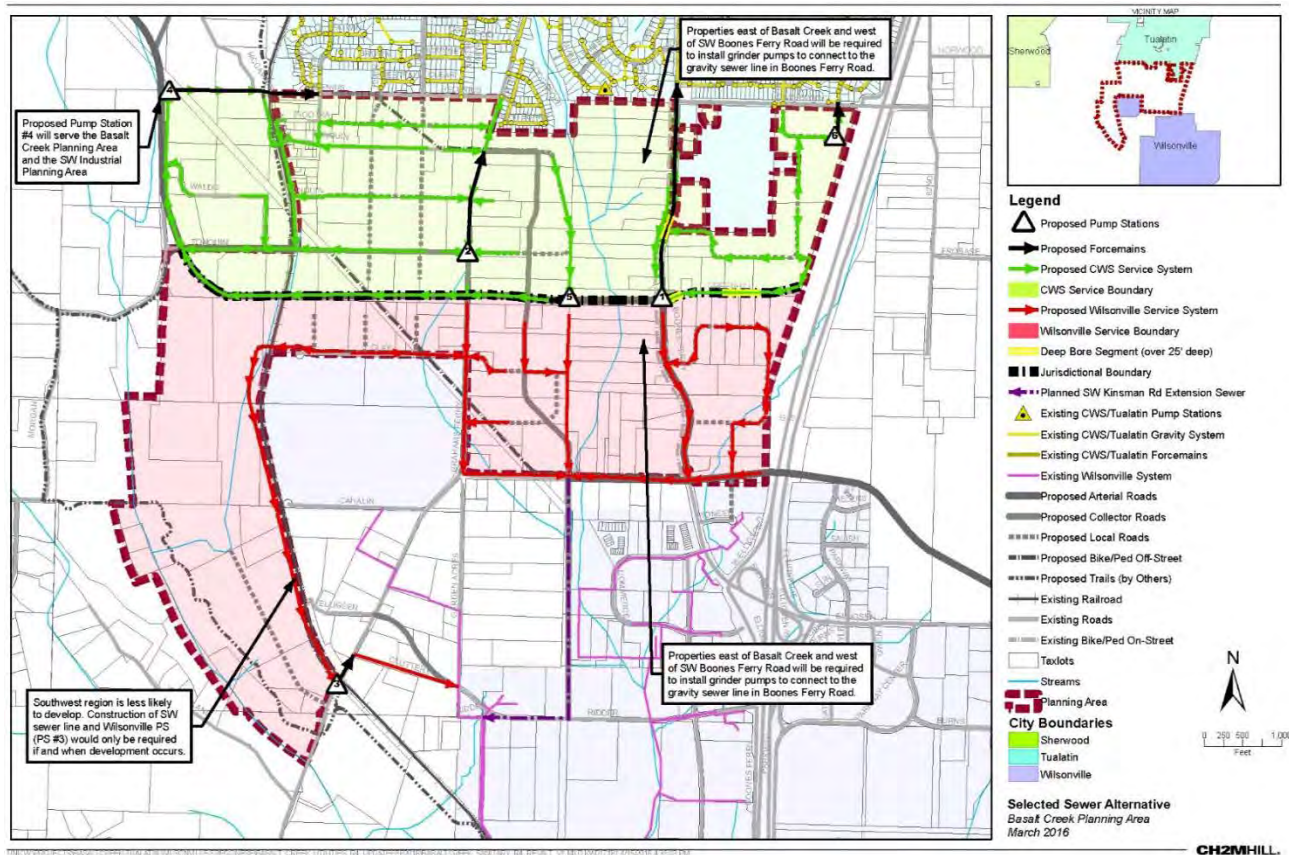
The Coffee Creek water system is shown outside of the Basalt Creek Planning Area (east of the railroad, west of SW Grahams Ferry Road, and south of SW Clay Road) to illustrate Wilsonville’s water system and how to connect services to the West Railroad Area. That portion of the system would be installed and funded by development within the Coffee Creek Master Plan area.

The West Railroad Area has a much lower potential for development due to several constraints including slope, geology, wetlands, habitat areas, access, and existing uses. Cost estimates to serve this area have been included as a separate column but would only be required if and when development occurs.

Sanitary Sewer

The conceptual sanitary sewer systems are shown in Figure 16. While topography will be a major challenge, the sanitary systems use gravity as much as possible and sewers generally flow to the south and west following the slopes of the existing ground and along existing and proposed roadways and trails to avoid streams and natural areas. These systems include new pump stations, which are used to lift wastewater to higher elevations where it can then be transported by gravity flow systems.

Figure 16 Sanitary Sewer Systems Concept for Basalt Creek Planning Area



Five pump stations are proposed to serve the Tualatin system, managed and maintained by Clean Water Services (CWS), and one pump station is required for the proposed Wilsonville system.

In the area between Basalt Creek Canyon and Boones Ferry Road in both Tualatin and Wilsonville service boundaries, residents and business owners who wish to connect to the proposed gravity system (or are

required due to septic failure) likely will require a private grinder pump to connect to public sewer. A grinder pump consists of a collection tank that grinds waste and pumps it to the public sewer system.

The conceptual sewer system connects to the existing Tualatin system at SW 112th Avenue between SW Cowlitz Drive and SW Nootka Street, at SW Grahams Ferry Road and SW Helenius Street, at SW Boones Ferry Road and SW Norwood Road, and at SW Vermillion Drive and SW Norwood Road. The sewer system connects to the existing Wilsonville system in Garden Acres Road to SW Day Road, Grahams Ferry Road and Boones Ferry Road (the sewer line initially contemplated in the Coffee Creek Master Plan and included in the analysis for this Concept Plan has changed, shifting from a SW Kinsman Road extension to Garden Acres Road).

Stormwater Drainage

Stormwater detention and treatment will occur at local facilities and no regional facilities are planned for the area. Each City will serve its own jurisdiction area independently. The Cities acknowledge that they must follow requirements established in their guiding respective NPDES (National Pollution Discharge Elimination System) MS4 (Municipal Separate Storm Sewer System) permits. All flows that outlet within each city will be guided by their respective protocols, design standards, and/or stormwater management plans. Public stormwater systems are included in the road network cost estimate. Stormwater systems outside of the public right-of-way are assumed to be part of the development costs, which have not been estimated.

Implementation and Phasing Strategy

Implementation Measures

Implementing the Concept Plan will take a predictable path in this area:

- First, each City will work with the County to update their Urban Planning Area Agreement.
- Each City will also amend its comprehensive plan to include the essential elements of the Concept Plan.
- Next, the Cities ensure that the zoning and/or development code is updated to enable development in the Planning Area, and includes appropriate zoning standards
- Generally, annexation is predicated on investor interest, and the expectation is that investors will finance the extension of services.
- Either city may decide to invest in service extension as a way to spur development or may decide to help a group of investors develop an area, for example by providing the formation of a Local Improvement District of other funding mechanism.

Action Items

1. Amend Urban Planning Area Agreements

Comprehensive planning within the regional Urban Growth Boundary (UGB) is coordinated between Washington County and cities through Urban Planning Area Agreements (UPAAs). Upon adoption of the Concept Plan both Cities will work with the County to update their respective UPAAs. The UPAAs will acknowledge the future jurisdictional boundary and outline what areas may be annexed into by each city. The amended UPAAs provide the transfer of planning authority to the Cities enabling them to proceed with annexation and development.

2. Amend Comprehensive Plans

Tualatin, which has a “one map” system where the zoning and comprehensive plan are essentially the same map, will be adopted after adoption of the Concept Plan anticipated by May 2019.

Wilsonville, which has a “two map” system where the Comprehensive Plan shows future conditions and not necessarily zoning, will adopt Comprehensive Plan amendments soon after the adoption of the Concept Plan. The Comprehensive Plan amendments will draw from the Concept Plan and use its definitions of uses and standards to design the amendments.

3. Assure zoning is compatible with future land use

Each city will need to assess its zoning codes and ensure that they permit the anticipated uses with appropriate development standards. This will be made fairly easy in that each city has its own development types, drafted around current zoning code standards. However, new uses anticipated in some of the development types will need some zoning code amendments.

In addition, the Cities will need to consider special design elements of the Concept Plan and determine if their respective development codes need to be updated. Specifically, the City of Tualatin will want to

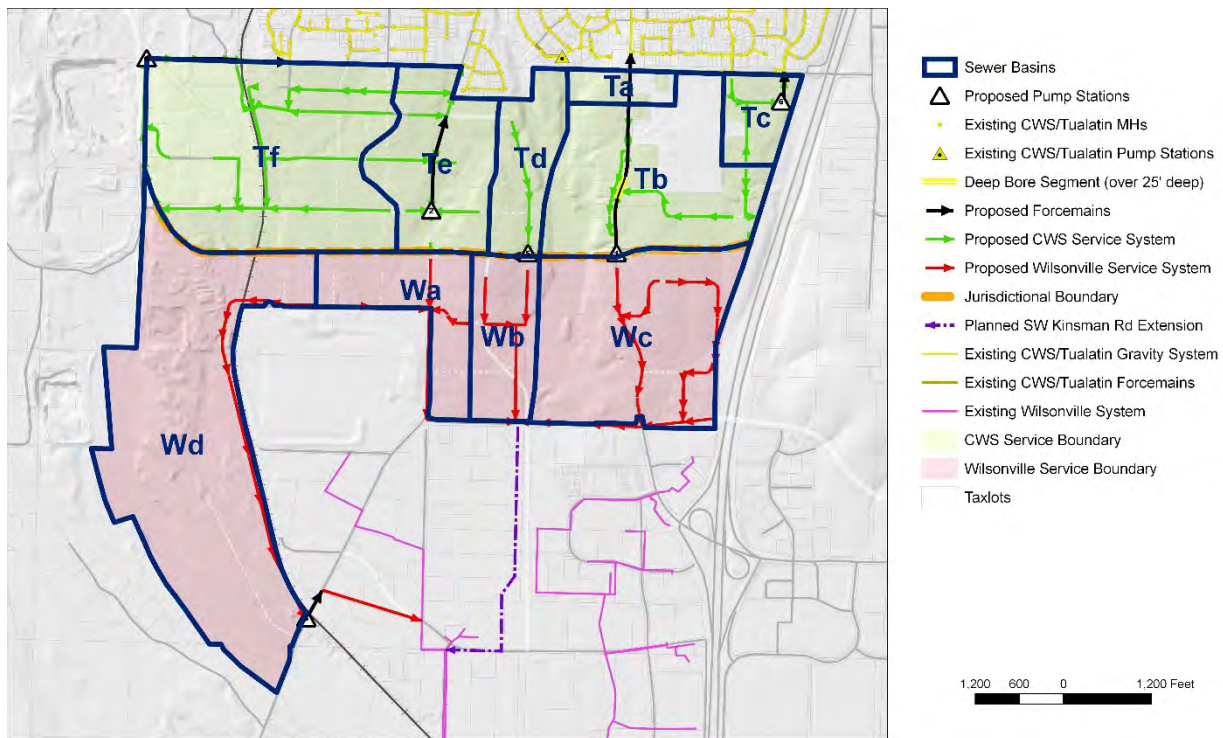
determine what design standards are relevant to creating appropriate transitions between residential and employment uses, and the City of Wilsonville will want to consider the application of its Industrial Form-based Code to help create a uniquely attractive business community.

4. Annex as demand occurs based on feasible phasing

Utility improvements will be made as properties are annexed and developed in each city, so phasing will be driven by the pace of development. Generally, utility improvements will begin at the boundaries of the Planning Area that are adjacent to the existing city services and progress outward. Most of the utility infrastructure follows existing or proposed roadways and construction should be coordinated with new road construction and existing roadway improvements.

The most formative of the utilities (sewer, water and roads) will be sanitary sewer. This is because it is a gravity system that must be hooked into an existing sanitary system or drained to a pump station that will lift the sewage via pressure line to an existing sanitary line.

Figure 17 Implementation Map



Based on the Sewer Master Plan, several natural phasing districts are evident. These are shown on Figure 17. Tualatin has six potential phases based on existing sewer basins and five pump stations. No one sewer basin is dependent on the other, so these areas could develop in any sequence. If the initial installation can install the pump station and pressure line, development can proceed in increments, from the pump station uphill to the extent of the sewer basin. Figure 17 shows Tualatin stages advancing from Ta through Tf.

Wilsonville has four basins, three gravity and one with a pump station. Figure 17 shows phasing progressing from Wa through Wd. District Wd, which serves the West Railroad Area, is the most

constrained and likely to see development last in the Planning Area. The other three are gravity lines that can be constructed independently. They can proceed from the inlet to the existing gravity system uphill in the basin.

In both cities, the water and transportation infrastructure can be installed as needed although some enabling projects may be required to be constructed prior to development to connect properties to existing systems. Efficiency may be achieved when the underground utilities are constructed concurrently with the transportation system.

5. Consider capital improvements to spur development

In both systems, the sewer basin is large enough that it contains several property owners. Each city has a method of reimbursing the developer for installing infrastructure when other development hooks in. However, the Cities may find that in some cases, the property owners of developers cannot finance the infrastructure themselves. In that case, the city may decide to participate in one of several ways:

- Finance the infrastructure themselves, charging reimbursement as projects hook up
- Create a cooperative financing district such as a Local Improvement District or Reimbursement District, that would allow the infrastructure to be installed by a primary party and paid off over time by the property owners, relieving some of the burden of a large capital financial commitment
- Develop the infrastructure as an inducement for desired development, such as for an important job creating project

6. Master planning processes

Many of the ideas proposed in this Concept Plan will require project development to determine the specific needs, feasibility, locations, costs, and other details through each City's master planning process. Typically master plans are completed for infrastructure services, parks, open space, and trails. Master plans include public involvement processes, including Planning Commission review and City Council adoption.

**Washington County – Wilsonville
Urban Planning Area Agreement**

THIS AGREEMENT is entered into by WASHINGTON COUNTY, a political subdivision in the State of Oregon, hereinafter referred to as the "COUNTY," and the CITY OF WILSONVILLE, an incorporated municipality of the State of Oregon, hereinafter referred to as the "CITY."

WHEREAS, ORS 190.010 provides that units of local government may enter into agreements for the performance of any or all functions and activities that a party to the agreement, its officers or agents, have authority to perform; and

WHEREAS, Statewide Planning Goal #2 (Land Use Planning) requires that City, County, State and Federal agency and special district plans and actions shall be consistent with the comprehensive plans of the cities and counties and regional plans adopted under ORS Chapter 197; and

WHEREAS, the Oregon Land Conservation and Development Commission requires each jurisdiction requesting acknowledgment of compliance to submit an agreement setting forth the means by which comprehensive planning coordination within the Regional Urban Growth Boundary will be implemented; and

WHEREAS, following the Urbanization Forum process, the COUNTY through Resolution & Order 09-63, agreed that future additions to the UGB during or after 2010 must be governed and urbanized by a city in the COUNTY and also agreed to urge Metro to expand the UGB only to such areas as are contiguous to incorporated areas of Washington County; and

WHEREAS, the State legislature with House Bill 4078-A in 2014 and House Bill 2047 in 2015 validated the acknowledged UGB and Urban and Rural Reserves established through the Metro Regional process involving both the COUNTY and the CITY; and

WHEREAS, the Basalt Creek and West Railroad Planning Areas, generally located between the CITY and Tualatin, were added to the UGB by the Metro Council in 2004, through Ord. No. 04-1040B; and

WHEREAS, Metro Ord. No. 04-1040B included a condition that the Basalt Creek and West Railroad Planning Areas undergo Title 11 concept planning, as defined in Metro Code Chapter 3.07 in the Urban Growth Management Functional Plan (UGMFP); and

WHEREAS, the COUNTY, the CITY, Tualatin and Metro entered into an Intergovernmental Agreement (2011 IGA) (Contract No. BCC 11-0470) to consider the Basalt Creek and the West Railroad Areas in a single concept planning effort and refer to the two areas generally as the Basalt Creek Planning Area, a distinct subarea; and

WHEREAS, the COUNTY, CITY, Tualatin and Metro entered into the First Addendum to the 2011 IGA, acknowledging the Basalt Creek Transportation Refinement Plan (BCC 13-0724), a collaborative transportation planning effort that identified the major transportation projects for the Basalt Creek Planning Area; and

WHEREAS, the CITY, Tualatin and Metro, agreed to extend the 2011 IGA through Addendum No. 2.0 (BCC No. 16-1110) until the cities and COUNTY amend their respective Urban Planning Area Agreements (UPAA) and incorporate the Basalt Creek Concept Plan into each city's respective comprehensive plans or until September 28, 2019; and

WHEREAS, the CITY through Resolution 2697 and Tualatin through Resolution 5392-18 adopted the Basalt Creek Concept Plan, which included the necessary transportation and land use planning for the Area as well as an agreement on the boundary between Wilsonville and Tualatin; and

WHEREAS, the COUNTY, CITY, Tualatin and Metro through the Basalt Creek Area planning process, recognized that major multi-modal transportation investments have been identified that require significant multi-jurisdictional coordination and agreed to seek and coordinate for additional funding for the transportation infrastructure in the Basalt Creek Planning Area as needed; and

WHEREAS, the COUNTY and the CITY, desire to amend the Urban Planning Area Agreement to reflect the changes to the UGB, the CITY's Urban Planning Area, and the need for urban planning of the new Urban Reserve lands; and

WHEREAS, the COUNTY and the CITY, to ensure coordinated and consistent comprehensive plans, consider it mutually advantageous to establish:

1. An Urban Planning Area Agreement incorporating a site-specific Urban Planning Area within the UGB where both the COUNTY and the CITY maintain an interest in comprehensive planning and an Urban Reserve Planning Area outside the UGB where both the COUNTY and the CITY maintain an interest in concept planning;
2. A process for coordinating comprehensive planning and development in the Urban Planning Area, and concept planning in the Urban Reserve Planning Area;
3. Special policies regarding comprehensive planning and development in the Urban Planning Area and concept planning in the Urban Reserve Planning Area; and
4. A process to amend the Urban Planning Area Agreement.

NOW THEREFORE, THE COUNTY AND THE CITY AGREE AS FOLLOWS:

I. Location of the Urban Planning Area and Urban Reserve Planning Area

The Urban Planning Area and Urban Reserve Planning Area mutually defined by the COUNTY and the CITY include the areas designated on the Washington County-Wilsonville UPAA “Exhibit A” to this Agreement.

In addition, the CITY and the COUNTY have identified a coordination area in which development may cause an impact on the CITY. This area, defined as that portion of the Willamette River Drainage Basin located in the unincorporated COUNTY, is identified on Exhibit A as the Wilsonville Drainage Area. Comprehensive planning and development shall be coordinated in this area the same manner as in the Urban Planning Area.

II. Coordination of Comprehensive Planning and Development

A. Amendments to or Adoption of a Comprehensive Plan or Implementing Regulation

1. Definitions

Comprehensive Plan means a generalized, coordinated land use map and policy statement of the governing body of a local government that interrelates all functional and natural systems and activities relating to the use of lands, including, but not limited to, sewer and water systems, transportation systems, educational facilities, recreational facilities, and natural resources and air and water quality management programs. “Comprehensive Plan” amendments do not include small tract comprehensive plan map changes.

Implementing Regulations means any local government zoning ordinance adopted under ORS 197, 215 or 227, any land division ordinance adopted under ORS 92.044 or 92.046 or similar general ordinance establishing standards for implementing a comprehensive plan.

2. The COUNTY shall provide the CITY with the opportunity to participate, review and comment on proposed amendments to or adoption of the COUNTY comprehensive plan or implementing regulations. The CITY shall provide the COUNTY with the opportunity to participate, review and comment on proposed amendments to or adoption of the CITY comprehensive plan or implementing regulations. The following procedures shall be followed

by the COUNTY and the CITY to notify and involve one another in the process to amend or adopt a comprehensive plan or implementing regulation:

- a. The CITY or the COUNTY, whichever has jurisdiction over the proposal, hereinafter the originating agency, shall notify the other agency, hereinafter the responding agency, of the proposed action at the time such planning efforts are initiated, but not less than 35 calendar days prior to the first hearing on adoption. For COUNTY or CITY comprehensive plan updates with the potential to impact the responding agency's land use or transportation system, the originating agency shall provide the responding agency with the opportunity to participate in the originating agency's advisory committee, if any.
- b. For COUNTY or CITY comprehensive plan updates with the potential to impact the responding agency's land use or transportation system, within the Urban Planning Area or Urban Reserve Planning Area, the originating agency shall transmit the draft amendments by first class mail, personal delivery, or as an attachment to electronic mail to the responding agency for its review and comment at least 10 calendar days before finalizing the draft amendments to the decision-making authority. The responding agency shall have 10 calendar days after receipt of a draft to submit comments orally or in writing. Lack of response shall be considered "no objection" to the draft. The responding agency may transmit comments by first class mail, personal deliver or as an attachment to electronic mail to the originating agency.
- c. The originating agency shall respond to the comments made by the responding agency either by a) revising the final draft amendment recommendations, or b) a statement on the record explaining why the comments cannot be addressed in the final draft. Transmittal of such response shall be by first class mail, personal delivery or as an attachment to electronic mail.
- d. Comments from the responding agency shall be given consideration and included as part of the public record on the proposed action. If after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

- e. Upon final adoption of the proposed action by the originating agency, it shall transmit the adopting ordinance to the responding agency as soon as publicly available, or if not adopted by ordinance, by whatever other written documentation is available to properly and promptly inform the responding agency of the final actions taken.

B. Development Actions Requiring Individual Notice to Property Owners

1. Definition

Development Action Requiring Notice means an action by the COUNTY or the CITY that directly affects and is applied to a specific parcel or parcels, which requires postal mail notification to the owners of property who could potentially be impacted (usually specified as a distance measured in feet). Such development actions may include, but are not limited to, small tract zoning or comprehensive plan amendments, conditional or special use permits, land divisions, planned unit developments, variances, and other similar actions requiring a quasi-judicial hearings process.

2. The COUNTY will provide the CITY with the opportunity to review and comment on proposed development actions requiring notice within the designated Urban Planning Area and/or Urban Reserve Planning Area. The CITY will provide the COUNTY with the opportunity to review and comment on proposed development actions requiring notice within the CITY limits within the COUNTY.
3. The following procedures shall be followed by the COUNTY and the CITY to notify one another of proposed development actions:
 - a. The originating agency with jurisdiction over the proposal, shall send by first class mail personal delivery or as an attachment to electronic mail a copy of the public hearing notice which identifies the proposed development action to the responding agency, at the earliest opportunity, but no less than 14 calendar days prior to the first scheduled public hearing or end of the comment period, whichever occurs first. The failure of the responding agency to receive a notice shall not invalidate an action if a good faith attempt was made by the originating agency to notify the responding agency.

- b. The responding agency receiving the notice may respond at its discretion. Comments may be submitted in written form or an oral response may be made at the public hearing. Lack of written or oral response prior to or at the public hearing shall be considered “no objection” to the proposal.
- c. If received in a timely manner, the originating agency shall include or attach the comments to the written staff report and respond to any concerns addressed by the responding agency in such report or orally at the hearing.
- d. Comments from the responding agency shall be given consideration as a part of the public record on the proposed action. If, after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

C. Additional Coordination Requirements

- 1. The CITY and the COUNTY agree to the following to notify one another of proposed actions with the potential to impact the other’s land use or transportation system, but are not subject to the notification and participation requirements contained in subsections A. and B. above.
 - a. The originating agency with jurisdiction over the proposed actions, shall send by first class mail or as an attachment to electronic mail a copy of all public hearings agendas which contain the proposed actions to the responding agency, at the earliest opportunity, but no less than three calendar days prior to the date of the scheduled public hearing. The failure of the responding agency to receive an agenda shall not invalidate an action if a good faith attempt was made by the originating agency to notify the responding agency.
 - b. The responding agency receiving the public hearing agenda may respond at its discretion. Comments may be submitted in written form or an oral response may be made at the public hearing. Lack of written or oral response shall be considered “no objection” to the proposal.
 - c. Comments from the responding agency shall be given consideration as a part of the public record on the proposed

action. If, after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

III. Concept Planning for Urban Reserve Areas

A. Definitions

1. Urban Reserve means those lands outside the UGB that have been so designated by Metro for the purpose of:
 - a. Future expansion of the UGB over a long-term period (40-50 years), and
 - b. The cost-effective provision of public facilities and services when the lands are included within the UGB.
2. Urban Reserve Planning Area (URPA) means those Urban Reserves identified for annexation and urbanization by the CITY at such time as the UGB is amended to include the Urban Reserve Area.
3. Urban Reserve Planning Area – Planning Responsibility Undefined means those Urban Reserves that the CITY and at least one other city may have an interest in ultimately governing, but no final agreement has been reached. These areas are not considered part of the URPA for the purpose of this Agreement.

B. The CITY's Urban Reserve Planning Area and Urban Reserve Area - Planning Responsibility Undefined are identified on "Exhibit A" to this Agreement.

C. The CITY shall be responsible for developing a concept plan in consultation with the COUNTY for the URPA in coordination with Metro and appropriate service districts. The concept plan shall include the following:

1. An agreement between the COUNTY and the CITY regarding expectations for road funding, jurisdictional transfer over roadways to and from the CITY and COUNTY, and access management for County roads in the URPA. The agreement should describe any changes to the CITY and/or COUNTY transportation system plans, other comprehensive plan documents, or codes that have been adopted or will be necessary to implement this agreement.

2. An agreement between the COUNTY and the CITY that preliminarily identifies the likely provider of urban services, as defined in ORS 195.065 (4), when the area is urbanized.

- D. The concept plan shall be approved by the CITY and acknowledged by the COUNTY by Resolution and Order.
- E. Upon completion and acknowledgement of the concept plan by the CITY and the COUNTY, and the addition of the area into the UGB by Metro, the affected portion of the URPA shall be designated as part of Urban Planning Area, as described below. Inclusion in the Urban Planning Area is automatic and does not require an amendment to this Agreement.
- F. Once an URPA has been added to the UGB and prior to annexation into the CITY, the COUNTY will apply the Future Development 20-Acre (FD-20) land designation to the land.

IV. Comprehensive Planning and Development Policies for Urban Planning Areas

A. Definition

Urban Planning Area means the incorporated area and certain unincorporated areas contiguous to the incorporated area for which the CITY conducts comprehensive planning and seeks to regulate development activities to the greatest extent possible. The CITY Urban Planning Area is designated on “Exhibit A.”

- B. The CITY shall be responsible for comprehensive planning within the Urban Planning Area.
- C. The CITY shall be responsible for the preparation, adoption and amendment of the public facility plan required by OAR 660-011 within the CITY Urban Planning Area in coordination with other service providers that provide urban services within the CITY’s Urban Planning Area.
- D. As required by OAR 660-011-0010, the CITY is identified as the appropriate provider of local water, sanitary sewer, storm sewer and transportation facilities within the Urban Planning Area. Exceptions include facilities provided by other service providers subject to the terms of any intergovernmental agreement the CITY may have with other service providers; facilities under the jurisdiction of other service providers not covered by an intergovernmental agreement; and future facilities that are more appropriately provided by an agency other than the CITY.

- E. The COUNTY shall not approve land divisions within the unincorporated Urban Planning Area that are inconsistent with the provisions of the Future Development 20-Acre District (FD-20).
 - F. The COUNTY shall not approve a development proposal in the Urban Planning Area if the proposal would not provide for, nor be conditioned to provide for, an enforceable plan for redevelopment to urban densities consistent with the CITY's Comprehensive Plan in the future upon annexation to the CITY as indicated by the CITY Comprehensive Plan.
 - G. The CITY and the COUNTY will implement the applicable Urban Reserve concept plans and related agreements. The CITY will amend the CITY comprehensive plan to include this area consistent with the original concept plan. If modifications to the original concept plan are made during the comprehensive planning process, the parties will update the related agreements to reflect these changes, which may include transportation, access and funding if needed. Until the CITY amends its Transportation System Plan (TSP), the COUNTY's TSP will serve as the TSP for the Urban Planning Area.
- V. Special Policies
- A. Annexations to the CITY of land outside of the UGB or the Urban Planning Area will not be supported by the COUNTY or the CITY.
 - B. The CITY shall specify in its Comprehensive Plan that access to SW 124th Avenue and Basalt Creek Parkway shall be limited to the following:
SW Tualatin-Sherwood Road, SW Tonquin Road, SW Grahams Ferry Road, SW Boones Ferry Road, and one other location within the CITY portion of the Basalt Creek Planning Area.
 - C. The CITY agrees to incorporate the planned local street network identified in the Basalt Creek Refinement Plan into the CITY's TSP and include all transportation projects on the COUNTY's Transportation Development Tax (TDT) Road Project List to be eligible for TDT funding.
 - D. The CITY agrees to work with the COUNTY and other partners to secure funding for construction of Basalt Creek Parkway from SW Grahams Ferry to SW Boones Ferry Road and other transportation improvements identified on the Basalt Creek Transportation Refinement Plan to support development in the Basalt Creek Planning Area.

- E. Where the CITY Urban Planning Area boundary on “Exhibit A” is shown as SW 124th Avenue, Basalt Creek Parkway, SW Tonquin Rd. and/or SW Waldo Way, the boundary shall extend to the centerline of each road.

VI. Amendments to the Urban Planning Area Agreement

- A. The following procedures shall be followed by the CITY and the COUNTY to amend the language of this agreement or the Urban Planning Area Boundary:
 - 1. The CITY or the COUNTY, whichever jurisdiction originates the proposal, shall submit a formal request for amendment to the responding agency.
 - 2. The formal request shall contain the following:
 - a. A statement describing the amendment.
 - b. A statement of findings indicating why the proposed amendment is necessary.
 - c. If the request is to amend the planning area boundary, a map which clearly indicates the proposed change and surrounding area.
 - 3. Upon receipt of a request for amendment from the originating agency, the responding agency shall schedule a review of the request before the appropriate reviewing body, with said review to be held within 45 calendar days of the date the request is received.
 - 4. The CITY and the COUNTY shall make good faith efforts to resolve requests to amend this agreement. Upon completion of the review, the reviewing body may approve the request, deny the request, or make a determination that the proposed amendment warrants additional review. If it is determined that additional review is necessary, the following procedures shall be followed by the CITY and the COUNTY:
 - a. If inconsistencies noted by both parties cannot be resolved in the review process as outlined in Section VI.A.3, the CITY and the COUNTY may agree to initiate a joint study. Such a study shall commence within 30 calendar days of the date it is determined that a proposed amendment creates an inconsistency, and shall be completed within 90 calendar days of said date. Methodologies and procedures regulating the

conduct of the joint study shall be mutually agreed upon by the CITY and the COUNTY prior to commencing the study.


- b. Upon completion of the joint study, the study and the recommendations drawn from it shall be included within the record of the review. The agency considering the proposed amendment shall give careful consideration to the study prior to making a final decision.

- B. The parties may individually or jointly initiate review of this Agreement to evaluate the effectiveness of the processes set forth herein and determine if conditions warrant any amendments. Both parties shall make a good faith effort to resolve any inconsistencies that may have developed since the previous review. If inconsistencies still remain at the conclusion of the review period, either party may terminate this Agreement.

- VII. This Agreement shall become effective upon full execution by the COUNTY and the CITY and shall then repeal and replace the Washington County – Wilsonville Urban Planning Area Agreement dated December 13, 2007. The effective date of this Agreement shall be the last date of signature on the signature page.

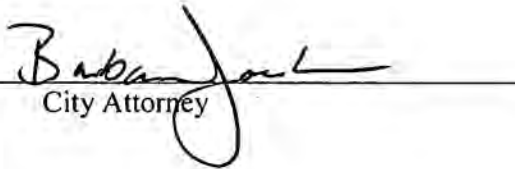
IN WITNESS WHEREOF the parties have executed this Urban Planning Area Agreement on the date set opposite their signatures.

CITY OF WILSONVILLE

By 
Mayor

Date 5/30/19

Approved as to Form:

By 
City Attorney

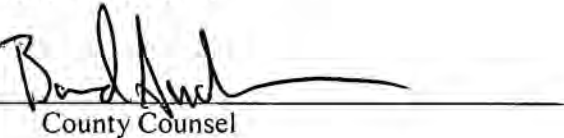
Date 5/29/19

WASHINGTON COUNTY

By  Kathryn Harrington
Chair, Board of Commissioners

Date 06/17/19

Approved as to Form:

By 
County Counsel

Date 6/18/19

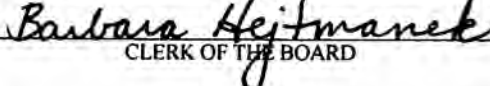
By _____
Recording Secretary

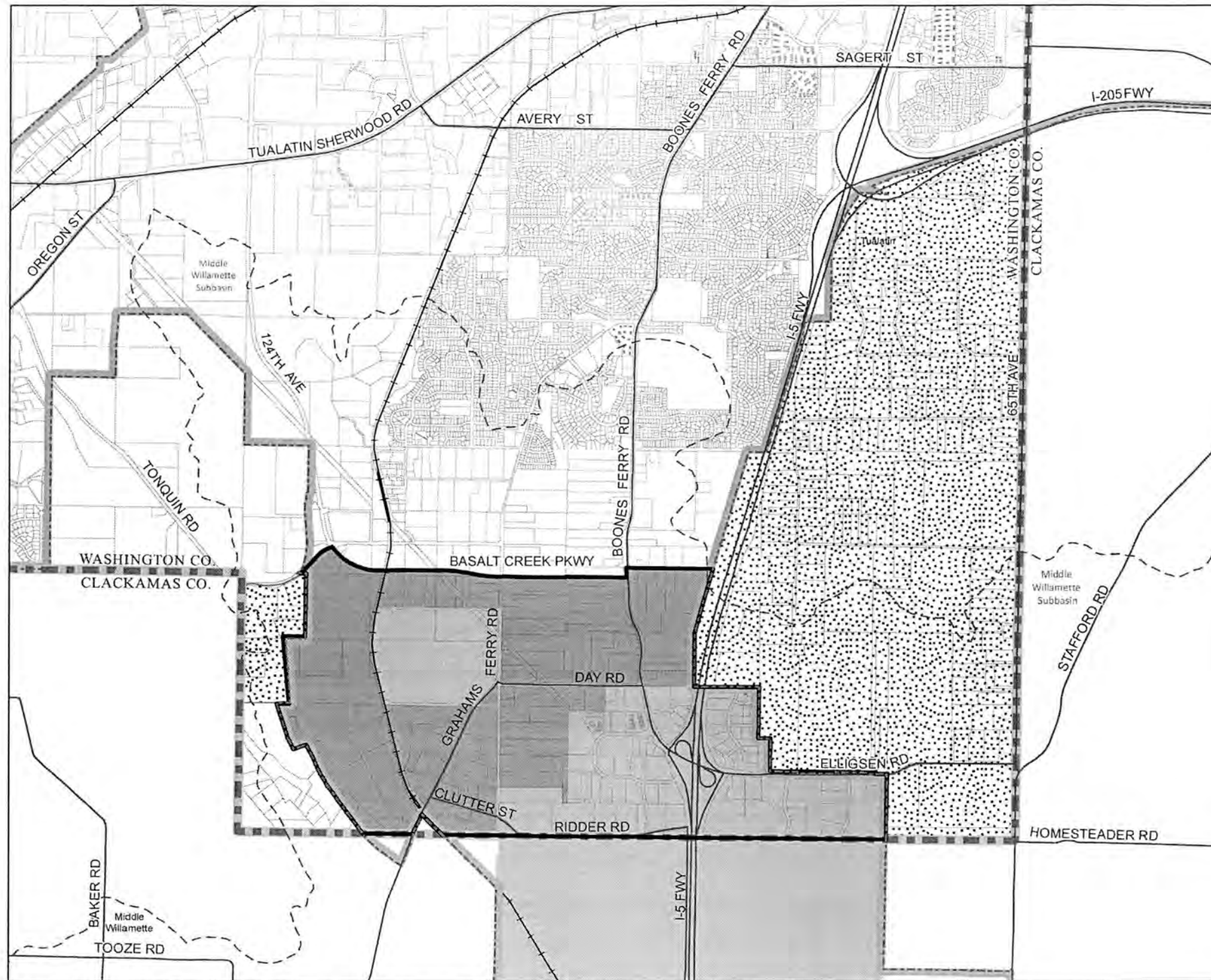
Date _____

APPROVED WASHINGTON COUNTY
BOARD OF COMMISSIONERS

MINUTE ORDER # 19-32

DATE 4-16-19

BY 
CLERK OF THE BOARD



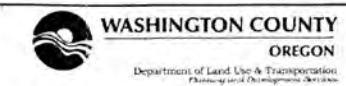
City of Wilsonville
 Urban Planning Area
 Washington County - Wilsonville
 Urban Planning Area Agreement
 Exhibit A

Legend:

- City Limit
- Urban Planning Area
- Urban Reserve – Planning Responsibility Undefined
- Middle Willamette Subbasin
- Tax Lot
- Urban Growth Boundary
- Railroad
- Major Road
- County Boundary

Scale: 1:24,000
 0 0.5 1 Miles

North Arrow: N



Date: 02/08/2019

\\emcg\neas\GISDATA\Workgroups\GIS\Planning\Community_Planning_Projects\UPAAs_and_IGAs\Wilsonville\UPAA\2018\Wilsonville_UPAA_PlanResp_11x17.mxd

Agreement Amended by
 Washington County Land Use Ordinance No. 850
 Adopted April 16, 2019



**CITY COUNCIL MEETING
STAFF REPORT**

Meeting Date: April 15, 2019		Subject: Ordinance No. 834 – 2nd Reading Comprehensive Plan & TSP Amendments Related to Basalt Creek Concept Plan	
		Staff Members: Kimberly Rybold, AICP, Associate Planner	
		Department: Community Development	
Action Required		Advisory Board/Commission Recommendation	
<input checked="" type="checkbox"/> Motion <input checked="" type="checkbox"/> Public Hearing Date: April 1, 2019 <input checked="" type="checkbox"/> Ordinance 1 st Reading Date: April 1, 2019 <input checked="" type="checkbox"/> Ordinance 2 nd Reading Date: April 15, 2019 <input type="checkbox"/> Resolution <input type="checkbox"/> Information or Direction <input type="checkbox"/> Information Only <input type="checkbox"/> Council Direction <input type="checkbox"/> Consent Agenda		<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Denial <input type="checkbox"/> None Forwarded <input type="checkbox"/> Not Applicable	
		Comments: At their February 13, 2019 meeting the Planning Commission unanimously recommended approval to the City Council.	
Staff Recommendation: Staff recommends that Council adopt Ordinance No. 834 on second reading.			
Recommended Language for Motion: I move to approve Ordinance No. 834 on second reading.			
Project / Issue Relates To:			
<input checked="" type="checkbox"/> Council Goals/Priorities: Basalt Creek Concept Plan	<input type="checkbox"/> Adopted Master Plan(s)	<input type="checkbox"/> Not Applicable	

ISSUE BEFORE COUNCIL:

Council will consider amendments to the City’s Comprehensive Plan & Transportation System Plan (TSP).

Ordinance No. 834 Staff Report

EXECUTIVE SUMMARY:

In 2004, Metro added the Basalt Creek Planning Area to the region's Urban Growth Boundary (UGB) in order to accommodate growth in industrial employment. The area consists of approximately 847 acres, located west of I-5 between the cities of Tualatin and Wilsonville, known as the Basalt Creek and West Railroad Areas and generally referred to as the "Basalt Creek Planning Area (BCPA)." In 2011, the two cities, Metro, and Washington County entered into an Inter-Governmental Agreement (IGA) that outlines the coordinated planning responsibilities regarding the BCPA. The project team worked with property owners, citizens, service providers, regional partners, and both Cities' Planning Commissions and City Councils, to complete transportation, infrastructure and land use planning. The Cities of Tualatin and Wilsonville adopted the Basalt Creek Concept Plan (Attachment 2) in August 2018, which presents a unified framework for future development in the BCPA. The proposed Comprehensive Plan and Transportation Systems Plan (TSP) amendments will reflect the City's adoption of the Basalt Creek Concept Plan and Basalt Creek Transportation Refinement Plan. Per the 2018 Inter-Governmental Agreement with Metro outlining the land use decision-making process between Wilsonville and Tualatin, the Comprehensive Plan amendments associated with the Basalt Creek Concept Plan must be adopted by May 3, 2019.

The proposed Comprehensive Plan and TSP amendments will reflect Wilsonville's planning authority in Basalt Creek, and will set the stage for future master planning and implementation efforts in this area. The addition of projects from the Basalt Creek Concept Plan and Transportation Refinement Plan to the City's TSP will also ensure consistency between the City and County's TSPs.

The proposed Comprehensive Plan Amendments (Attachment 1, Exhibit A) include:

- Amendments to the Comprehensive Plan Map to apply the Industrial land use designation to Basalt Creek and the Coffee Creek Industrial Area, consistent with anticipated Washington County and City of Wilsonville Urban Planning Area Agreement (UPAA) revisions.
- Amendments to the Area of Special Concern Map to include Wilsonville's portion of the Basalt Creek Planning Area, including the West Railroad Area.
- Amendments to the language of the Area of Special Concern section to provide guidance on future development and implementation planning efforts for Wilsonville's portion of the Basalt Creek Planning Area and West Railroad Area.
- Amendments to the language of the Industrial Development Policies section to include important principles from the Concept Plan for development of the BCPA.

The proposed TSP Amendments (Attachment 1, Exhibit B) will be added to the Higher Priority Projects list in the TSP:

- Current alignment of 124th Avenue extension and the Basalt Creek Parkway extension from 124th Avenue to Boones Ferry Road.
- Grahams Ferry Road widening to three lanes from Day Road to Basalt Creek Parkway.
- Boones Ferry widening to 5-lanes from Day Road to Basalt Creek Parkway.
- Boones Ferry Road/95th Avenue Intersection access management project.
- Second southbound right turn lane on the ramp at Boones Ferry Road/I-5 Southbound.
- Basalt Creek Canyon and I-5 Easement trail projects on the bicycle/pedestrian map.

- Garden Acres Road (from Grahams Ferry Road to Ridder Road) designation as a Minor Arterial.
- Selected Brown Road Extension Alignment to 5th Street.
- Updated figures to show new City of Wilsonville jurisdiction.

The following project will also be added to the Additional Planned Projects list in the TSP:

- Day Road overcrossing (Boones Ferry Road to Elligsen Road) to the additional planned project list.

City staff held a work session with the Planning Commission on December 12, 2018 to seek feedback on the proposed amendments. On February 13, 2019, a public hearing was held before the Planning Commission for consideration of a recommendation to the City Council on the Comprehensive Plan and TSP amendments.

The proposed TSP amendments in Attachment 1, Exhibit B include one modification from the Planning Commission recommendation. The cost estimate for Project RE-P15, listed in Table 5-9, has been changed from “Developer Funded” to \$4,000,000 with a brief statement of project need added to the “Why Not Higher Priority?” column. While this project is a local road that would typically be funded by development, uncertainty surrounding the timing of development relative to the need for this connection, resulting from the anticipated failure of the Pioneer Court / Boones Ferry Road intersection, may require the City to construct this improvement prior to adjacent development.

Additionally, staff from the City and Washington County coordinated to draft an update to the Urban Planning Area Agreement (UPAA) to include the Basalt Creek Planning Area to reflect the future boundary between Wilsonville and Tualatin as determined through the Concept Plan, giving Wilsonville planning authority over the portion of the BCPA south of the Basalt Creek Parkway and SW Greenhill Lane. City Council reviewed the UPAA amendments at a work session on February 21, and approved Resolution No. 2726 on March 4 authorizing the Mayor to execute this UPAA. Washington County is scheduled for hearings on March 20 and April 16 to adopt the new UPAA.

EXPECTED RESULTS:

Adoption of the Basalt Creek Comprehensive Plan and TSP Amendments and an updated UPAA with Washington County will set the stage for the next great business district in Wilsonville.

TIMELINE:

The public hearing and first reading is scheduled for April 1, 2019, with a second reading of the Ordinance on April 15. Washington County is expected to adopt the revised UPAA on April 16.

CURRENT YEAR BUDGET IMPACTS:

The fiscal year budget allocated \$30,000 for CIP #3000 for staff time to adopt the Comprehensive Plan Amendments. An additional \$15,000 was requested in March as a supplemental budget adjustment. A portion of the professional services funds from the Planning Division budget will cover consultant time to prepare the TSP Amendments.

FINANCIAL REVIEW / COMMENT:

Reviewed by: CAR Date: 3/20/2019

LEGAL REVIEW / COMMENT:

Reviewed by: BAJ Date: 3/25/2019

COMMUNITY INVOLVEMENT PROCESS:

The concept planning process included participation from affected residents, businesses, and property owners. The City's website is updated to reflect the most recent work and staff sent notice of the amendments to the interested parties list and property owners via email and U.S. postal mail.

POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY:

The Basalt Creek area is important for the long-term growth of Tualatin, Wilsonville, and the Metro region. The Basalt Creek area presents an opportunity to integrate jobs and housing, develop efficient transportation and utility systems, create an attractive residential and business community, incorporate natural resource areas, and provide recreational opportunities as community amenities and assets.

ALTERNATIVES:

The City Council may provide recommendations and modifications to the Comprehensive Plan and TSP Amendments.

CITY MANAGER COMMENT:

N/A

ATTACHMENTS:

1. Attachment 1: Ordinance No. 834
Exhibits:
 - A. Ordinance No. 834 Exhibit A – Comprehensive Plan Text and Map Amendments
 - B. Ordinance No. 834 Exhibit B – Transportation System Plan Amendments
 - C. Ordinance No. 834 Exhibit C – Planning Commission Record
2. Attachment 2: Basalt Creek Concept Plan and Supporting Documentation:
https://www.ci.wilsonville.or.us/sites/default/files/fileattachments/city_council/meeting/27721/06_att_2_concept_plan_and_supporting_documentation.pdf

ORDINANCE NO. 834

AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING COMPREHENSIVE PLAN TEXT AND MAP AMENDMENTS AND TRANSPORTATION SYSTEM PLAN AMENDMENTS RELATED TO THE BASALT CREEK CONCEPT PLAN AND APPROVING A COMPREHENSIVE PLAN MAP AMENDMENT RELATED TO THE COFFEE CREEK MASTER PLAN.

WHEREAS, in 2004, the Metro Council added two areas located generally between the cities of Wilsonville and Tualatin to the Metro Urban Growth Boundary (“UGB”) in Metro Ordinance No. 04-1040B to meet an identified industrial land need; and

WHEREAS, the above-described two areas are known as the Basalt Creek and West Railroad Planning Areas which are generally referred to as the “Basalt Creek Planning Area;” and

WHEREAS, in 2011 the City of Wilsonville approved Resolution No. 2293 authorizing an Intergovernmental Agreement (“2011 IGA”) with Metro, Washington County, and the City of Tualatin (the “Parties”) to engage in concept planning for the Basalt Creek Planning Area; and

WHEREAS, the above Parties agreed to memorialize and endorse the recommendations and results of the 2013 Basalt Creek Transportation Refinement Plan, and in 2013 the City of Wilsonville approved Resolution No. 2435 acknowledging the Basalt Creek Transportation Refinement Plan; and

WHEREAS, from October 2013 through October 2016, the Wilsonville and Tualatin City Councils held five joint Council work sessions considering several boundary and land use alternatives for the Basalt Creek Planning Area; and

WHEREAS, over that same time period, two public workshops were held and the Wilsonville and Tualatin Planning Commissions and City Councils convened several work sessions; and

WHEREAS, the City of Wilsonville approved Resolution No. 2657 authorizing an Intergovernmental Agreement (“2017 IGA”) with Metro, Washington County, and the City of Tualatin to ask Metro to make an arbitration determination on the appropriate designation of the land use for an area within the Basalt Creek Planning Area that consists of approximately 52 net acres of land, commonly referred to as the “Central Subarea;” and

WHEREAS, in the 2017 IGA, the City agreed to pass a Resolution adopting the Concept Plan, reflecting the Metro determination, within 120 days after the date Metro's decision becomes final and effective, and to adopt an Ordinance amending the City's Comprehensive Plan within one year after the Metro determination; and

WHEREAS, Metro made its determination on April 19, 2018 in accordance with the 2017 IGA and adopted Resolution 18-4885 on May 3, 2018 acknowledging that decision and beginning the 120-day time period requiring the City to adopt the Basalt Creek Concept Plan and one year to adopt comprehensive plan amendments; and

WHEREAS, on August 6, 2018, the City of Wilsonville approved Resolution No. 2697 acknowledging the Basalt Creek Concept Plan; and

WHEREAS, with respect to the Coffee Creek Industrial Area, on March 4, 2019, the City Council adopted Resolution No. 2726, amending the Urban Planning Area Agreement, which expands the City of Wilsonville Urban Planning Area Boundary and, among other things, removes the condition requiring annexation of property in Coffee Creek prior to application of a City Comprehensive Plan Map designation and thus allowing the City to include the Coffee Creek Industrial Area in its Comprehensive Plan Map; and

WHEREAS, in April 2019, the City and Washington County anticipate executing the Urban Planning Area Agreement; and

WHEREAS, on December 12, 2018 the Wilsonville Planning Commission held a work session to discuss and take public testimony on the Basalt Creek Comprehensive Plan and Transportation System Plan amendments; and

WHEREAS, on February 21, 2019 the Wilsonville City Council held a work session to discuss the Basalt Creek Comprehensive Plan and Transportation System Plan amendments and Urban Planning Area Agreement; and

WHEREAS, following the timely mailing and publication of the required notice, the Planning Commission conducted a public hearing on February 13, 2019, wherein the Commission received public testimony, staff reports and input, and Attachments and Exhibits, and thereafter deliberated and voted unanimously to approve Resolution No. LP19-0001 recommending approval to the City Council; and

WHEREAS, a copy of the record of the aforementioned Planning Commission action and recommendation is marked Exhibit C, attached and incorporated herein; and

WHEREAS, following the Planning Commission public hearing, the Wilsonville Planning Director forwarded the recommended Basalt Creek Comprehensive Plan and Transportation System Plan amendments to the City Council, along with a staff report and attachments, in accordance with the public hearing and notice procedures that are set forth in Sections 4.008, 4.011, 4.012, and 4.198 of the Wilsonville Code; and

WHEREAS, the City Council, after Public Hearing Notices were provided to a list of interested parties, property owners, and affected agencies, and posted in three locations throughout the City and on the City website, held a public hearing on April 1, 2019 to review the proposed Basalt Creek Comprehensive Plan and Transportation System Plan amendments, and to gather additional testimony and evidence regarding the proposal; and

WHEREAS, the City Council has afforded all interested parties an opportunity to be heard on this subject and has entered all available evidence and testimony into the public record of their proceeding; and

WHEREAS, the City Council has duly considered the subject, including the Planning Commission recommendations and all the exhibits and testimony introduced and offered by all interested parties;

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

1. FINDINGS.

The above-recited findings are adopted and incorporated by reference herein as findings and conclusions of Resolution No. LP19-0001, which includes the staff report and attachments (Exhibit C). The City Council further finds and concludes that the adoption of the proposed Basalt Creek Comprehensive Plan and Transportation System Plan amendments are necessary to help protect the public health, safety, and welfare of the municipality by planning that will support the development of employment lands within the City limits.

2. DETERMINATION.

Based on such findings, the City Council hereby adopts Comprehensive Plan text and Comprehensive Plan Map amendments, attached hereto and marked as Exhibit A, and Transportation System Plan amendments, attached hereto and marked as Exhibit B, and incorporated by reference as if fully set forth herein. The City Recorder is hereby

directed to prepare final Comprehensive Plan formatting to make sure such style and conforming changes match the format and style of the Comprehensive Plan.

3. EFFECTIVE DATE OF ORDINANCE.

This Ordinance shall be declared to be in full force and effect thirty (30) days from the date of final passage and approval.

SUBMITTED to the Wilsonville City Council and read for the first time at a regular meeting thereof on the 1st day of April, 2019, and scheduled for a second reading at a regular meeting of the Council on the 15th day of April, 2019, commencing at the hour of 7:00 P.M. at the Wilsonville City Hall.

Kimberly Veliz, City Recorder

ENACTED by the City Council on the 15th day of April, 2019 by the following votes:

Yes: ___ No: ___

Kimberly Veliz, City Recorder

DATED and signed by the Mayor this ____ day of April, 2019.

TIM KNAPP, Mayor

SUMMARY OF VOTES:

- Mayor Knapp
- Council President Akervall
- Councilor Stevens
- Councilor Lehan
- Councilor West

Exhibits:

- A. Comprehensive Plan Text and Map Amendments
- B. Transportation System Plan Amendments
- C. Planning Commission Record

Ordinance No. 834 Exhibit A

Wilsonville Comprehensive Plan

Proposed Amendments associated with Basalt Creek: February 6, 2019

Proposed additions to the Comprehensive Plan text are shown in purple.

LAND USE AND DEVELOPMENT**INDUSTRIAL DEVELOPMENT**

Wilsonville is basically a compact City, for this reason all industrial development should be compatible with adjacent or nearby commercial and/or residential areas. Therefore, there is little need for more than one industrial designation. For all practical purposes, all development should be guided by the same general standards; dealing with intensity, etc.

Policy 4.1.3 City of Wilsonville shall encourage light industry compatible with the residential and urban nature of the City.

Implementation Measure 4.1.3.a Develop an attractive and economically sound community.

Implementation Measure 4.1.3.b Maintain high-quality industrial development that enhances the livability of the area and promotes diversified economic growth and a broad tax base.

Implementation Measure 4.1.3.c Favor capital intensive, rather than labor intensive, industries within the City.

Implementation Measure 4.1.3.d Encourage industries interested in and willing to participate in development and preservation of a high-quality environment. Continue to require adherence to performance standards for all industrial operations within the City.

Implementation Measure 4.1.3.e Site industries where they can take advantage of existing transportation corridors such as the freeway, river, and railroad.

Implementation Measure 4.1.3.f Encourage a diversity of industries compatible with the Plan to provide a variety of jobs for the citizens of the City and the local area.

Implementation Measure 4.1.3.g Encourage energy-efficient, low-pollution industries.

Implementation Measure 4.1.3.h The City, in accordance with Title 4 of the Metro Urban Growth Management Functional Plan, supports appropriate retail development within Employment and Industrial Areas. Employment and Industrial areas are expected to include some limited retail commercial uses, primarily to serve the needs of people working or living in the immediate Employment or Industrial Areas, as well as office complexes housing technology-based industries. Where the City has already designated land for commercial development within Metro's employment areas, the City has been exempted from Metro development standards.

Implementation Measure 4.1.3.i The City shall limit the maximum amount of square footage of gross leasable retail area per building or business in areas designated for industrial development. In order to assure compliance with Metro's standards for the development of industrial areas, retail uses with more than 60,000 square feet of gross leasable floor

Wilsonville Comprehensive Plan

Proposed Amendments associated with Basalt Creek: February 6, 2019

area per building or business shall not be permitted in areas designated for industrial development.

Implementation Measure 4.1.3.j All industrial areas will be developed in a manner consistent with industrial planned developments in Wilsonville. Non-industrial uses may be allowed within a Planned Development Industrial Zone, provided that those non-industrial uses do not limit the industrial development potential of the area.

Implementation Measure 4.1.3.k Encourage high-growth employment industries in which the City is already competitive, including advanced manufacturing, corporate and professional services, and health care and medical-related fields.

Implementation Measure 4.1.3.l Encourage growth in industrial business types prevalent in the region but new to the City, such as “craft” manufacturing (such as bicycle manufacturing, breweries, distilleries). Consider integrating live/work units into “craft” manufacturing areas.

Implementation Measure 4.1.3.m Encourage new industrial development that contributes to employment districts with a high density of jobs and a range of employment opportunities.

Implementation Measure 4.1.3.n Encourage development that incorporates active urban green spaces, such as trails, linear parks, and pocket parks, and use vegetation for buffering where possible.

**Wilsonville Comprehensive Plan
Proposed Amendments associated with Basalt Creek: February 6, 2019**

AREAS OF SPECIAL CONCERN

AREA M

This area, known as Basalt Creek, is located to the northwest of Wilsonville in Washington County. The area is generally oriented east-west, and is bound by Interstate 5 (I-5) to the east, the Portland and Western Railroad (PNWR) and the Coffee Creek Correctional Facility to the west, and Clay Street and Day Road to the south. The northern boundary is the location of the Basalt Creek Parkway, which extends from 124th Avenue and connects to Grahams Ferry Road. The Basalt Creek Parkway will run east-west between Grahams Ferry Road and Boones Ferry Road, and eventually extend over I-5. The Parkway is designed as a high-capacity major freight arterial with limited access to local streets providing industrial access between Tualatin, Sherwood, and Wilsonville.

The primary existing land uses in Basalt Creek are rural agriculture, industrial and rural residential consisting of low-density single-family housing. South of the area within the City of Wilsonville are existing and planned commercial, office, and industrial uses. The employment areas around Commerce Circle, Ridder Road, and 95th Avenue include advanced manufacturing, clean tech, warehouse, distribution, and logistics businesses. Abutting Area M along the south side of Day Road is the Coffee Creek Industrial Area, which has an adopted Master Plan and Industrial Form-based Code to enable the creation of a high-caliber business district.

The Cities of Wilsonville and Tualatin prepared the Basalt Creek Concept Plan to provide a framework for development and the provision of services in the area between the two cities. Land uses planned within the Wilsonville portion of Basalt Creek include a mix of employment development types and modest opportunities for live/work housing to support the nearby employment areas. The Concept Plan identifies three land use categories within Basalt Creek.

- High Tech Employment District. Most of the buildable acres in this area are devoted to a mix of higher density employment land. The High Tech Employment District is expected to accommodate jobs in manufacturing and high tech, with warehousing components. This land use is in the southern and eastern sections of the area, covering

Wilsonville Comprehensive Plan

Proposed Amendments associated with Basalt Creek: February 6, 2019

all land east of Boones Ferry Road, and most of the land south of Clay Street, extending to Day Road and bordered to the west by Coffee Creek Correctional Facility.

- Craft Industrial. The southwest corner of the intersection of Boones Ferry Road and the future Basalt Creek Parkway is planned as Craft Industrial, which allows for a mix of smaller scale commercial uses. This area allows less than 20 percent residential use and is expected to accommodate live/work units. This development responds to the topography on these parcels and their location directly south from residential land and southwest of the neighborhood commercial node north of the Basalt Creek Parkway. Craft Industrial provides a transition to the higher intensity employment uses to the south.
- Light Industrial District. This land is located along the southern edge of the Basalt Creek Parkway just north of the Coffee Creek Correctional Facility and will accommodate jobs primarily in warehousing and light manufacturing.

The 2013 Basalt Creek Transportation Refinement Plan (TRP) sets the layout of major new roads and improvements for the area. As the area develops, property owners will plan and build local roads connecting to this network. These roadway improvements will include enhanced bike and pedestrian facilities and connections to the future SMART transit system.

Design Objectives

1. Consider adoption of a form-based code, similar to that adopted in the Coffee Creek Industrial Area, for new industrial development located in Basalt Creek. A form-based code in Basalt Creek would guide the development of a well-designed and uniquely attractive business community, while providing flexibility for development.
2. Protect key natural resources and sensitive areas while making recreational opportunities accessible by integrating the new parkland, open spaces, natural areas and trails in Basalt Creek into existing regional networks. The area has distinctive natural features, particularly its namesake - Basalt Creek - and the surrounding wetlands habitat running north-south through the eastern half of the area. Development should protect, enhance, and provide access to these natural resources.

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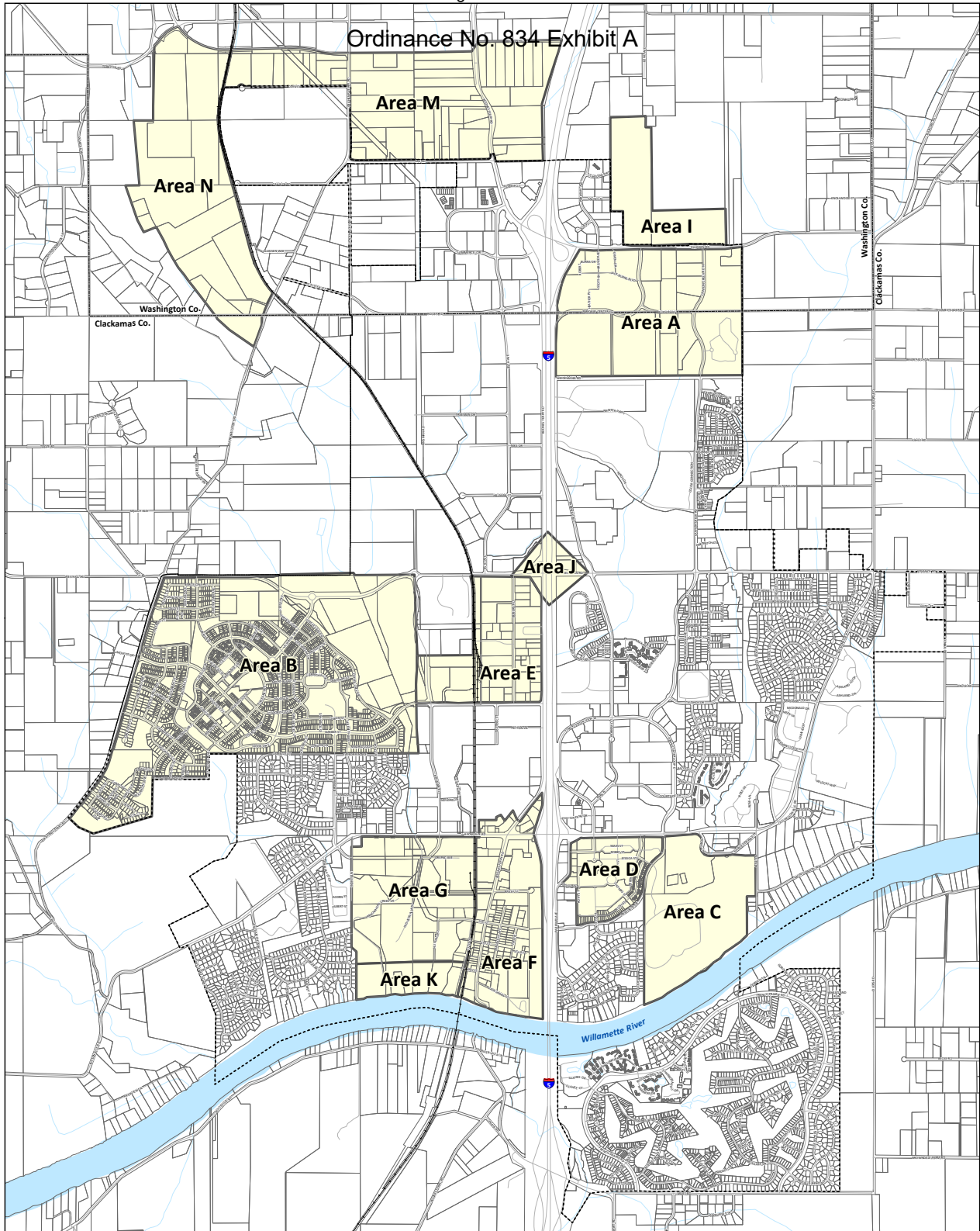
Wilsonville Comprehensive Plan**Proposed Amendments associated with Basalt Creek: February 6, 2019**

3. Locate north to south trails near the Basalt Creek Canyon and provide bicycle connections that would connect to other cities and trail systems, serving as an asset for both residents and employees in the area.
4. Provide strong transit access to support employment within Basalt Creek. Integrate transit access with the bike, pedestrian, and trail services at key access points along Grahams Ferry Road, Boones Ferry Road, Day Road, SMART Central, and the Coffee Creek Correctional Facility.

AREA N

This area, known as West Railroad, is south of the Basalt Creek Parkway and in City of Wilsonville jurisdiction. The West Railroad area is divided from the Basalt Creek area by the Portland and Western Railroad (PNWR) and the Coffee Creek Correctional Facility. The area is heavily constrained by wetlands habitat, steep slopes, limited access, and fragmented property ownership. Without addressing any of these constraints, development potential is limited, and initial estimates show it would be costly to serve this area with adequate water, sewer, and transportation infrastructure. However, once development and the extension of infrastructure occurs in the rest of Basalt Creek as well as the Coffee Creek Industrial Area, additional analysis should be completed on infrastructure service costs and appropriate land uses. The area also has potential for resource conservation and future public access to nature. The area will require master planning before any development occurs.

Ordinance No. 834 Exhibit A



Comprehensive Plan Areas of Special Concern



February 2019

Map Legend

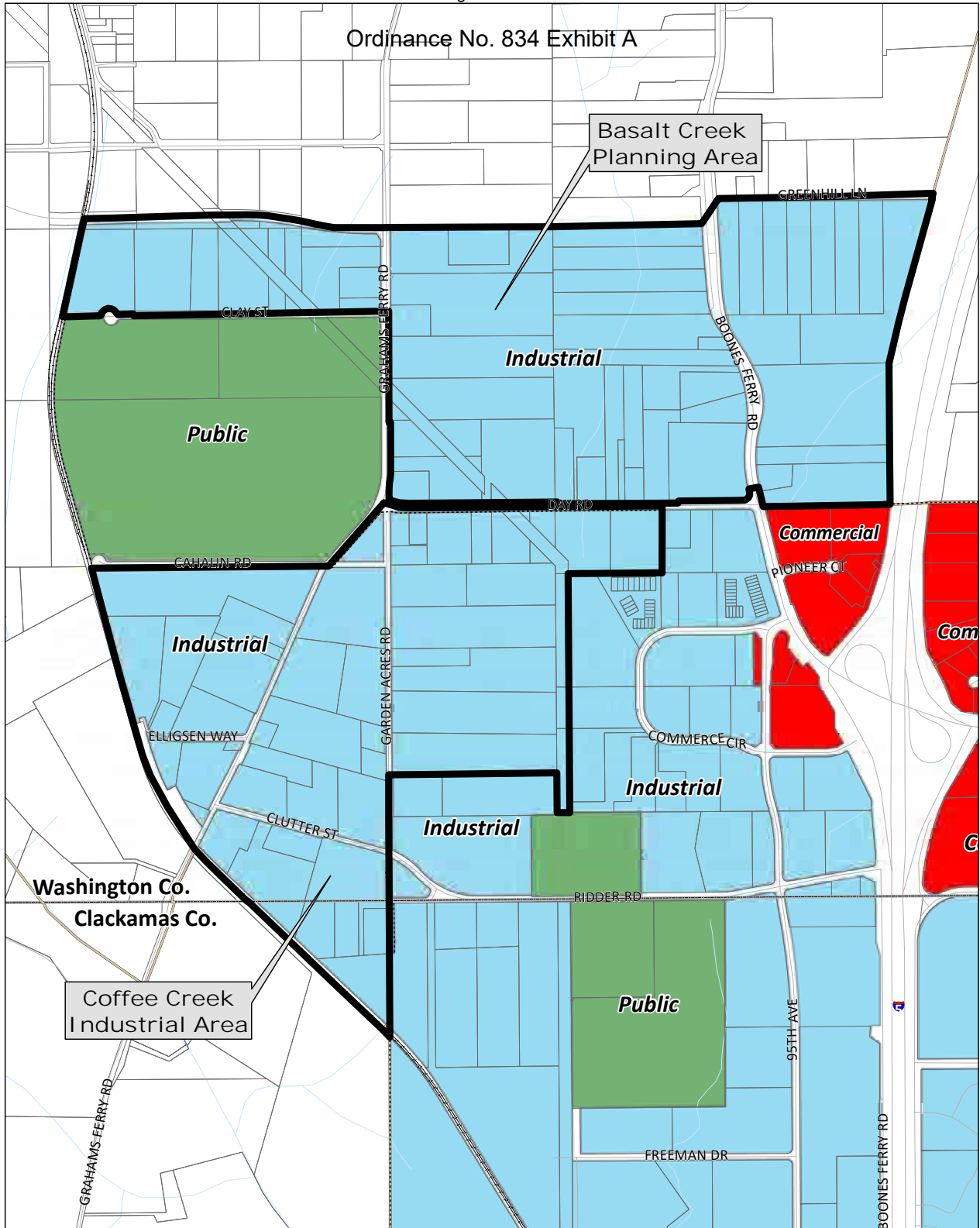
- County Boundary
- City Boundary
- Urban Growth Boundary
- Taxlots
- Area of Special Concern



This map is to be used in conjunction with written text provided in the Wilsonville Comprehensive Plan.

Disclaimer: The City of Wilsonville makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. Data errors and omissions may exist in map and report. This map is not suitable for legal, engineering, or surveying purposes. Please contact the City of Wilsonville Planning Division to verify report information is complete and accurate.

Ordinance No. 834 Exhibit A



Comprehensive Plan Map Amendments

Basalt Creek Planning Area and Coffee Creek Industrial Area



February 2019

Land Use Designations

- Commercial
- Industrial
- Public
- County Boundary
- City Boundary
- Urban Growth Boundary
- Taxlots



Disclaimer: The City of Wilsonville makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. Data errors and omissions may exist in map and report. This map is not suitable for legal, engineering, or surveying purposes. Please contact the City of Wilsonville Planning Division to verify report information is complete and accurate.

Ordinance No. 834 Exhibit B



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Suite 310
Salem, OR 97301
503.391.8773
www.dksassociates.com

MEMORANDUM

DATE: February 5, 2019

TO: Miranda Bateschell, Planning Manager | City of Wilsonville
Zach Weigel, Capital Projects Engineering Manager | City of Wilsonville

FROM: Scott Mansur, P.E., PTOE | DKS Associates
Jenna Hills, E.I. | DKS Associates

SUBJECT: **Wilsonville Transportation System Plan (TSP) Amendment Summary**

P18197-001

The Basalt Creek Concept Plan was formally adopted by the City of Wilsonville on August 6, 2018. A summary of the Basalt Creek Analysis is attached to memorandum for reference. This memorandum discusses necessary amendments to the City of Wilsonville’s Transportation System Plan (TSP) based on transportation requirements and projects identified in the plan. This memorandum also documents other amendments to the TSP based on general updates and a recent City Council Resolution. The TSP changes include:

Basalt Creek Concept Plan

- Show the current alignment of 124th Avenue extension and add the Basalt Creek Parkway extension project from 124th Avenue to Boones Ferry Road on the higher priority project list.
- Add the Basalt Creek Parkway overcrossing of I-5 to the additional planned project list.
- Add the Day Road overcrossing (Boones Ferry Road to Elligsen Road) to the additional planned project list (unfunded).
- Add Boones Ferry Road widening to 5-lanes from Day Road to Basalt Creek Parkway on the higher priority project list.
- Update Grahams Ferry Road widening to three lanes from Day Road to Basalt Creek Pkwy and move to the higher priority project list.
- Update project UU-P4 text under “Why Not Higher Priority” to recognize the function of Grahams Ferry Road between Day and Clutter to serve Coffee Creek Industrial area.
- Add the Boones Ferry Road/95th Avenue Intersection access management project on the higher priority project list.
- Add Basalt Creek Canyon and the I-5 Easement trail projects to the bicycle/pedestrian map.



General Updates

- Update Figure 3-1 to show Garden Acres Road, Clutter Road, and Advance Road to 60th Avenue as City of Wilsonville jurisdiction.
- Update Figure 3-2 to show Garden Acres Road (from Grahams Ferry Road to Ridder Road) as a Minor Arterial and Ridder Road (from Garden Acres Road to Kinsman Road) as a Minor Arterial.
- Add a second southbound right turn lane on the ramp at Boones Ferry Road/I-5 Southbound on the higher priority project list.
- Update the Brown Road Extension Alignment to 5th Street that was selected and approved by Wilsonville City Council Resolution No. 2610.
- Add the Pioneer Court roadway extension project to the Additional Planned Projects list.

The following sections provide more detail for the specific proposed modifications to the TSP.

PROPOSED AMENDMENTS FOR TSP COMPLIANCE

The discussion of recommended revisions is generally organized by reference to the applicable chapter(s) of the TSP. In all chapters, revisions to existing TSP language are presented with deletions shown in ~~strikethrough~~ and additions shown as underlined. The revised TSP figures and text are attached to this memorandum. The revisions identified in this memorandum will also be addressed in a final amended TSP document once the revisions are approved by the Planning Commission and City Council.

Executive Summary

The following changes are recommended to the Executive Summary of the City of Wilsonville's TSP.

Higher Priority Projects Figure (Page iv)

See the recommended changes to this figure in Chapter 5 (pages 3-4 of this memorandum).

Higher Priority Projects Table (Page v)

Add or update the following projects to this table:

- RE-04B Brown Road Extension (with ~~Bailey Street~~ or 5th Street Connection)
- RE-14 Basalt Creek Parkway Connection
- RW-04 Boones Ferry Road Widening
- RW-05 Grahams Ferry Road Widening
- SI-07 Dual Southbound Right Turn Lanes on I-5 Off-Ramp at Boones Ferry Road
- SI-08 Boones Ferry Road/95th Avenue Access Management
- LT-02 Basalt Creek Canyon Ridge Trail
- LT-03 I-5 Easement Trail



Chapter 3: The Standards

The following changes are recommended to Chapter 3 of the City of Wilsonville's TSP.

Figure 3-1: Roadway Jurisdictions (Page 3-3)

Summary of changes:

- Change the jurisdiction of Clutter Road from Washington County to City.
- Change the jurisdiction of Garden Acres Road (Day Road to Ridder Road) from Washington County to City.
- Change the jurisdiction of Advance Road (to 60th Avenue) from Clackamas County to City.

Figure 3-2: Functional Class Designations (Page 3-5)

Summary of changes:

- Update the functional classification of Clutter Road to Collector.
- Modify the functional classification of Garden Acres Road (Day Road to Ridder Road) from Collector to Minor Arterial.
- Modify the functional classification of Ridder Road (Garden Acres Road to Kinsman Road) from Collector to Minor Arterial.
- Add the Day Road overcrossing (Boones Ferry Road to Elligsen Road) and show it as a Future Minor Arterial.

Figure 3-4: Freight Routes (Page 3-9)

Summary of changes:

- Show Basalt Creek Parkway and Boones Ferry Road (between Day Road and Basalt Creek Parkway) as a Future Truck Route.

Figure 3-5: Bicycle Routes (Page 3-11)

Summary of changes:

- Add the Basalt Creek Canyon Ridge trail project
- Add the I-5 Easement trail project
- Remove the bike lane and Tonquin Trail alignment for the Bailey Street Connection for the Brown Road Extension

Access Management (Page 3-20)

Add the following text to Page 3-20 after the third paragraph:

- The Basalt Creek Parkway is considered an Access Management Interest Area because the parkway will be a high-capacity major freight arterial, limited to at-grade accesses at 124th Avenue, Grahams Ferry Road, and Boones Ferry Road. The parkway creates a new connection between I-5 and 99W.



Figure 3-13: Access Management Interest Areas (Page 3-21)

Summary of changes:

- Add Basalt Creek Parkway as Access Management Interest Area (from Grahams Ferry Road to Boones Ferry Road).

Chapter 4: The Needs

The following changes are recommended to Chapter 4 of the City of Wilsonville's TSP.

Figure 4-2: Future 2035 Capacity Deficiencies (Page 4-7)

Summary of changes:

- Remove the textbox that states "Basalt Creek Study will refine projects"

Chapter 5: The Projects

The following changes are recommended to Chapter 5 of the City of Wilsonville's TSP.

Figure 5-2: Higher Priority Projects (Page 5-5)

Summary of changes:

- Remove the alignment for the Bailey Street Connection for project RE-04 Brown Road Extension
- Remove the Brown Road Extension Area of Special Concern textbox and callout
- Add a new project RE-14 Basalt Creek Parkway Connection (from Grahams Ferry Road to Boones Ferry Road as a Major Arterial Roadway Extension
- Add project RW-04 on Boones Ferry Road from Day Road to Basalt Creek Parkway (Major Arterial)
- Add project RW-05 Grahams Ferry Road Widening from Day Road to Basalt Creek Parkway (Collector)
- Add project SI-07 at the I-5 Southbound Exit Ramp at Boones Ferry Road intersection
- Add project SI-08 for access management for the Boones Ferry Road/95th Avenue intersection
- Add Basalt Creek Canyon Ridge Trail project LT-02 to Basalt Creek Planning Area as described in Table 5-2.
- Add I-5 Easement Trail project LT-03 to Basalt Creek Planning Area as described in Table 5-2.

Table 5-2: Higher Priority Projects (Northwest Quadrant) (Page 5-6)

Add the following projects and their descriptions:

- RE-14 Basalt Creek Parkway Connection

Construct Basalt Creek Parkway as a limited access five-lane Major Arterial between Grahams Ferry Road and Boones Ferry Road. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11470.

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- RW-04 Boones Ferry Road Widening
Widen Boones Ferry Road from Day Road to Basalt Creek Parkway to five lanes. RTP project #11487.
- RW-05 Grahams Ferry Road Widening
Widen Grahams Ferry Road from Day Road to Basalt Creek Parkway to three lanes with bike lanes, sidewalks, and transit improvements.
- SI-07 Dual Southbound Right Turn Lanes on I-5 Off-Ramp at Boones Ferry Road.
Add a second southbound right turn lane to the I-5 Exit Ramp at the Boones Ferry Road intersection. RTP project #11489
- SI-08 Boones Ferry Road/95th Avenue Access Management.
Improve operations at the Boones Ferry Road/95th Avenue intersection by removing the east private access approach. Pioneer Court access onto Boones Ferry Road will be right-in / right-out. Additional access will occur via a north-south local street connection between Pioneer Drive, passing under the Day Road I-5 overcrossing approach, and a new west-east local street (north of Day Road) with full intersection access with Boones Ferry Road.
- LT-02 Basalt Creek Canyon Ridge Trail.
Build a north/south trail connection within Basalt Creek (west of the Canyon) to improve the pedestrian and bicycle network and make connections to east/west roads that run north and south. This trail would require a grade-separated crossing of Basalt Creek Parkway and would be connected to the regional trail network by extending Tonquin Road with bike/pedestrian facilities across Graham's Ferry to this future Basalt Creek Canyon Ridge Trail.
- LT-03 I-5 Easement Trail.
Build a trail parallel to I-5 in the ODOT easement that would provide an additional north/south connection connecting to existing bike and pedestrian facilities.

Figure 5-3: Higher Priority Projects (Northwest Quadrant) (Page 5-7)

Summary of changes:

- Remove the textbox regarding the Basalt Creek Refinement Plan
- Add Basalt Creek Parkway Connection project RE-14 as described in Table 5-2.
- Add Boones Ferry Road project RW-04 from Day Road to Basalt Creek Parkway (Major Arterial)
- Add Grahams Ferry Road Widening project RW-05 from Day Road to Basalt Creek Parkway (Collector)
- Add I-5 Southbound Exit Ramp/Boones Ferry Road project SI-07.
- Add Boones Ferry Road/95th Avenue intersection project SI-08.

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- Add Basalt Creek Canyon Ridge Trail project LT-02 to Basalt Creek Planning Area as described in Table 5-2.
- Add I-5 Easement Trail project LT-03 to Basalt Creek Planning Area as described in Table 5-2.
- Add 124th Avenue extension to Grahams Ferry Road as a Collector Roadway

Table 5-4: Higher Priority Projects (Southwest Quadrant) (Page 5-10)

Update the following projects and their descriptions:

- RE-04B Brown Road Extension

Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connecting at either Bailey Street or 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trail terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection

Figure 5-5: Higher Priority Projects (Southwest Quadrant) (Page 5-11)

Summary of changes:

- Remove the textbox that states “Area of Special Concern:”
- Remove the alignment for the Bailey Street Connection for project RE-04B Brown Road Extension.

Brown Road Extension Alternatives (Page 5-15)

- Remove entire page.

Figure 5-7: Additional Planned Projects (Page 5-17)

Summary of changes:

- Remove the “124th Avenue Extension from Tualatin-Sherwood Road (Washington County Project)” text
- Remove the “Possible Basalt Creek Connection (Conceptual)” text
- Remove project RW-P1 Grahams Ferry Road Widening (move to Higher Priority Projects)
- Add project RE-P6 Basalt Creek Overcrossing as a Minor Arterial (from Boones Ferry Road over I-5) as described in Table 5-9.
- Add project RE-P5 Day Road Overcrossing as a Minor Arterial (from Boones Ferry Road to Elligsen Road) as described in Table 5-10.
- Add project RE-P15 Pioneer Court Extension as a Collector from Pioneer Court to 1,000 feet north of Day Road, then west to Boones Ferry Road.

Table 5-9: Additional Planned Projects (Northwest Quadrant) (Page 5-18)

Add, remove, or update the following projects and descriptions:



- RE-P6 Basalt Creek Overcrossing

Extend Basalt Creek across I-5 as a four-lane overcrossing. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11436. No funding has been identified within the planning horizon for this project.

- RE-P15 Pioneer Court Extension

Extend Pioneer Court to the north, approximately 1,000 feet north of Day Road, connect to Boones Ferry Road to the west.

- UU-P4 Grahams Ferry Road Urban Upgrade

Why Not Higher Priority? Grahams Ferry Road is primarily a rural road and Ice Age Tonquin Trail is a preferred option for providing north-south connection through this part of Wilsonville. Grahams Ferry Road will be a key urban connection to serve Coffee Creek Industrial Area. It is assumed that the roadway segment between Day Road and Clutter Road will be constructed as the Coffee Creek industrial lands develop.

Figure 5-8: Additional Planned Projects (Northwest Quadrant) (Page 5-19)

Summary of changes:

- Remove the “124th Avenue Extension from Tualatin-Sherwood Road (Washington County Project)” text
- Remove the “Possible Basalt Creek Connection (Conceptual)” text
- Add project RE-P6 Basalt Creek Overcrossing as a Minor Arterial (from Boones Ferry Road over I-5) as described in Table 5-9.
- Remove project RW-P1 Grahams Ferry Road Widening (move to Higher Priority Projects)
- Add project RE-P15 Pioneer Court Extension as a Collector from Pioneer Court to 1,000 feet north of Day Road, then west to Boones Ferry Road.

Table 5-10: Additional Planned Projects (Northeast Quadrant) (Page 5-20)

Add the following project and description:

- RE-P5 Day Road Overcrossing

Extend Day Road from Boones Ferry Road to Elligsen Road as a four-lane overcrossing of I-5. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11490. No funding has been identified within the planning horizon for this project.

Figure 5-9: Additional Planned Projects (Northeast Quadrant) (Page 5-21)

Summary of changes:

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- Add project RE-P5 Day Road Overcrossing as a Minor Arterial (from Boones Ferry Road to Elligsen Road).

Please let us know if you have any questions.

Attachments:

- Basalt Creek TSP Amendment Analysis Summary
- TSP Amendments (Figures, Tables, and Text)

Basalt Creek TSP Amendment Analysis

February 2019

The purpose of this document is to demonstrate that the solutions identified in the 2013 Basalt Creek Transportation Refinement Plan are still appropriate in response to the 2018 Regional Transportation Plan update. The Basalt Creek Transportation Refinement Plan was adopted in 2013 and provided the framework for the development of concept and comprehensive plans for the Basalt Creek Urban Growth Expansion Area. Since that time, the plans for the area have refined the types of expected urban development that will occur in the area. In addition, regional planning efforts, such as the 2018 Regional Transportation Plan, have continued to be refined.

The Basalt Creek Transportation Refinement Plan was developed to determine the major transportation system necessary to serve development throughout the Basalt Creek Planning Area. The Basalt Creek Transportation Refinement Plan set the stage for concept planning and comprehensive plan development for the Basalt Creek Planning Area. The transportation investments identified by the Basalt Creek Transportation Refinement Plan considered not only future growth within the Basalt Creek Planning Area itself, but also future growth in adjacent areas, including:

- Southwest Tualatin Concept Planning Area
- Tonquin Employment Planning Area (in Sherwood)
- Coffee Creek Planning Area in Wilsonville

Since the development of the Basalt Creek Transportation Refinement Plan the Cities of Tualatin and Wilsonville have proceeded with concept and comprehensive planning for the Basalt Creek Planning Area. These planning efforts have built upon the Basalt Creek Transportation Refinement Plan as a framework for organizing the land use plans.

Furthermore, the 124th Avenue connection and Basalt Creek Parkway has been constructed as an interim 3-lane facility between Tualatin-Sherwood Road and Grahams Ferry Road. Washington County is currently beginning design work for the extension of the Basalt Creek Parkway between Grahams Ferry Road and Boones Ferry Road. The interim improvement is intended to serve existing transportation needs. Development along the corridor is encouraged to dedicate the right-of-way and complete the ultimate cross-section as appropriate.

The Regional Transportation Plan was updated in 2014 to reflect the Basalt Creek Transportation Refinement Plan. Regional land use growth assumptions and additional regional planning efforts have continued as the concept and comprehensive planning for the Basalt Creek area has been developed through an extensive multi-year and multi-jurisdictional public process.

With the advent of the 2018 Regional Transportation Plan and revised growth assumptions it seemed prudent to revisit the Basalt Creek Transportation Refinement Plan to ensure that the transportation system anticipated at the start of the process was indeed still adequate to serve the Basalt Creek Planning Area.

The following tables document the land use assumptions for the Basalt Creek Planning Area.

Land Use in the 2010 Regional Transportation Plan travel demand forecast
 (Land Use in the 2012 Basalt Creek Transportation Refinement Plan Technical Report)

Zone Number	2005 Households	2035 Households	2005 Total Employment	2035 Total Employment
1013	94	706	52	896
1014	54	645	16	938
Total	148	1,351	68	1,834

Land Use in the 2018 Regional Transportation Plan travel demand forecast

Zone Number	2015 Households	2040 Households	2015 Total Employment	2040 Total Employment
980	45	0	79	1,447
981	107	646	167	1,447
Total	152	646	246	2,894

Buildout of the Basalt Creek Concept Plan

Zone Number	2015 Households	2040 Households	2015 Total Employment	2040 Total Employment
980	45		79	2,227
981	107	581	167	2,227
Total	152	581	246	4,453

It should be noted that the zone numbering system changed in 2013 but the geographic boundaries of these two zones remained the same.

Also note the total 2040 employment for both zones is the same number; however the model assumed zone 981 will have slightly more service employment than zone 980.

The following table provides a list of transportation investments assumed in the 2040 regional travel demand forecast:

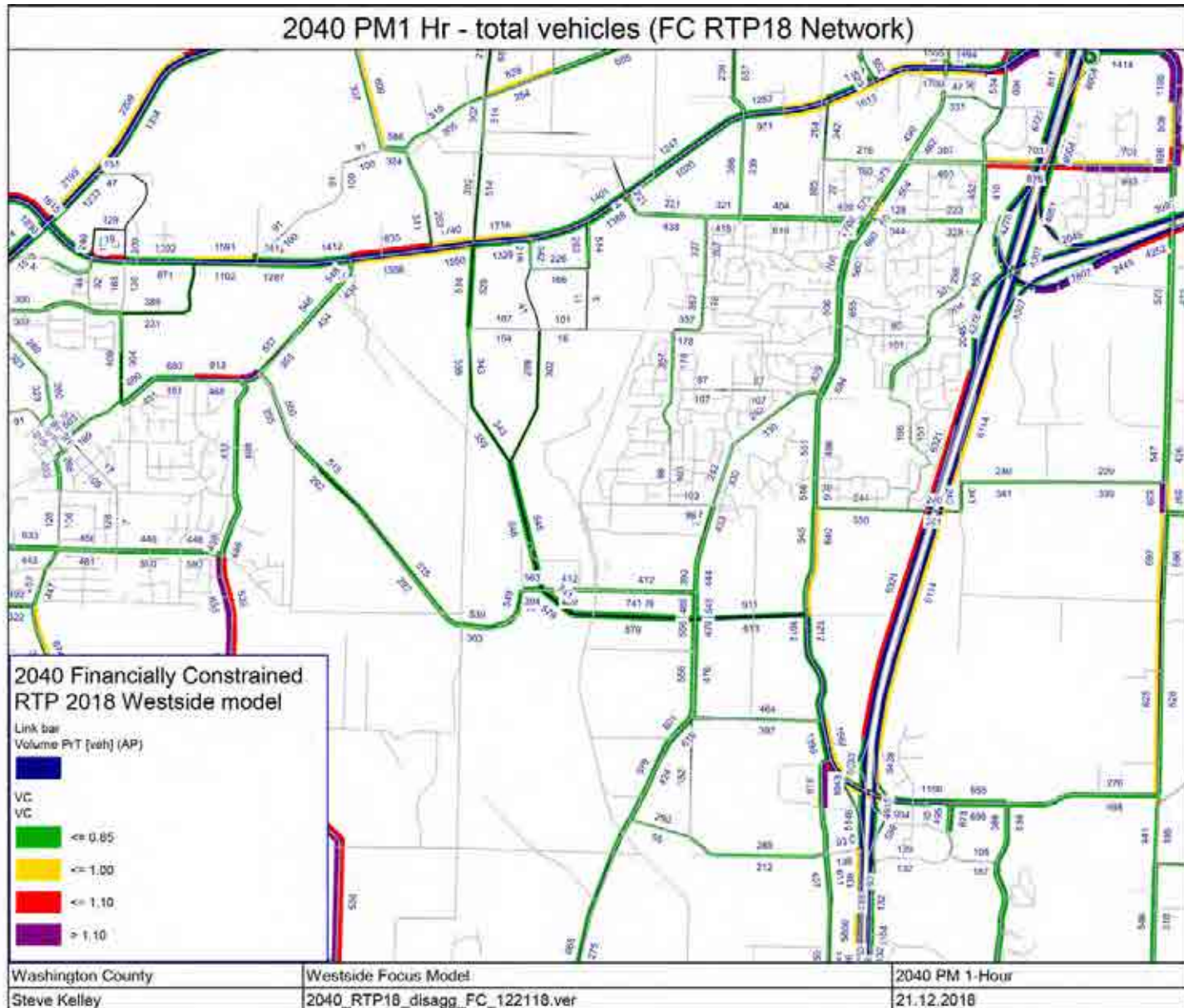
2040 Financially Constrained RTP Projects near Basalt Creek Planning Area

Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Description	Estimated Cost (2016 Dollars)	Time Period	Financially Constrained	RTP Investment Category	Primary Purpose
Washington County	10568	Tualatin-Sherwood Rd Improvements	Langer Farms Pkwy	Teton Ave	Widen from three to five lanes with bike lanes and sidewalks.	\$35,000,000	2018-2027	Yes	Roads and Bridges	Relieve current congestion
Sherwood	10674	Oregon-Tonquin Intersection Improvements	SW Oregon St	SW Tonquin Rd	Reconstruct and realign three leg intersection with a roundabout (partial two-lane roundabout) approx 400 feet northeast of existing roundabout at SW Oregon St & Murdock Rd. ROW, PE, design & construction. Potential for signal in-lieu of dual-roundabout system if better for development and once SW 124th Ave project is completed. If roundabout, project will include rapid flashing beacons at new roundabout and retrofit of adjacent roundabout to meet MUTCD suggestions for pedestrian crossings at roundabouts. This is currently a Washington County facility but would likely become Sherwood's upon completion of project to TSP standards.	\$2,400,000	2018-2027	Yes	Roads and Bridges	Relieve future congestion
Wilsonville	10588	Grahams Ferry Rd Improvements	Day Rd	County line	Widen Grahams Ferry Road to 3 lanes, add bike/pedestrian connections to regional trail system and fix (project development only) undersized railroad overcrossing.	\$13,200,000	2028-2040	Yes	Freight	Improve freight access to indust & intermodal
Washington County	10590	Tonquin Rd Improvements	Grahams Ferry Rd	124th Ave	Realign and widen to three lanes with bike lanes and sidewalks and street lighting.	\$11,400,000	2018-2027	Yes	Roads and Bridges	Build Complete Street
Wilsonville	10853	Garden Acres Road Extension	Day Road	Ridder Road	Construct three lane road extension with sidewalks and cycle track and reconstruct/reorient Day Road/Grahams Ferry Road/Garden Acres Road intersection.	\$14,260,000	2018-2027	Yes	Roads and Bridges	Relieve future congestion
Wilsonville	11243	Day Rd Improvements	Grahams Ferry Rd	Boones Ferry Rd	Widen street from 3 to 5 lanes with buffered bike lanes, sidewalks and street lighting. Improve structural integrity for increased freight traffic and provide congestion relief. Sidewalk infill and creation of Tonquin Trail multi-use path spur will reduce pedestrian and vehicle conflicts. Bike buffers will reduce bicycle and freight conflicts.	\$10,560,000	2028-2040	Yes	Roads and Bridges	Relieve future congestion

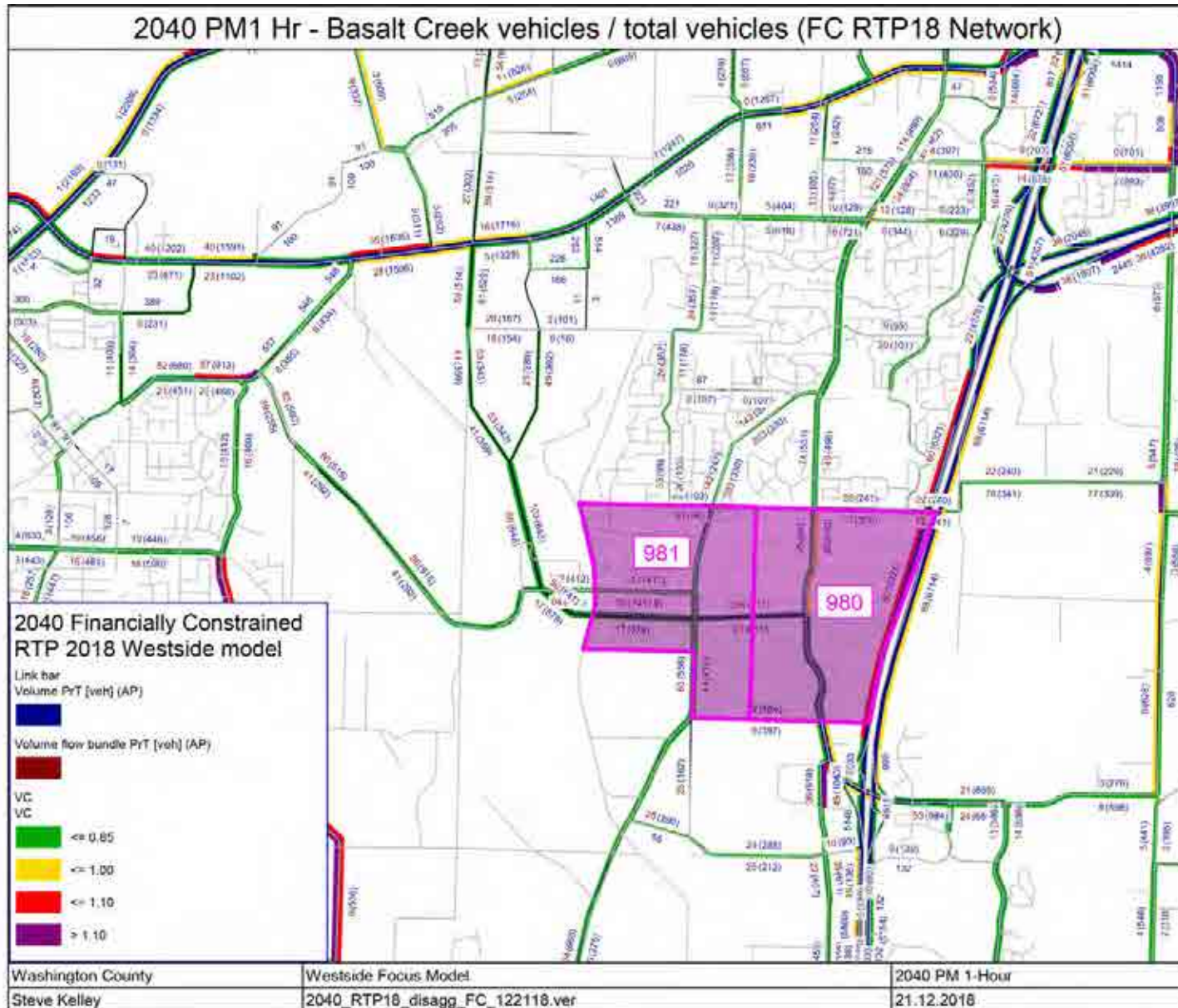
2040 Financially Constrained RTP Projects near Basalt Creek Planning Area (Continued)

Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Description	Estimated Cost (2016 Dollars)	Time Period	Financially Constrained	RTP Investment Category	Primary Purpose
Tualatin	11417	Blake Street Extension	115th Ave	124th Ave	Extend Blake Street to create an east-west connection between 115th and 124th. Install signal at Blake and 124th. New road section will provide an alternative route for industrial traffic on the high injury corridor: Tualatin/Sherwood Road.	\$17,000,000	2018-2027	Yes	Roads and Bridges	Increase access to jobs
Washington County	11470	Basalt Creek Parkway	Grahams Ferry Rd	Boones Ferry Rd	Extend new 5 lane Arterial with bike lanes, sidewalks and street lighting.	\$31,700,000	2018-2027	Yes	Roads and Bridges	Serve new urban area
Washington County	11487	Boones Ferry Improvements	Basalt Creek East-West Arterial	Day Rd	Widen from 3 lanes to 5 lanes with bike lanes, sidewalks and street lighting	\$1,200,000	2028-2040	Yes	Roads and Bridges	Relieve future congestion
Wilsonville	11489	Boones Ferry / I-5 off ramp improvements	SB I-5 off ramp	Boones Ferry Rd	construct second right-turn lane	\$1,063,000	2028-2040	Yes	Roads and Bridges	Relieve current congestion
Tualatin	11962	Grahams Ferry Rd	SW Ibach Rd	Helenius Rd	Upgrade SW Grahams Ferry Road to roadway standards between SW Ibach Road and Helenius Road.	\$5,048,800	2028-2040	Yes	Roads and Bridges	Build Complete Street

Financially Constrained 2018 Regional Transportation Plan Network
 2040 PM 1 Hour Total Vehicle Volume Forecast Results



Financially Constrained 2018 Regional Transportation Plan Network
 2040 PM 1 Hour Basalt Creek Vehicles (and Total Vehicles) Forecast Results

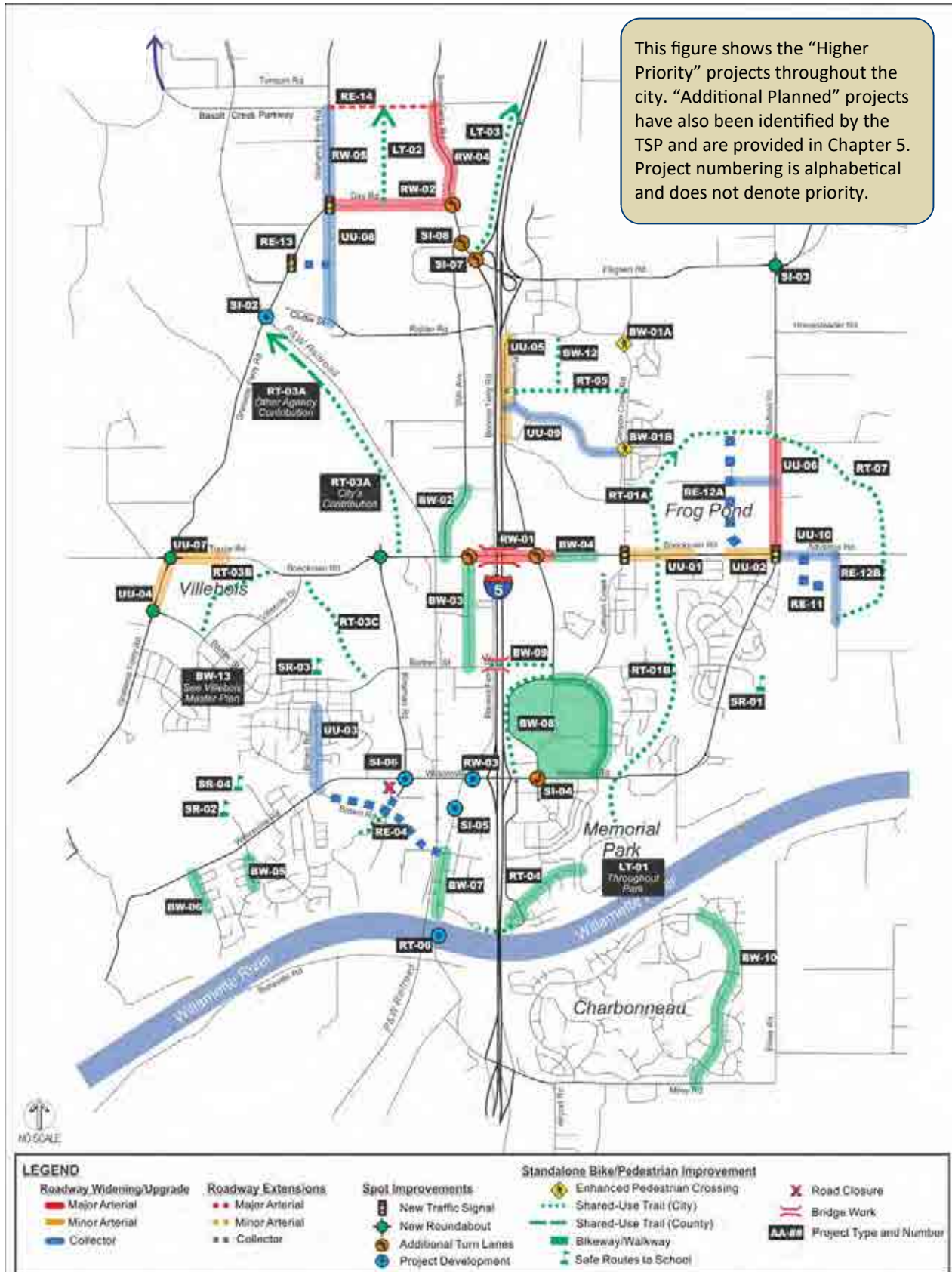


Summary

The 2018 Regional Transportation Plan contains a number of Financially Constrained projects identified in the Basalt Creek Planning Area. These projects were generally identified by the Basalt Creek Transportation Refinement Plan in 2012. It is anticipated that these projects will be implemented in conjunction with development in the area. The resulting planned system, including the build out scenario documented in the land use tables above, results in anticipated traffic operations consistent with regional and local level of service standards.

The level of service maps and analysis in this report are intended to provide a planning level system assessment consistent with the requirements for Transportation Planning in Oregon. A detailed operational analysis will be necessary prior to project development. The detailed operational analysis should consider needed turn lanes and assess vehicular movements at intersections to determine the appropriate design configuration. This analysis is intended to provide a generalized system assessment that would be an appropriate input into an operational evaluation necessary for project development.

HIGHER PRIORITY PROJECTS



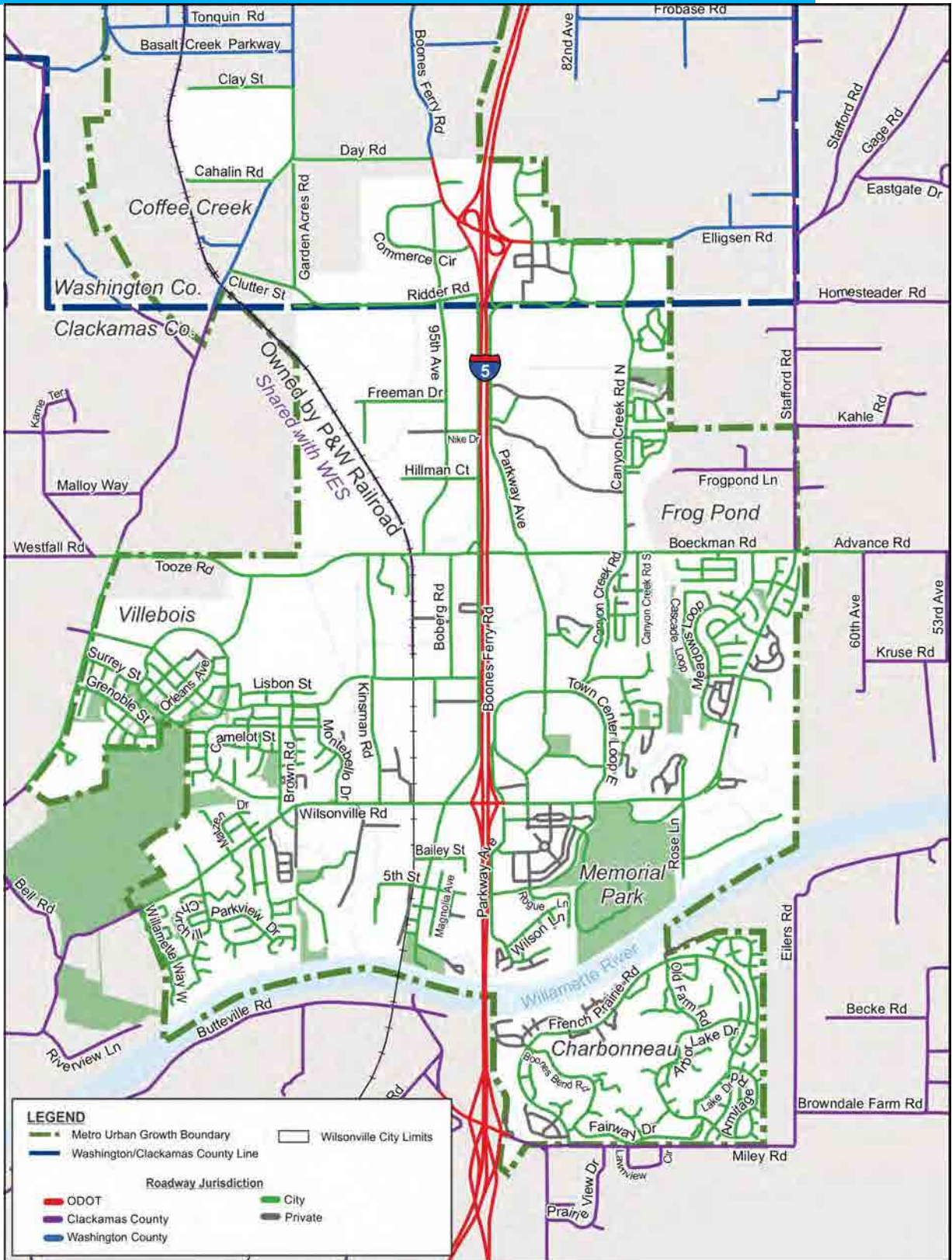
Ordinance No. 834 Exhibit B

HIGHER PRIORITY PROJECTS (LISTED ALPHABETICALLY BY IMPROVEMENT)

No.	Higher Priority Project	No.	Higher Priority Project
Roadway Extensions (Multimodal Connectivity)		Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements) . . . Continued	
RE-04A	Corridor Study for Brown Road Extension	BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements
RE-04B	Brown Road Extension (5th Street Connection)	BW-09	Town Center Loop Bike/Pedestrian Bridge
RE-13	Java Road Connection and Signal	BW-10	French Prairie Drive Pathway
RE-14	Basalt Creek Parkway Connection	BW-11	Frog Pond Trails
Roadway Widening (Capacity)		BW-12	Parkway Center Trail Connector
RW-01	Boeckman Road Bridge and Corridor Improvements	BW-13	Villebois Loop Trail
RW-02	Day Road Widening	BW-14	Wayfinding Signage
RW-04	Boones Ferry Road Widening	Safe Routes to School (Standalone Pedestrian and Bicycle Improvements)	
RW-05	Grahams Ferry Road Widening	SR-01	Boeckman Creek Primary Safe Routes to School Improvements
Urban Upgrades (Multimodal Connectivity and Safety)		SR-02	Boones Ferry Primary Safe Routes to School Improvements
UU-01	Boeckman Road Dip Improvements	SR-03	Lowrie Primary Safe Routes to School Improvements
UU-02	Boeckman Road Urban Upgrade	SR-04	Wood Middle School Safe Routes to School Improvements
UU-03	Brown Road Upgrades	Local Trails (Standalone Pedestrian and Bicycle Improvements)	
UU-04	Grahams Ferry Urban Upgrade	LT-01	Memorial Park Trail Improvements
UU-05	Parkway Avenue Urban Upgrade	LT-02	Basalt Creek Canyon Ridge Trail
UU-06	Stafford Road Urban Upgrade	LT-03	I-5 Easement Trail
UU-07	Tooze Road Urban Upgrade	Regional Trails (Standalone Pedestrian and Bicycle Improvements Safety)	
UU-08	Garden Acres Road Urban Upgrade	RT-01A	Boeckman Creek Trail (North)
Spot Improvements (Transportation System Management/Operations)		RT-01B	Boeckman Creek Trail (South)
SI-02	Grahams Ferry Railroad Undercrossing Project Development	RT-02	Frog Pond Trail
SI-03	Stafford Road/65th Avenue Intersection Improvements	RT-03A	Tonquin Trail (North)
SI-04	Wilsonville Rd/Town Center Loop West Intersection Improvements	RT-03B/C	Tonquin Trail (Villebois)
SI-07	Dual Southbound Right Turn Lanes on I-5 Off-Ramp at Boones Ferry Road	RT-04	Waterfront Trail Improvements
SI-08	Boones Ferry Road/95th Avenue Access Management	RT-05	Wiedeman Road Trail
Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements)		RT-06	Willamette River Bike/Pedestrian/Emergency Bridge Project Dev.
BW-01 A/B	Canyon Creek Road Enhanced Pedestrian Crossings	Transit Improvements	
BW-02	95th Avenue Sidewalk Infill	TI-01	Pedestrian Access to Transit
BW-03	Boberg Road Sidewalk Infill	TI-02	Transit Street Improvements
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill		
BW-05	Willamette Way East Sidewalk Infill		
BW-06	Willamette Way West Sidewalk Infill		
BW-07	Boones Ferry Road Sharrows		

Ordinance No. 834 Exhibit B

FIGURE 3-1. ROADWAY JURISDICTION



Ordinance No. 834 Exhibit B

FIGURE 3-2. FUNCTIONAL CLASS DESIGNATIONS

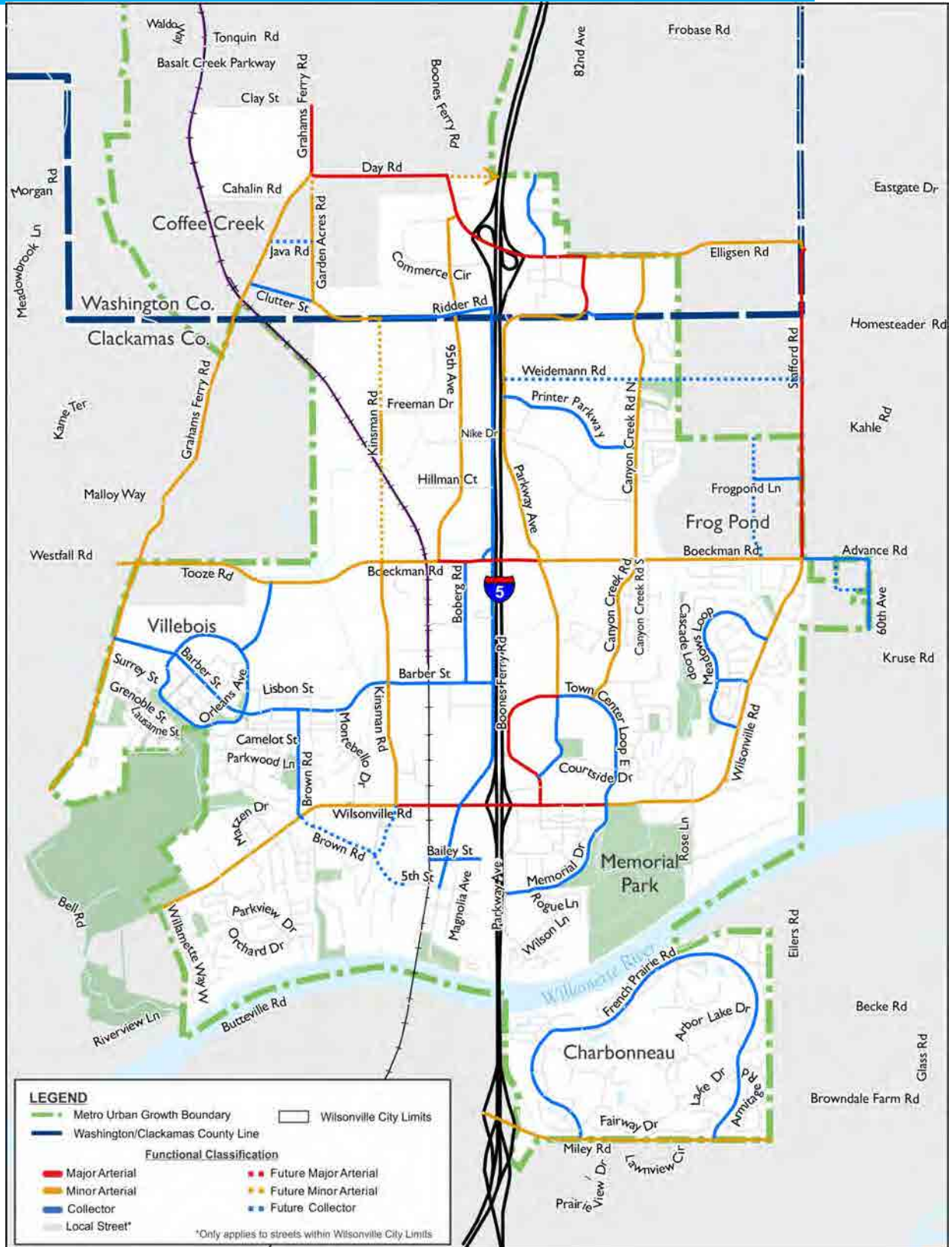


FIGURE 3-4. FREIGHT ROUTES

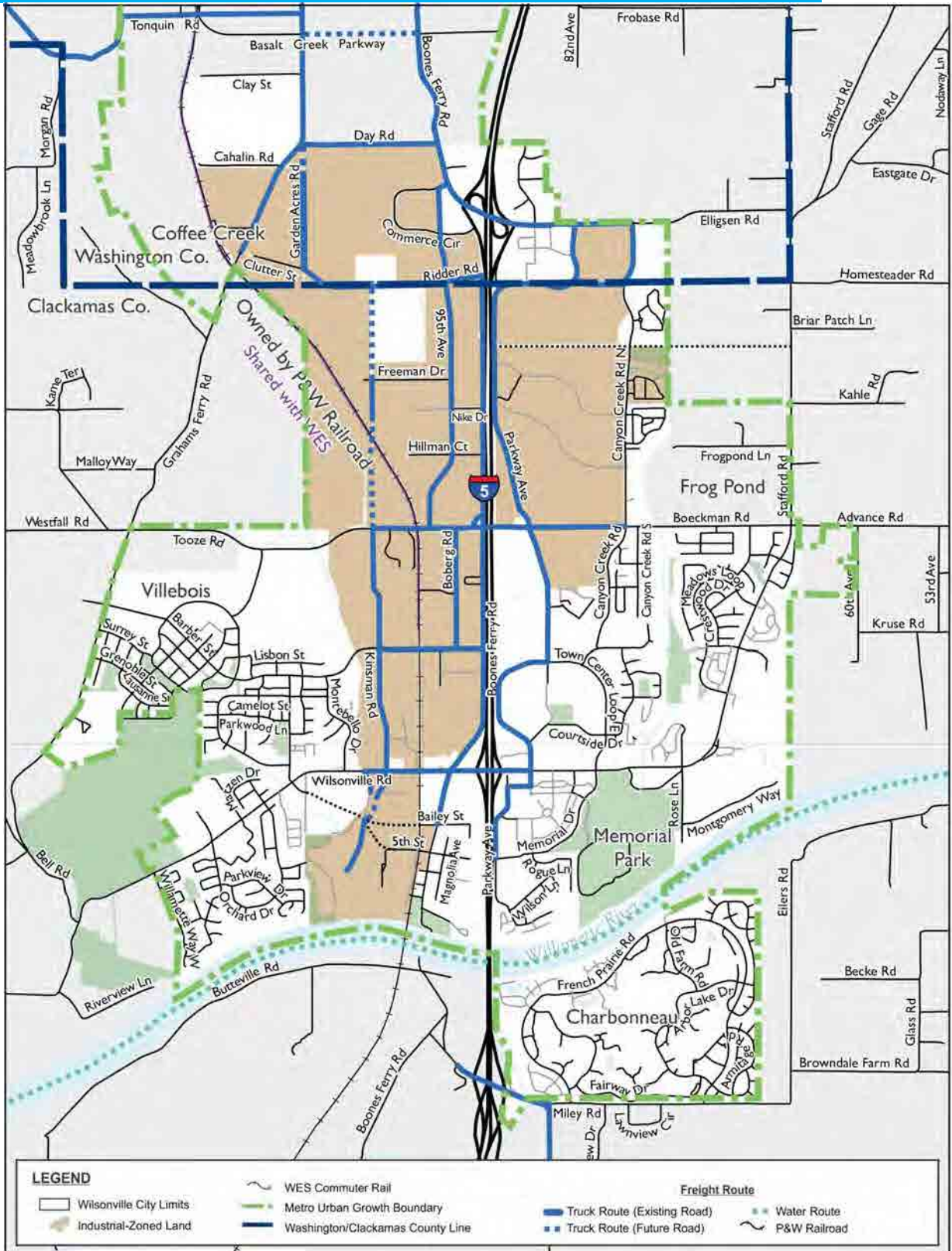
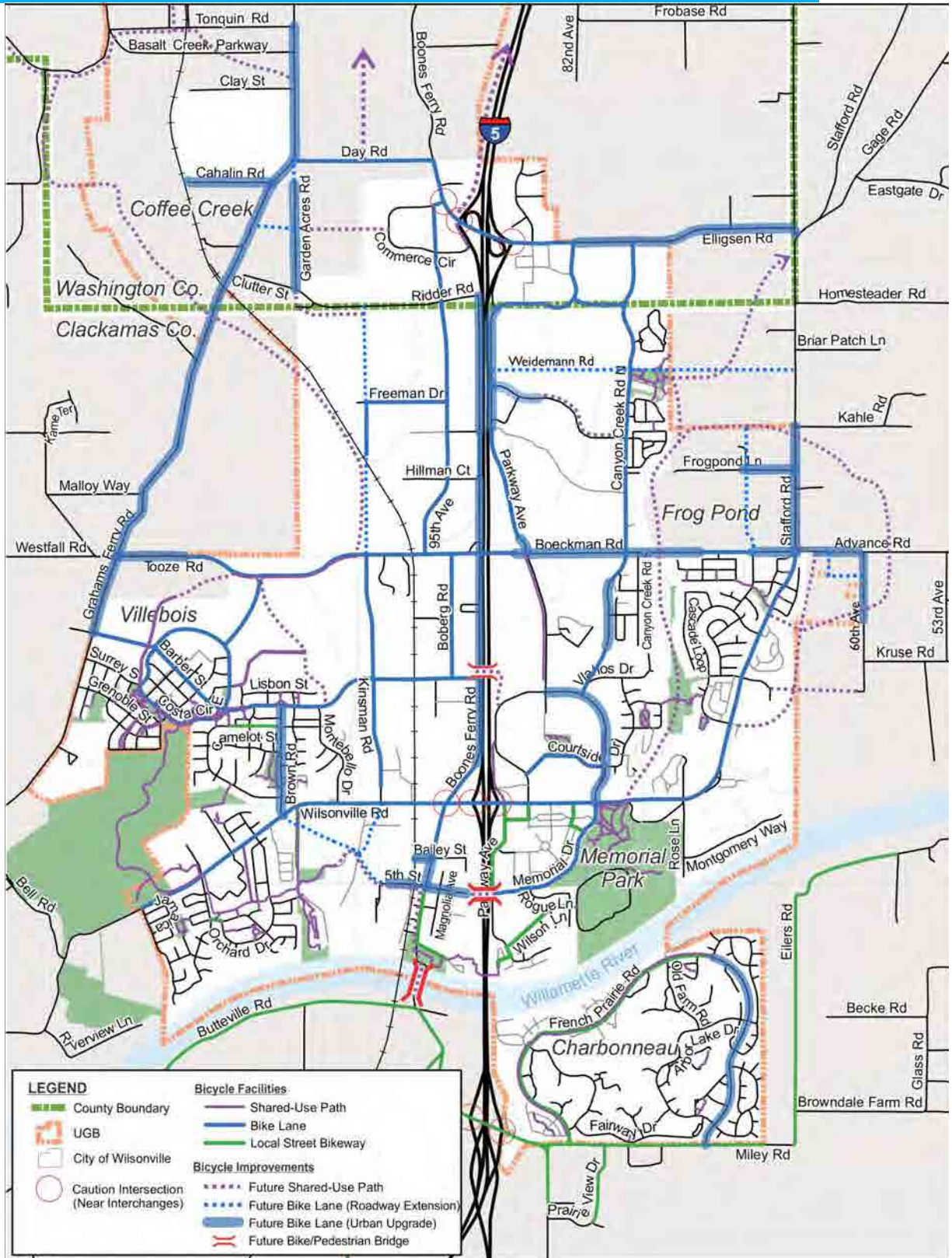


FIGURE 3-5. BICYCLE ROUTES



ACCESS MANAGEMENT

Access management refers to the broad set of techniques that are used to balance safe, efficient, and timely travel with the ability to allow access to individual properties. Access is an important component of the city's transportation infrastructure and significantly affects system operations and safety.

Wilsonville should continue to manage roadway access to improve traffic flow and safety. By limiting access to higher classification roadways (especially Major and Minor Arterials), conflicts between vehicles entering and exiting driveways and vehicles on the roadway are reduced. Pedestrians and bicyclists also benefit from reduced conflicts with vehicles entering and exiting the roadway.

Table 3-2. Access Spacing Standards

Functional Classification	Access Spacing Standards ^a	
	Desired ^b	Minimum
Near Interchanges	ODOT Requires 1,320 ft	
Major Arterial	1,320 ft	1,000 ft
Minor Arterial	1,000 ft	600 ft
Collector	300 ft	100 ft
Local Street	Access Permitted to Each Lot	

^a Spacing is measured from centerline to centerline on Major Arterials and Minor Arterials and between adjacent curb returns on Collectors and Local Streets

^b Desired Access Spacing shall be adhered to unless otherwise approved by the City Engineer. Reasons for deviating from Desired Access Spacing include aligning with existing driveways, topography, property limitations, and other safety related issues as identified in a transportation study.

Table 3-2 lists the City's access spacing standards. Because there are existing non-conforming accesses, these standards will primarily guide access layout of future development consistent with the strategies listed in the call-out box at right. ODOT also has access spacing standards that apply to the I-5 interchange areas and to the section of Boones Ferry Road that is under ODOT jurisdiction (i.e., between Parkway Avenue and Day Road). The I-5/Wilsonville Road

Interchange Area Management Plan (IAMP) should also be consulted when considering access needs near the Wilsonville Road interchange.

The Basalt Creek Parkway is considered an Access Management Interest Area because the parkway will be a high-capacity major freight arterial, limited to at-grade accesses at 124th Avenue, Grahams Ferry Road, and Boones Ferry Road as shown in Figure 3-13. The parkway creates a new connection between I-5 and 99W.



Looking east to the I-5/Wilsonville Road interchange.

ACCESS MANAGEMENT STRATEGIES

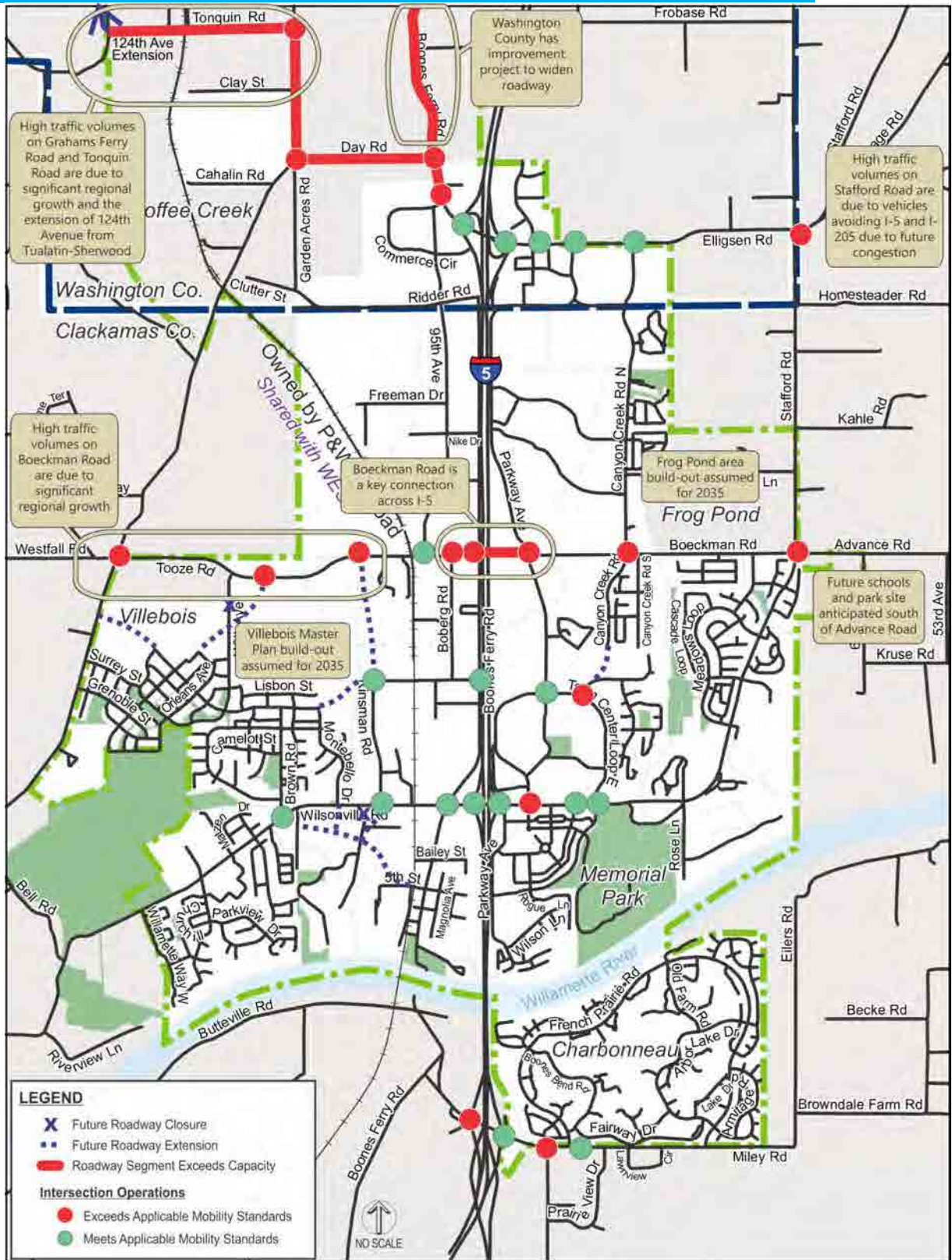
The City can use various access management strategies to help improve mobility and safety:

- **Interchange Areas:** Eliminate or consolidate accesses within one-quarter mile of the I-5 interchanges as opportunities arise.
- **Adjacent to High Volume Intersections:** Pursue appropriate treatments at accesses adjacent to high volume intersections, particularly when queues block access.
- **Existing Driveways:** Evaluate accesses that do not conform to the City's access spacing standard and consider modifications as practicable, while maintaining reasonable access to each property.
- **Ongoing Development Review:** Manage new driveway locations and spacing on a case-by-case basis. Where driveways do not meet spacing standards, consider mitigation treatments, such as consolidating accesses or

FIGURE 3-13. ACCESS MANAGEMENT INTEREST AREAS



FIGURE 4-2. FUTURE 2035 CAPACITY DEFICIENCIES



Ordinance No. 834 Exhibit B

FIGURE 5-2. HIGHER PRIORITY PROJECTS

This figure provides an overall perspective of the Higher Priority projects throughout the city. Additional details are provided on the pages that follow for each of the City's four quadrants (Northwest, Northeast, Southwest, Southeast), which use I-5 and Boeckman Road as dividing lines.

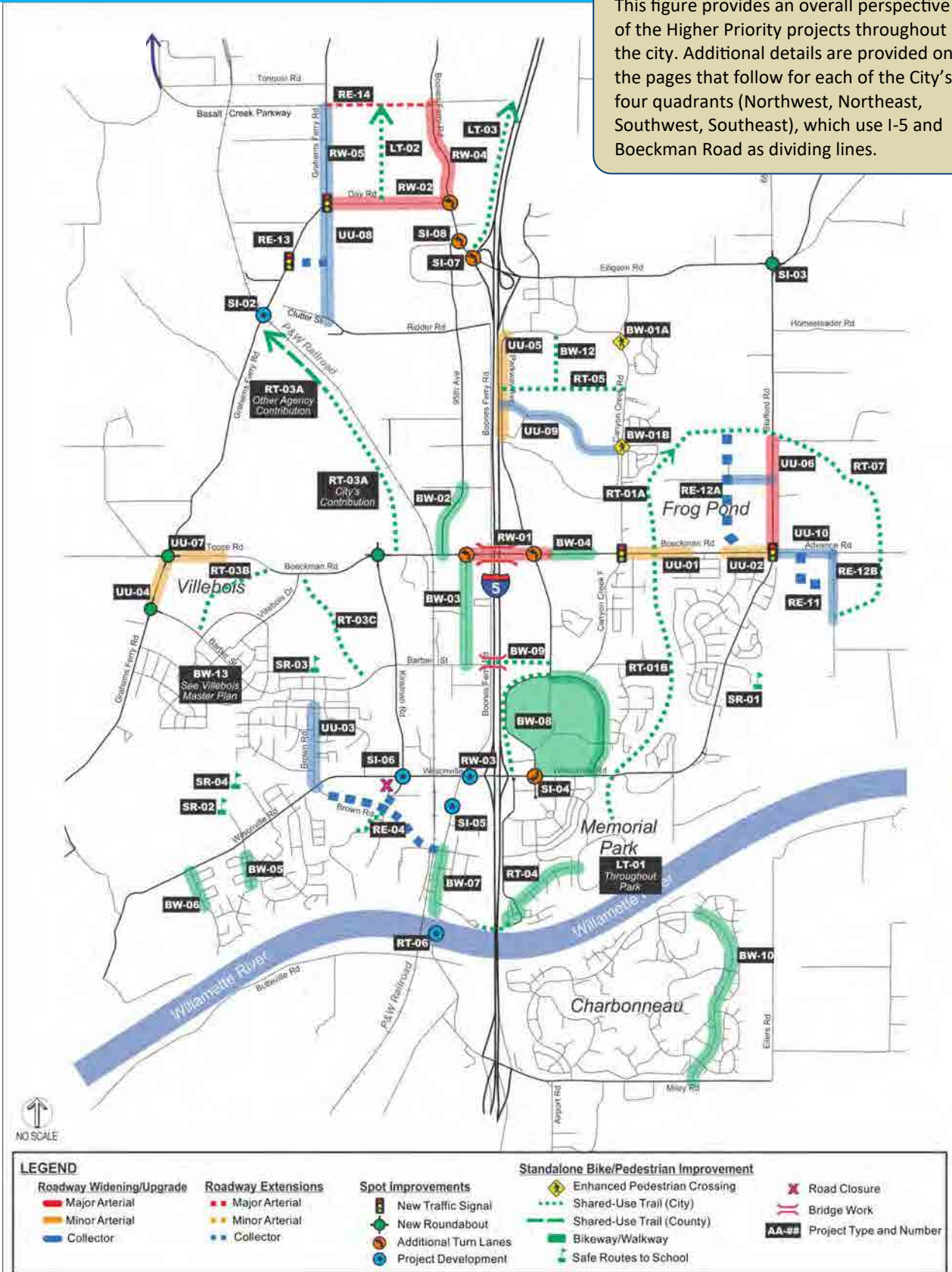


Table 5-2. Higher Priority Projects (Northwest Quadrant)

Project	Description	Cost	
Roadway Extensions			
RE-13	Java Road Connection and Signal	Construct Java Road from Boones Ferry Road to Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection and disconnect Clutter Street from Grahams Ferry Road.	\$1,500,000
RE-14	Basalt Creek Parkway Connection	Construct Basalt Creek Parkway as a limited access five-lane Major Arterial between Grahams Ferry Road and Boones Ferry Road. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11470.	\$31,700,000
Urban Upgrades			
UU-08	Garden Acres Road Urban Upgrade	Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.	\$14,260,000
Roadway Widening			
RW-02	Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road intersections	\$5,900,000
RW-04	Boones Ferry Road Widening	Widen Boones Ferry Road from Day Road to Basalt Creek Parkway to five lanes. RTP project #11487.	\$1,200,000
RW-05	Grahams Ferry Road Widening	Widen Grahams Ferry Road from Day Road to Basalt Creek Parkway to three lanes with bike lanes, sidewalks, and transit improvements. RTP project #10588.	\$13,200,000
Spot Improvements			
SI-02	Grahams Ferry Railroad Undercrossing Project Development	Perform preliminary analysis to determine needs, feasibility, etc.	\$500,000
SI-07	Dual Southbound Right Turn Lanes	Add a second southbound right turn lane to the I-5 Exit Ramp at the Boones Ferry Road intersection. RTP project #11489	\$1,063,000
SI-08	Boones Ferry Road/95th Avenue Access Management	Improve operations at the Boones Ferry Road/95th Avenue intersection by removing the east private access approach. Pioneer Court access onto Boones Ferry Road will be right-in /right-out. Additional access will occur via a north-south local street connection between Pioneer Court (RE-P15), passing under the Day Road I-5 overcrossing approach, and a new west-east local street (north of Day Road) with full intersection access at Boones Ferry Road.	\$2,500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-02	95th Avenue Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of 95th Avenue from Boeckman Road to Hillman Court, and construct transit stop improvements	\$85,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-03A	Ice Age Tonquin Trail (North)	Construct sections of the Ice Age Tonquin Trail north of Boeckman Road; City to construct portion within City limits (approximately \$750,000) and coordinate portion farther north with Washington County and neighboring cities	\$2,040,000 (Partial Regional funding)
Standalone Pedestrian and Bicycle Improvements (Local Trails)			
LT-02	Basalt Creek Canyon Ridge Trail	Build a north/south trail connection within Basalt Creek (west of the Canyon) to improve the pedestrian and bicycle network and make connections to east/west roads that run north and south. This trail would require a grade-separated crossing of Basalt Creek Parkway and would be connected to the regional trail network by extending Tonquin Road with bike/pedestrian facilities across Graham's Ferry to this future Basalt Creek Canyon Ridge Trail.	\$450,000
LT-03	I-5 Easement Trail	Build a trail parallel to I-5 in the ODOT easement that would provide an additional north/south connection connecting to existing bike and pedestrian facilities.	\$750,000

FIGURE 5-3. HIGHER PRIORITY PROJECTS (NORTHWEST QUADRANT)

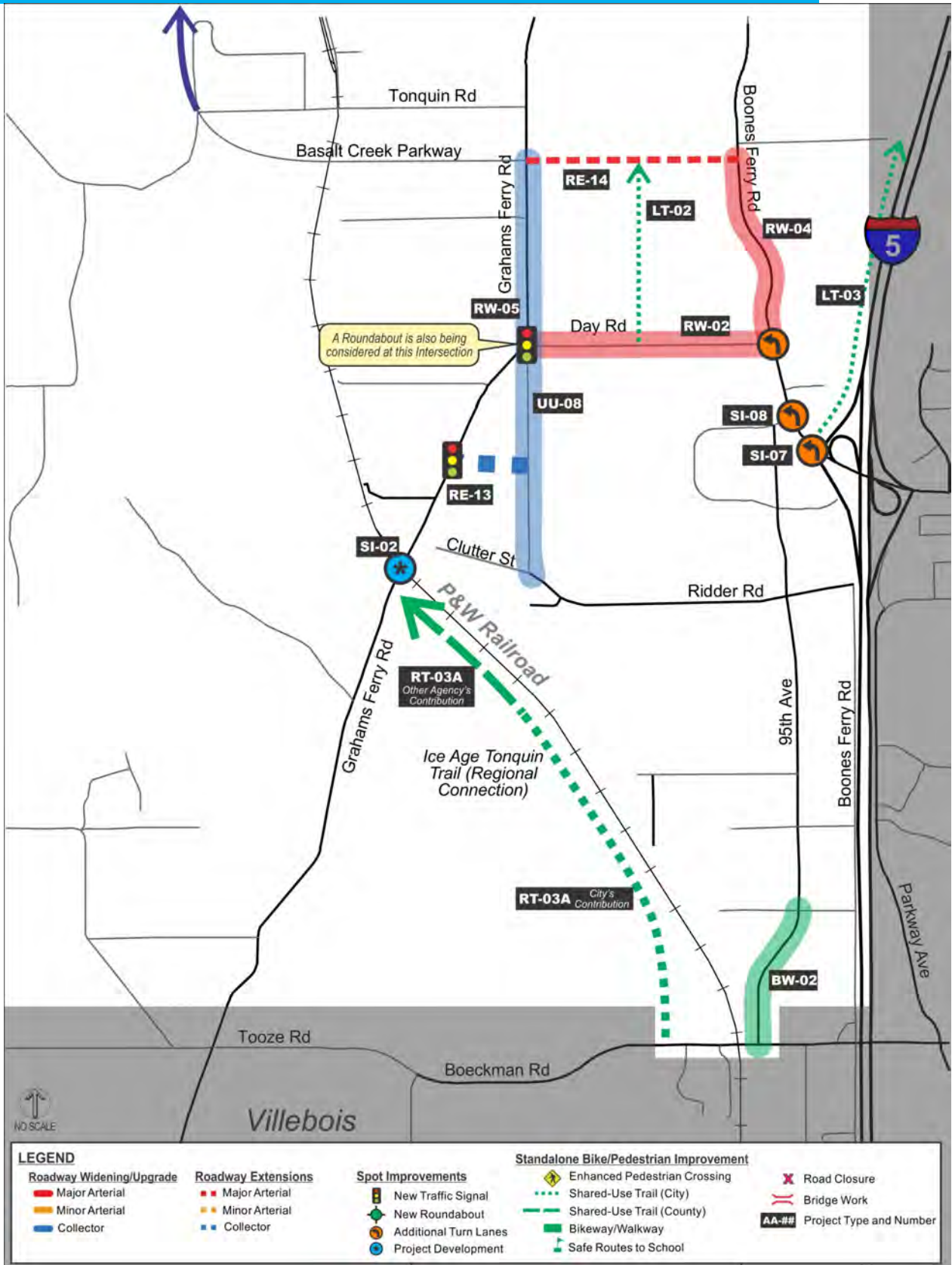
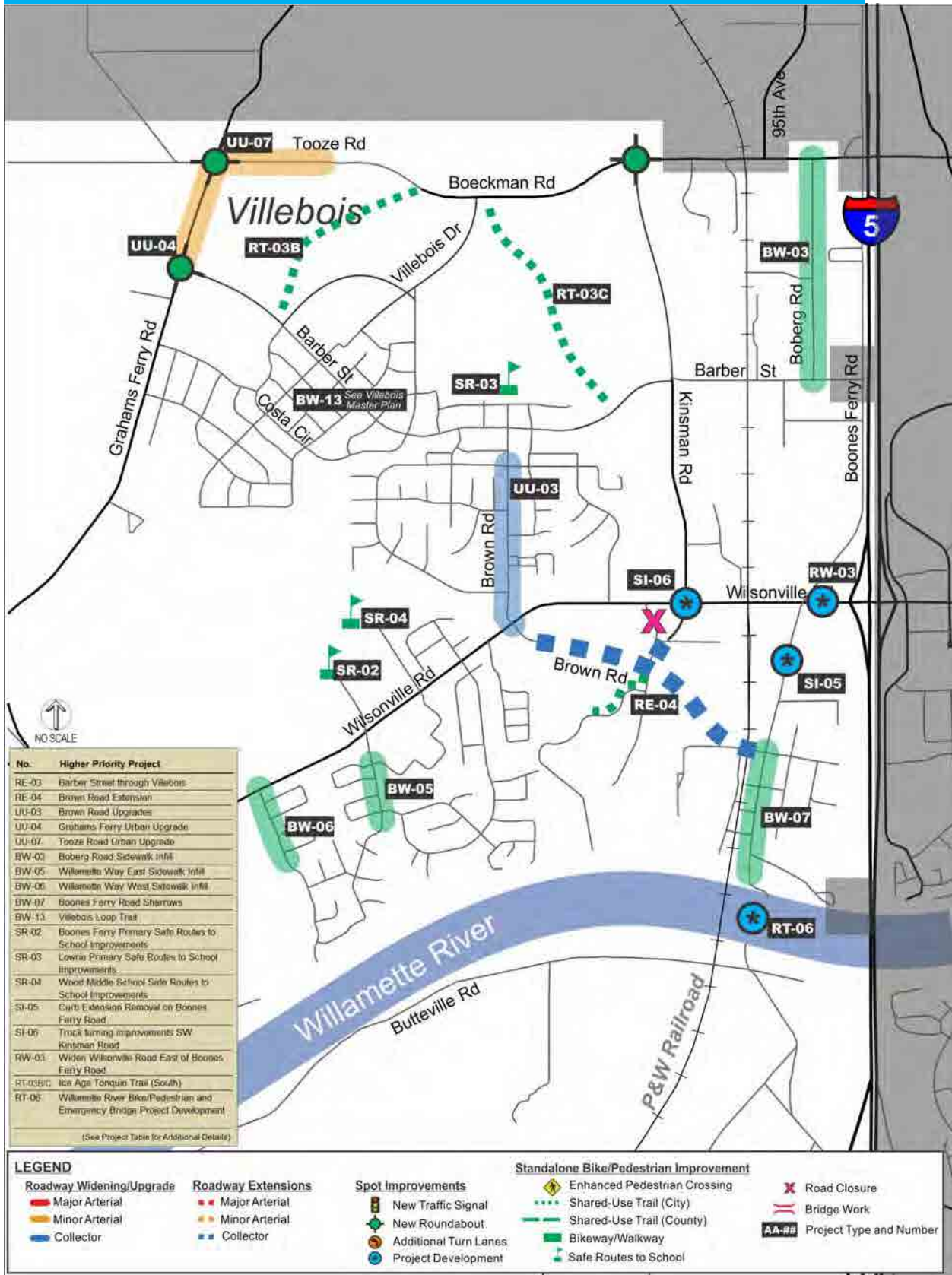


Table 5-4. Higher Priority Projects (Southwest Quadrant)

Project	Description	Cost	
Roadway Extensions			
RE-04A	Corridor Study for Brown Road Extension	Perform a corridor study to determine the recommended Brown Road extension alignment	\$20,000
RE-04B	Brown Road Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connect at 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trail terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection.	\$15,200,000
Urban Upgrades			
UU-03	Brown Road Upgrades	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stops)	\$3,500,000
UU-04	Grahams Ferry Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Barber Street intersection	\$2,400,000
UU-07	Tooze Road Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Tooze Road intersection	\$7,900,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-03	Boberg Road Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of the roadway from Boeckman Road to Barber Street, and construct transit stop improvements	\$375,000
BW-05	Willamette Way East Sidewalk Infill	Fill in gaps in the sidewalk network on the west side of the roadway from Chantilly to south of Churchill (part of Ice Age Tonquin Trail)	\$50,000
BW-06	Willamette Way West Sidewalk Infill	Construct a new sidewalk on west side of the roadway from Wilsonville Road to Paulina Drive	\$50,000
BW-07	Boones Ferry Road Sharrows	Stripe sharrows (shared travel lanes) from 5th Street to Boones Ferry Park; this will connect Ice Age Tonquin Trail (once the portion along the Brown Road Extension is completed) to Waterfront Trail	\$5,000
BW-13	Villebois Loop Trail	Construct shared-use path as part of Villebois development; include connections to Villebois Greenway, the Ice Age Tonquin Trail, and the Village Center	\$180,000
Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)			
SR-02	Boones Ferry Primary Safe Routes to School Improvements	Construct shared-use path between Boones Ferry Primary and Wood Middle School, a bicycle parking shelter near the school, and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road	\$200,000
SR-03	Lowrie Primary Safe Routes to School Improvements	Construct shared-use path from existing connection of Lowrie Primary School to Barber Street as part of Villebois development; include connections to new school, Ice Age Tonquin Trail, and Barber Street to future connections	\$150,000
SR-04	Wood Middle School Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road; also widen and stripe the Park at Merryfield Trail, which connects Wood Middle School to Camelot Street to the north	\$150,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-03B/C	Ice Age Tonquin Trail (Villebois)	Construct the remaining sections of the Ice Age Tonquin Trail within Villebois Village in conjunction with development and adjacent roadway improvements	\$560,000
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development	Perform feasibility study and project development for bike/pedestrian/emergency bridge over the Willamette River to provide a non-motorized alternative to the I-5 freeway deck	\$1,380,000 (Partial Regional funding)

FIGURE 5-5. HIGHER PRIORITY PROJECTS (SOUTHWEST QUADRANT)



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FIGURE 5-7. ADDITIONAL PLANNED PROJECTS

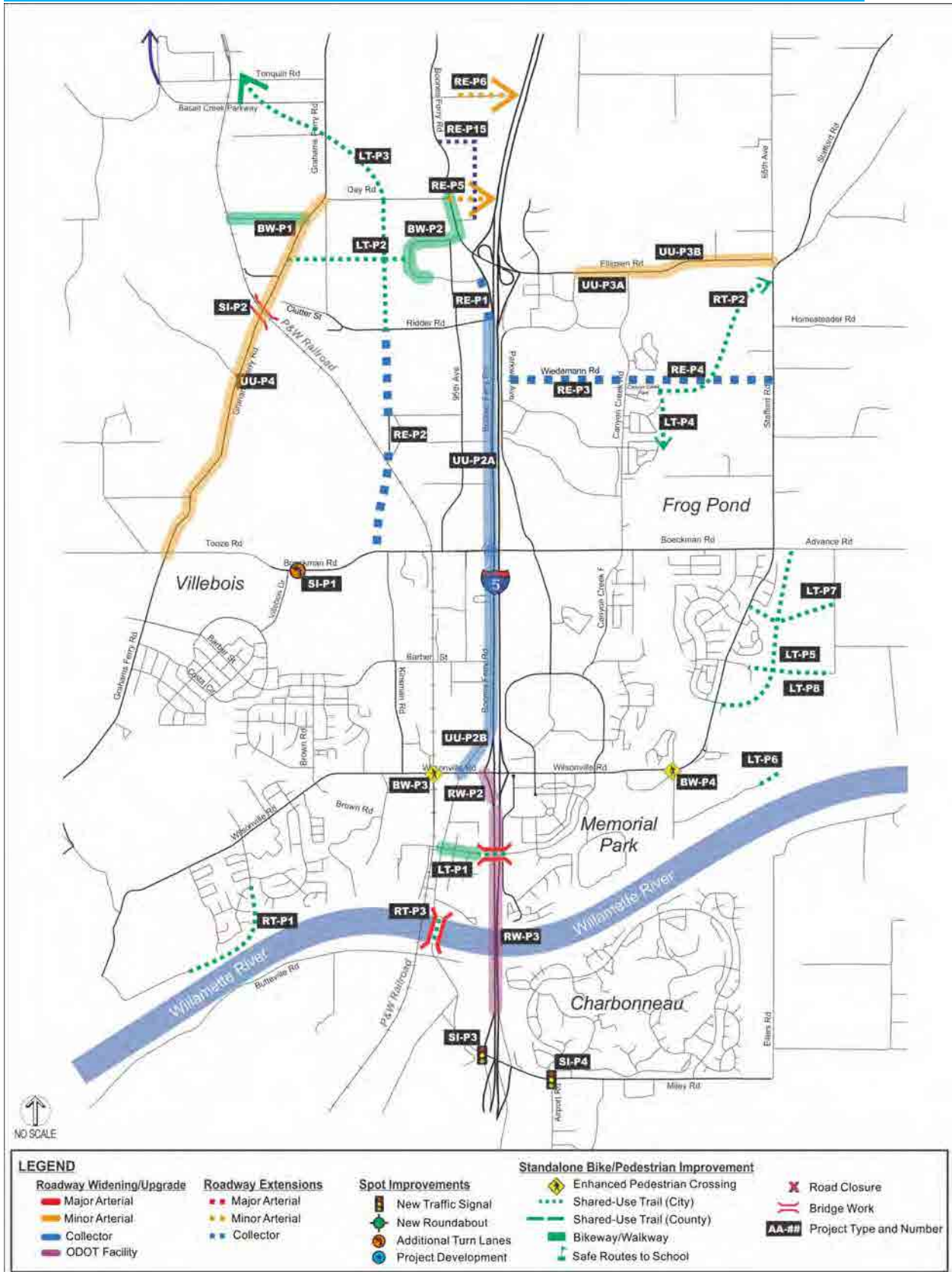


Table 5-9. Additional Planned Projects (Northwest Quadrant)

Project	Description	Why Not Higher Priority?	Cost	
Roadway Extensions				
RE-P1	Boones Ferry Road Extension	Construct 2-lane roadway from Ridder Road to Commerce Circle with bike lanes, sidewalks, and transit improvements to facilitate access and circulation in the area surrounding Ridder Road and 95th Avenue	Identified as potentially helpful freight connection, but not a critical need at this time	\$2,100,000
RE-P2	Kinsman Road Extension (Central)	Construct 2/3-lane roadway from Boeckman Road to Ridder Road with bike lanes and sidewalks	High cost due to grade-separated RR crossing and construction across Metro lands; alternative route (95th Avenue) is available	\$12,000,000
RE-P6	Basalt Creek Overcrossing	Extend Basalt Creek across I-5 as a four-lane overcrossing. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11436.	This project timeline is outside of the planning horizon of the City's current TSP	\$46,000,000
RE-P15	Pioneer Court Extension	Extend Pioneer Court to the north, approximately 1,000 feet north of Day Road, connect to Boones Ferry Road to the west.	Identified to help improve operations at the Pioneer Court /Boones Ferry Road intersection after Boones Ferry Rd/95th Ave Intersection Improvements are made (SI-08)	\$4,000,000
Urban Upgrades				
UU-P2A	Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited connectivity benefit alternative parallel routes exist	\$5,900,000
UU-P4	Grahams Ferry Road Urban Upgrade	Upgrade Grahams Ferry Road from Day Road to Tooze Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit improvements)	Grahams Ferry Road will be a key urban connection to serve Coffee Creek Industrial Area. It is assumed that the roadway segment between Day Road and Clutter Road will be constructed as the Coffee Creek industrial lands develop	\$2,000,000
Spot Improvements				
SI-P2	Grahams Ferry Road Undercrossing Improvements at Railroad Bridge	Reconstruct existing railroad under-crossing to City of Wilsonville Minor Arterial standards; Higher Priority project list includes project development portion of this project (costs are separate)	Located within Washington County jurisdiction, and it is an important safety-related project with particular benefits for freight travel; however, it comes with high cost and freight traffic has alternate travel routes	\$4,500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)				
BW-P1	Cahalin Road Bike Lanes and Sidewalks	Construct bike lanes and sidewalks from Kinsman Road extension to Ice Age Tonquin Trail	High cost due to railroad crossing barrier	\$700,000
BW-P2	Commerce Circle Loop Sidewalk Infill	Fill in gaps in the sidewalk network on Commerce Circle Loop	Industrial area with no connectivity to other facilities	\$100,000
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P2	Area 42 Trail	Shared Use Path from Kinsman Road to Day Road	To be constructed as Coffee Lake Creek Master Plan Area Redevelops	\$220,000
LT-P3	BPA Power Line Trail	Shared Use Path from Day Road to Ice Age Tonquin Trail providing trail users to City's northern industrial area	Ice Age Tonquin Trail provides key connection to north (more critical when Coffee Lake Creek develops)	\$500,000

FIGURE 5-8. ADDITIONAL PLANNED PROJECTS (NORTHWEST QUADRANT)

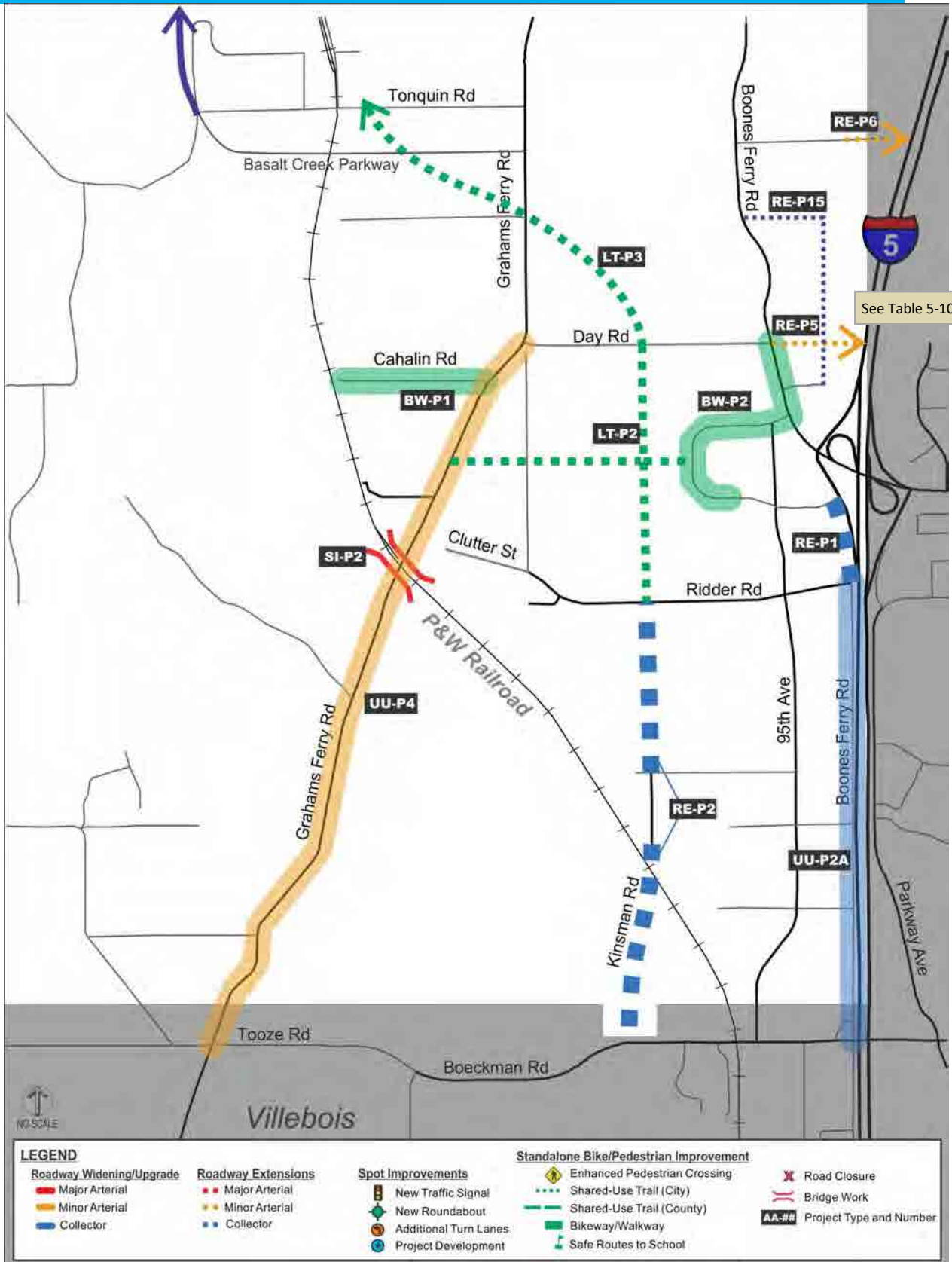
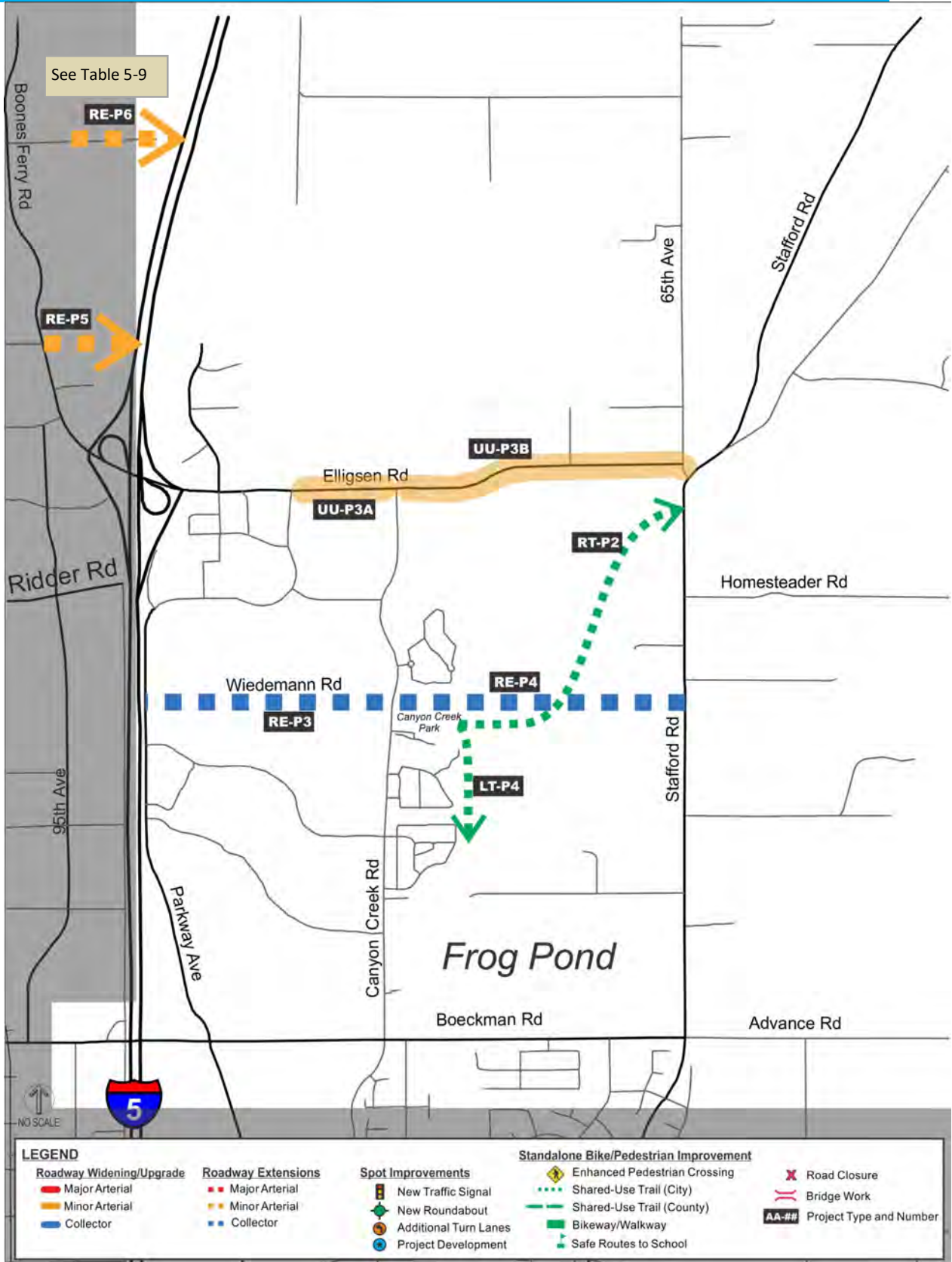


Table 5-10. Additional Planned Projects (Northeast Quadrant)

Project	Description	Why Not Higher Priority?	Cost	
Roadway Extensions				
RE-P3	Wiedeman Road Extension (West)	Construct 2/3-lane roadway from Parkway Avenue to Canyon Creek Road with bike lanes and sidewalks	Limited impact on system capacity; money better spent upgrading Boeckman Road and Elligsen Road	\$4,300,000
RE-P4	Wiedeman Road Extension (East)	Construct 2/3-lane roadway from Canyon Creek Road to Stafford Road with bike lanes and sidewalks; would require construction over Boeckman Creek	Only needed with future development on land east of Canyon Creek Road; costly (especially over wetlands) and has limited impact on system capacity; and money better spent upgrading Boeckman Road and Elligsen Road	\$8,800,000
RE-P5	Day Road Overcrossing	Extend Day Road from Boones Ferry Road to Elligsen Road as a four-lane overcrossing of I-5. This project would be a joint Washington County, City of Wilsonville and City of Tualatin project and will work together to seek funding. RTP project #11490.	This project timeline is outside of the planning horizon of the City's current TSP.	\$40,800,000 — \$53,400,000
Urban Upgrades				
UU-P3 A/B	Elligsen Road Urban Upgrade	Upgrade Elligsen Road from Parkway Center to Stafford Road to meet applicable cross-section standards including bike lanes, sidewalks, and transit improvements	Much of the land is in Clackamas County; significant slopes from Parkway Center Drive to Canyon Creek Road would likely require retaining walls (higher costs) and large oak trees would be impacted	\$6,000,000 (Partial Federal funding)
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P4	Canyon Creek Trail	Shared Use Path from Canyon Creek Park to Boeckman Creek Trail providing connectivity to neighborhoods to the south	Low priority as it needed after the Boeckman Creek Trail is constructed	\$200,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)				
RT-P2	Stafford Spur Trail	Shared-Use Path from Canyon Creek Park to Stafford Road	High cost project that provides limited connectivity to land uses in Clackamas County	\$1,640,000

FIGURE 5-9. ADDITIONAL PLANNED PROJECTS (NORTHEAST QUADRANT)



Ordinance No. 834
EXHIBIT C
CITY COUNCIL PUBLIC HEARING 4.1.2018

Basalt Creek Comprehensive Plan and Transportation System Plan Amendments

Exhibit C - Planning Commission Resolution and Record

<https://www.ci.wilsonville.or.us/planning/page/basalt-creek>

Ordinance No. 834 Staff Report

ATTACHMENT 2

Basalt Creek Concept Plan and Supporting Documentation

https://www.ci.wilsonville.or.us/sites/default/files/fileattachments/city_council/meeting/27721/06.att_2_concept_plan_and_supporting_documentation.pdf

Basalt Creek Transportation Refinement Plan Recommendations

Introduction

The Basalt Creek transportation planning effort analyzed future transportation conditions and evaluated alternative strategies for phased investments that support regional and local needs.¹ This document reflects the Policy Advisory Group’s unanimous approval of the transportation investments, next steps for policy and plan updates, and potential funding strategies described in this document.

Purpose

The purpose of this refinement plan was to determine the major transportation system connecting Tualatin-Sherwood Road to I-5 in North Wilsonville through the Basalt Creek Planning Area, which is currently an unincorporated urban area of Washington County between the cities of Tualatin to the north, and Wilsonville to the south (see Figure 1). This plan refines recommendations from the I-5/99W Connector Study and the Regional Transportation Plan, setting the stage for land use concept planning and comprehensive plan development for the Basalt Creek area.

Planning Context

The need to plan for the future transportation system in the Basalt Creek area is driven not only by future growth in the Basalt Creek Planning area itself, but by future growth in surrounding areas targeted for industrial development. Basalt Creek currently lacks the multi-modal transportation facilities needed to support economic and urban-level development. Several planning

The Basalt Creek Transportation Refinement Plan was a joint effort involving:

- Washington County
- City of Tualatin
- City of Wilsonville
- Metro
- The Oregon Department of Transportation
- Area Citizens

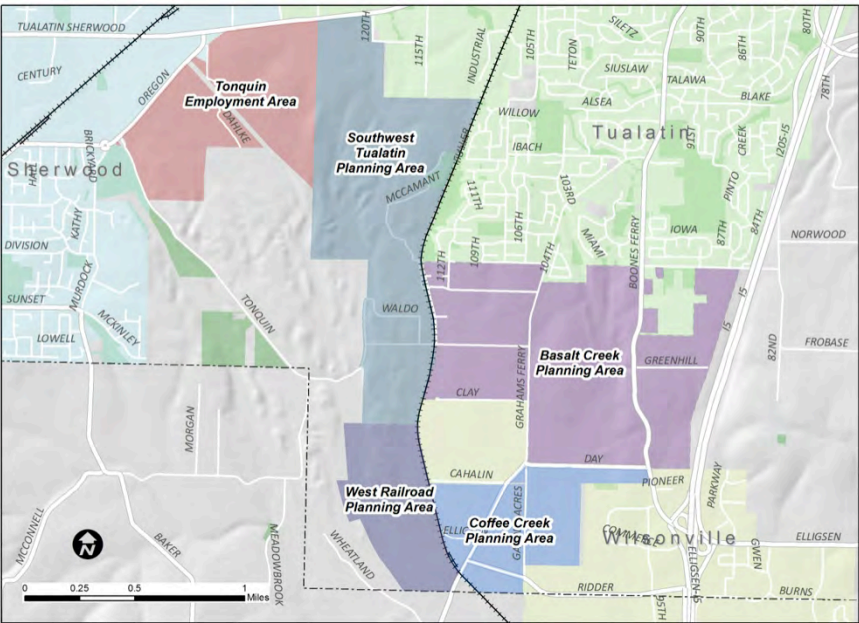


Figure 1: Basalt Creek Planning Area Location

¹ See *Basalt Creek Transportation Refinement Plan Technical Report* for more information.

efforts, summarized below, provide background and context for the Basalt Creek Transportation Refinement Plan.

- The **I-5/99W Connector Study** recommended an alternative that spreads east-west traffic across three smaller arterials rather than a single expressway. Although specific alignments for these arterials were not defined, the eastern end of the Southern Arterial was generally located within the Basalt Creek Planning Area, south of Tonquin Road. The present planning effort aims to further define the location of the connection between the SW 124th Avenue Extension and the I-5/Elligsen interchange in a manner that does not preclude the future Southern Arterial west of SW 124th.
- The **2035 Regional Transportation Plan (RTP)** calls for detailed project planning and near-term construction of an extension of SW 124th Avenue from Tualatin-Sherwood Road to the I-5/Elligsen Road interchange, supporting industrial access from the Tonquin, Southwest Tualatin, and Basalt Creek Planning Areas. The RTP also calls for the near-term construction of the Tonquin Trail (see below).
- The **Tonquin Employment Area, Southwest Tualatin Concept Planning Area, and Coffee Creek Planning Area** together comprise about 1,000 acres surrounding the Basalt Creek area that are planned primarily for industrial use. These areas are expected to generate growing freight and work-related travel demands on the multi-modal transportation network that runs through the Basalt Creek area.
- The **SW 124th Avenue Extension** Project, currently underway, is planning and designing the corridor described in the RTP from Tualatin-Sherwood Road to Tonquin Road. The present planning effort aims to extend the corridor to I-5 as envisioned in the RTP and ensure consistency with current SW 124th Avenue project.
- Washington County's **Boones Ferry Road** improvement project, also currently underway, provides pedestrian and bicycle improvements and an intermittent center turn lane between Norwood Road and Day Road. It is an assumed improvement for the Basalt Creek area.
- Near-term construction of the **Tonquin Trail** is called for in the RTP. The master plan identifies an alignment for new bicycle and pedestrian connections between Sherwood, Tualatin, and Wilsonville, with connections to the larger regional trail system. The Tonquin Trail will travel through the Southwest Tualatin Concept Plan Area and the Tonquin Employment Concept Plan Area, and is an assumed improvement within the Basalt Creek Transportation Refinement Plan.
- **Transportation System Plan** updates for Washington County, Tualatin, and Wilsonville are currently underway. Washington County will incorporate recommendations from this refinement plan into the County TSP update. The cities of Tualatin and Wilsonville will not incorporate these recommendations into their current TSP updates, but will carry the recommendations into land use concept planning and future TSP updates.

Facility Considerations and Characteristics

At the outset of this effort, agencies articulated a set of considerations to guide selection of the preferred transportation system as well as preferred characteristics of the primary east-west facility through the area.

- **Guiding considerations** included: ability to fund and phase improvements, level of impacts (environmental, right-of-way, etc.), support for development, consistency with regional policy, and traffic operations performance.
- **Facility characteristics** included: for the primary arterial connection, a 45 mph prevailing speed and access spacing of one-half mile to one mile to improve capacity.

Recommendation

The Policy Advisory Group (PAG), which consists of elected officials and key staff from the project's five partner agencies, recommends the following elements as part of an overall Action Plan (illustrated in Figure 2) for the area.

Roadways

The final recommendation is for a combination of new and improved roadways through the Basalt Creek area. The key new roadway through the area is a five-lane east-west extension of SW 124th Avenue, aligned south of Tonquin Road and extending east to Boones Ferry Road. The recommendation also includes improvements to existing roadways in the area, such as Tonquin Road, Grahams Ferry Road, Boones Ferry Road, and Day Road.

Protection of right-of-way for the new east-west roadway from the 124th Avenue extension to Boones Ferry Road is a key element of this recommendation. Right-of-way protection and purchase will be addressed separately, concurrent with the Basalt Creek land use concept planning.

During the planning process, the City of Wilsonville expressed concern about the structural condition of Day Road (i.e., failing roadway base and resulting pavement deterioration) and its ability to carry freight traffic for further development of industrial lands. While the Basalt Creek Transportation Refinement Plan focused on roadway needs related to capacity, the PAG agreed that the function of the arterial network in the Basalt Creek area includes providing roadways with adequate structural design for regional freight needs. Therefore, the PAG agreed that the project recommendations include a commitment to address the construction, operations, and maintenance of the arterial network through the concept planning process.

Overcrossings

The ability to construct two new I-5 overcrossings, including an off-street multi-use path, should be preserved in order to provide for future circulation and connectivity across the Basalt Creek area and into areas east of I-5. These overcrossings are recommended as long-term improvements and are likely not needed until 2035 or later. Forecasts show that the second overcrossing is not needed unless surrounding urban reserve areas east of I-5 and south of I-205 are developed. This refinement plan is neutral on the timing of urban reserves development, and therefore does not specify the timing and order of overcrossing improvements.

Active Transportation

All improved roadways in the Action Plan include bike lanes and sidewalks consistent with Washington County urban standards. This recommendation also includes integration of the regional Tonquin Trail into the transportation network. Metro, in close coordination with the cities of Tualatin, Wilsonville, Sherwood, and Washington and Clackamas counties, led the master planning effort that identified a preferred alignment that travels through the Basalt Creek Planning Area. Roadway cross-sections and right-of-way purchases for the future east-west facility will consider needs for the Tonquin Trail in the design for the railroad overcrossing and improvements to Tonquin Road between Morgan Road and Tonquin Loop Road. Design for the east-west facility should also consider providing an off-street multi-use path that connects to the Tonquin Trail and extends east of I-5. Details of how this multi-use path will be integrated with the east-west facility design will be refined during later land use concept planning.

Action Plan

The recommended Action Plan consists of 18 transportation investments, shown in Figure 2. Timing of projects was prioritized through an analysis of likely transportation needs in 2020, 2030, and 2035 based on growth assumptions from the adopted Regional Transportation Plan. Because of uncertainty regarding the years during which development in the Basalt Creek Planning Area and surrounding areas will occur, phasing for investments is classified as short-term, medium-term, and long-term. Descriptions of these investments, as well as timing and the funding needed, are shown in Table 1. Cost estimates include right-of-way.

Table 1: Basalt Creek Action Plan

ID	Project	Short-Term	Medium-Term	Long-Term	Cost (\$2012)
1	124 th Avenue Extension (Tualatin-Sherwood Road to Tonquin Road): Construct three lane road extension with bike lanes and sidewalks	x			\$20,000,000
2	Tonquin Road (124 th Avenue to Grahams Ferry Road): Widen to three lanes with bike lanes and sidewalks, grade separate at railroad, improve geometry at Grahams Ferry Road ¹	x			\$10,500,000
3	Grahams Ferry Road (Tonquin Road to Day Road): Widen to three lanes with bike lanes and sidewalks	x			\$5,400,000
4	Boones Ferry Road (Norwood Road to Day Road): Widen to three lanes with bicycle and pedestrian improvements	x			\$10,800,000
5	124 th Avenue/Tonquin Road Intersection: Signal (may include Tonquin Trail crossing)	x			. ²
6	Grahams Ferry Road/Tonquin Road Intersection: Signal	x			\$500,000
7	Boones Ferry Road/Day Road Intersection: Add second southbound through approach lane	x			. ³
8	Boones Ferry Road/95 th Avenue Intersection: Construct dual left-turn and right-turn lanes; improve signal synchronization, access management and sight distance	x			\$2,500,000
9a	Tonquin Trail (Clackamas County Line to Tonquin Loop Road): Construct multi-use trail with some segments close to but separated from road	x			\$8,900,000 ⁴
9b	Tonquin Trail (Tonquin Loop Road to Tualatin-Sherwood Road): Construct multi-use trail with some segments close to but separated from road		x		\$7,100,000 ⁴
10	124 th Avenue Extension (Tualatin-Sherwood Road to Tonquin Road): Widen from three to five lanes with bike lanes and sidewalks		x		\$14,000,000
11	East-West Arterial (124 th Avenue to Boones Ferry Road): Construct 5 lane roadway with railroad and creek crossings, integrate segment of Tonquin Trail ⁵		x		\$57,900,000
12	Boones Ferry Road (East-West Arterial to Day Road): Widen to five lanes with bike lanes and sidewalks		x		\$1,100,000
13	Kinsman Road Extension (Ridder Road to Day Street): Construct three lane road extension with bike lanes and sidewalks		x		\$10,400,000
14	Day Road (Kinsman Road to Boones Ferry Road): Widen to five lanes with bike lanes and sidewalks		x		\$5,800,000
15	I-5 Southbound off-ramp at Boones Ferry Road/Elligsen Road: construct second right turn lane		x		\$500,000
16	Boones Ferry Road/95 th Avenue Intersection: Access management		x		. ⁶
17	Day Road Overcrossing: Extend new four lane crossing over I-5 from Boones Ferry Road to Elligsen Road			x	\$33,700,000- \$44,100,000 ⁷
18	East-West Arterial Overcrossing: Extend new four lane crossing over I-5 from Boones Ferry Road to Stafford Road. Integrate multi-use path in corridor that connects to Tonquin Trail			x	\$38,000,000
TOTAL		\$59M	\$97M	\$72-82M	\$228-238M

¹ Grade separation for Tonquin Road is optional. An at-grade crossing would reduce cost by around \$2,000,000

² Cost included in Project 1

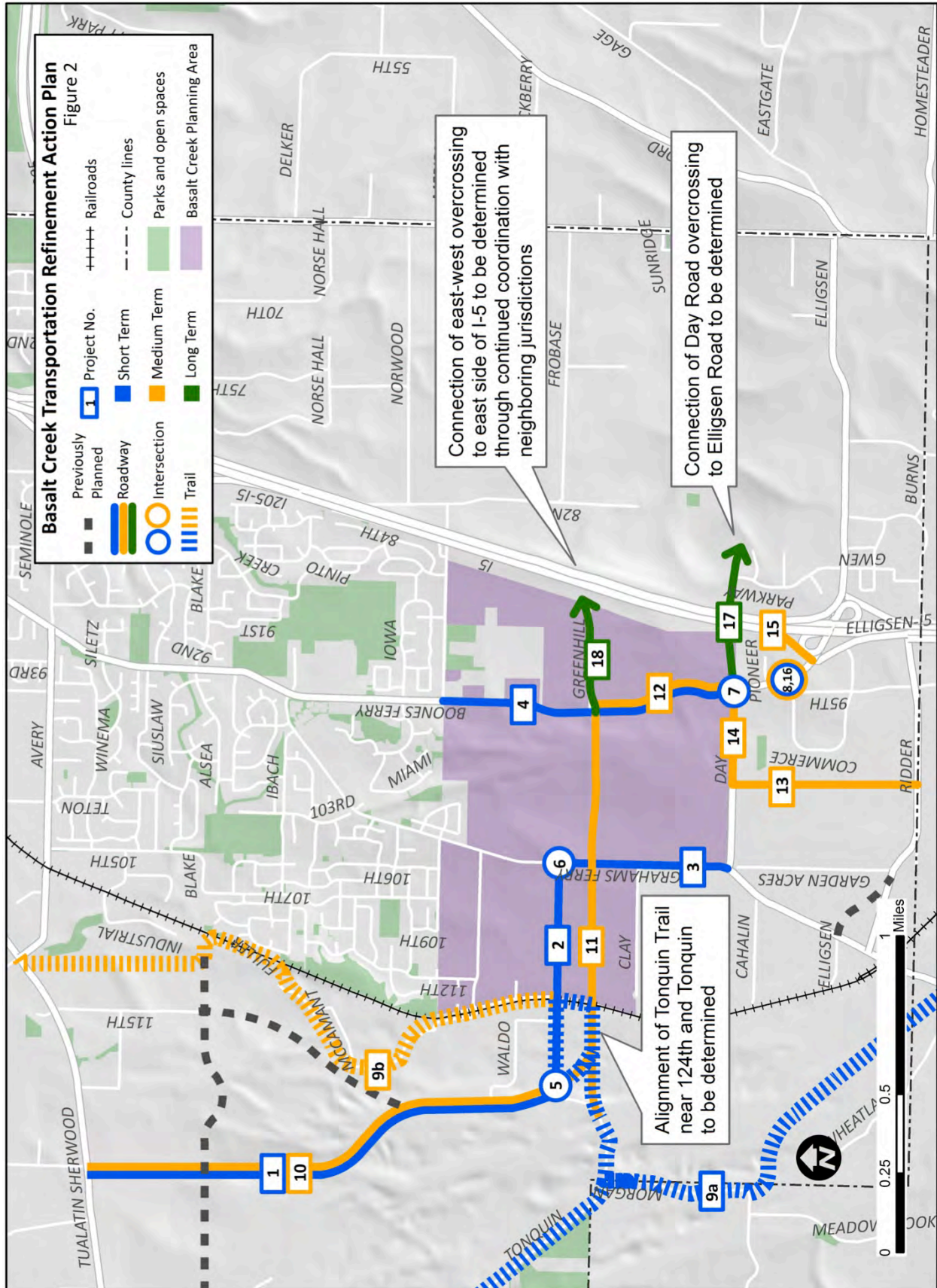
³ Coordinate with Project 4. Cost of approach lane included in estimate for Project 12

⁴ Tonquin Trail cost estimated by Metro as part of trail planning effort

⁵ Project 11 can potentially be built in two phases funded separately, west and east of Grahams Ferry Road. However, traffic benefits needed in the medium term (around 2030) will not be realized unless entire project is completed

⁶ Project details to be determined by further coordination between City of Wilsonville and ODOT. Cost expected to be minimal

⁷ Specific alignment approaching Elligsen Road will determine project cost. Alignment to Parkway Center Drive is estimated at \$33,700,000, and alignment to Canyon Creek Road is estimated at \$44,100,000



Each investment adds important improvements to the major transportation system in the Basalt Creek area to support future development, adding new multimodal facilities and upgrading existing facilities to urban standards. Although not shown on the map, it is expected that future concept planning will identify locations for additional, lower-classification roads and other transportation facilities to serve future development as well.

Are these new projects?

While cost estimates for the entire recommendation may total as high as \$238,000,000, all of the 18 projects have some relation to investments already planned in the adopted RTP. Table 2 shows projects from the RTP that have overlap or similarity to projects contained in the Action Plan. **Note that many of these projects are different in scope from those contained in the Action Plan, and will have different cost estimates. Future RTP updates may include updated cost estimates from this study.**

Table 2: Related projects from the Regional Transportation Plan

RTP ID	RTP Project	Related Action Plan Projects	Time Period	Cost (\$2007)
10736	124 th Avenue: Construct new street from Tualatin-Sherwood Road to Tonquin Road: 5 lanes	1,5,10,11	2008-2017	\$82,500,000
10590	Tonquin Road: Realign and widen to three lanes with bike lanes and sidewalks (Oregon Street to Grahams Ferry Road)	2,6	2018-2025	\$28,406,000
10588	Grahams Ferry Road: Widen to three lanes, add bike/pedestrian connections to regional trail system and fix undersized railroad crossing (Helenius Street to Clackamas County line)	3	2008-2017	\$28,000,000
10732	Boones Ferry Road: Widen to five lanes (Norwood Road to Day Road)	4,7,12	2018-2025	\$40,050,000
10852	95 th /Boones Ferry/Commerce Circle Intersection Improvements	8,16	2008-2017	\$2,500,000
10854	Tonquin Trail: Construct multi-use trail with some on-street segments (Tualatin-Sherwood Road to Clackamas County line)	9a,9b	2008-2017	\$3,000,000
10853	Kinsman Road extension with bike lanes and sidewalks (Ridder Road to Day Road)	13	2008-2017	\$6,500,000
11243	Day Road reconstruction to accommodate trucks (Grahams Ferry Road to Boones Ferry Road)	14	2008-2017	\$3,200,000
11342	I-5/99W Connector Southern Arterial/I-5 Interface ¹	15,17,18	2026-2035	\$50,000,000

¹ Construction of projects specifically related to the I-5/99W Connector Southern Arterial, such as the I-5 interface, are contingent on certain project conditions being met. See Regional Transportation Plan for details.

Policy and Plan Updates

Recommendations in this plan allow new concept planning efforts to move forward and provide guidance for updates of existing transportation plans.

Basalt Creek and West Railroad Area Concept Planning

The transportation system recommended in this plan becomes the framework for more detailed land use concept planning of the Basalt Creek Planning Area and West Railroad Planning Area by the cities of Tualatin and Wilsonville. Key recommendations to be carried forward during concept planning include:

- Protection of the major transportation facility corridors from development encroachment.
- Coordination of the local transportation system with the transportation investments included in this plan (unless amended by the parties of this study). Each roadway in the Basalt Creek area has access spacing standards that protect the safety and operations of the system, and these standards help determine appropriate local street connections. The new east-west facility is limited to accesses at 124th Avenue, Grahams Ferry Road, and Boones Ferry Road.
- Detailed concept planning in the Basalt Creek area should consider multi-use path connections to the Tonquin Trail that emphasize directness and minimize conflicts, enhancing bicycle and pedestrian access to new residential and employment areas. In the West Railroad area, concept planning will also include sections of the Tonquin Trail.

Regional Transportation Plan

In many cases, this transportation refinement plan provides new detail and cost estimates for projects that are already in the adopted RTP. These refined project descriptions, cost estimates, and timing considerations should be considered when projects are forwarded to Metro for the next RTP update. Examples of RTP projects that overlap with projects in this refinement plan include:

- 10590 (Tonquin Road). Action Plan project #2 includes a grade-separated railroad crossing, which is not included in the RTP project description.
- 10852 (95th/Boones Ferry/Commerce). Action Plan projects 8 and 16 will require further coordination with ODOT to determine geometry and timing of intersection improvements.
- 11243 (Day Road). Action Plan project #14, which widens part of Day Road, should also upgrade the roadway structure and pavement conditions to accommodate increasing heavy truck volumes. Although project #14 applies only to the section of Day Road between Kinsman Road and Boones Ferry Road, funding of roadway reconstruction between Kinsman Road and Grahams Ferry Road should also be discussed as part of land use concept planning.
- 10854 (Tonquin Trail). Action Plan projects #2, #5, #11 all need to consider Tonquin Trail in their design, including most recent alignment information and cost estimates from the trail master plan.

Washington County TSP Update

Most of the projects included in the Action Plan are new facilities in unincorporated Washington County or improved facilities already under County jurisdiction. An amendment to update the Washington County TSP will be done in 2013 to incorporate the descriptions, cost estimates, and timing of these projects.

Tualatin and Wilsonville TSP Updates

The Cities of Tualatin and Wilsonville are also currently updating their transportation system plans. However, because concept planning for Basalt Creek will include agreement on the future city limit boundary between the two cities, as well as more detailed transportation network considerations, the projects included in this plan will not be incorporated as part of the current TSP updates. Future TSP updates may reflect elements from this refinement plan by amending project lists, maps, and funding strategies.

Funding

Funding for some short-term Action Plan projects has already been programmed by Washington County through their Major Streets Transportation Improvement Program (MSTIP). This includes \$16.9 million (\$10.9 million in MSTIP funding and \$6 million from other sources) for an interim two-lane extension of SW 124th Avenue from Tualatin-Sherwood Road to Tonquin Road. It also includes an additional \$10 million for right-of-way purchase or other improvements from the list identified by this Plan. Washington County has also provided \$11 million in funding for the current Boones Ferry Road improvement project.

While this recommendation does not identify a specific overall funding strategy for the Action Plan, there are many existing revenue sources that may be used to fund the recommended investments.

Many are subject to a state or regionally competitive process where success can hinge on having a broadly supported plan in place.

The revenue sources listed below form the basis of the financially constrained Regional Transportation Plan and related project list, which already contains many of the recommended Basalt Creek investments. The RTP assumes federal, state, and local sources, all of which will be key to funding the Action Plan.

Federal

Based on MAP-21² legislation, sources may include:

- **National Highway Performance Program (NHPP).** These funds are intended for rehabilitation and expansion of principal arterials, especially those with important freight functions.
- **Regional Surface Transportation Program (STP) funds.** These funds may be used for virtually any transportation purpose short of building local residential streets.
- **Congestion Mitigation/Air Quality (CMAQ) funds.** These funds typically support biking, walking, and transit projects, and other projects that help to achieve air quality standards.
- **Transportation Alternatives (TA) funds.** TA takes the place of previous programs such as Transportation Enhancements and Recreational Trails, and may be used to fund a variety of non-motorized projects.

² For more information see <http://www.fhwa.dot.gov/map21/>

These funds are allocated to projects through a state or regionally managed competitive process for inclusion in the Metropolitan Transportation Improvement Program (MTIP) and the State Transportation Improvement Program (STIP).

State

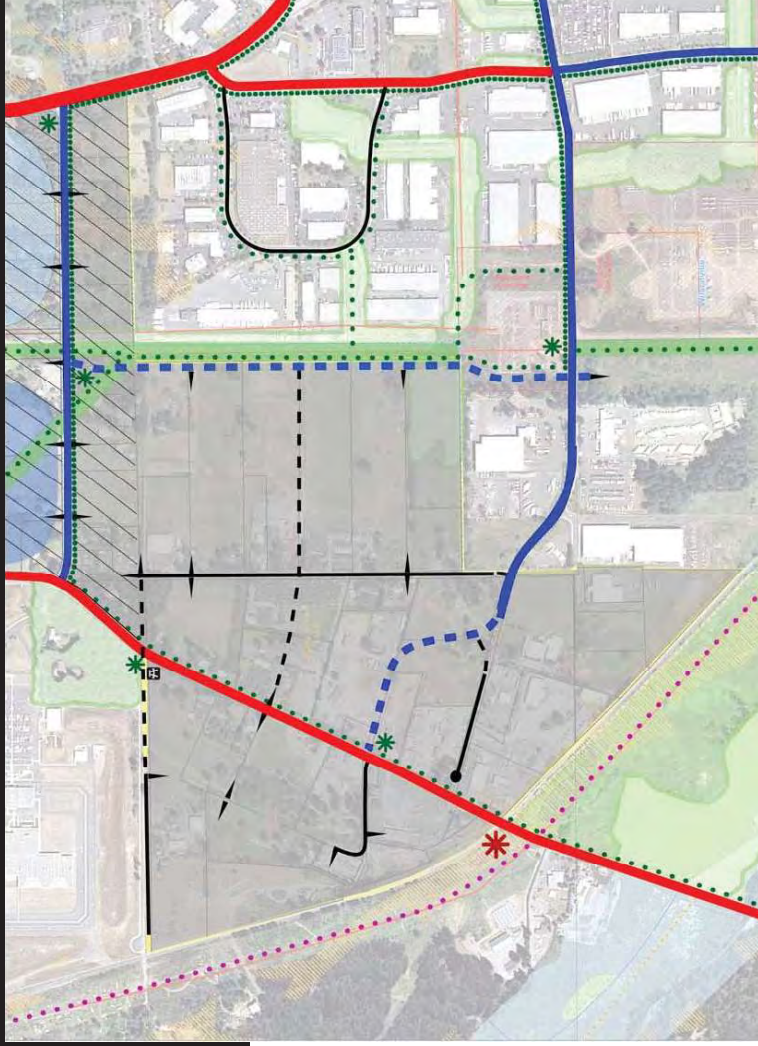
State sources include the statewide gas tax, vehicle registration fees, and weight-mile taxes on trucks. These funds typically go to road and bridge maintenance projects, but funding for projects of regional significance, such as those provided by Oregon House Bill 2001 Jobs and Transportation Act (JTA), may be made available for modernization. Again, having a plan in place allows projects to access funds when new funding opportunities become available.

Local

A variety of local funding sources are available, although some, such as urban renewal and local improvement districts, are subject to approval. Sources may include:

- Washington County Major Streets Transportation Improvement Program (MSTIP)
- Local portion of State Highway Trust Fund
- Local gas tax
- Transportation System Development Charges (SDCs) or Transportation Development Taxes (TDTs) levied on new development
- Urban renewal funding
- Developer contributions
- Local improvement districts (LIDs)

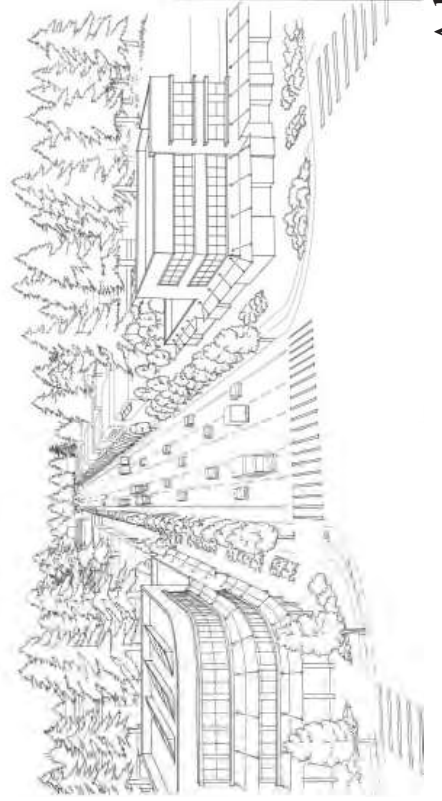
COFFEE CREEK MASTER PLAN



Prepared for:



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Adopted October 15, 2007

Final

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The City of Wilsonville Industrial Lands Master Planning Project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development.

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1 INTRODUCTION

The Coffee Creek planning effort is being conducted to create a detailed transportation and land use plan for the area located near northwest Wilsonville in unincorporated Washington and Clackamas Counties (see Figure 1). The Coffee Creek Industrial Area is being planned in two parts, including a Master Plan (this document) with a detailed strategy for urbanizing the area south of Day Road, and a separate Concept Plan north of Day Road for long-range planning.

An Urban Reserve Plan was prepared by Otak, Inc. in 1998 as a Concept Plan for the area south of Day Road. Metro followed up with a 2002 decision to include Area 49 into the Metro Urban Growth Boundary (UGB) to allow urban services to extend to the Coffee Creek Correctional Facility, and set the stage for additional industrial development south of Day Road.

In 2004, Metro added additional land to the Metro UGB north of Day Road and east of the Portland and Western Railroad, but conditioned future annexation north of Day Road on the decision regarding a preferred location for the future I-5/Highway 99W Connector route.¹ Hence this Master Plan focuses only on the area south of Day Road.

¹ When Metro adopted the 2004 UGB expansion, they included conditions (Ordinance #04-104B, Exhibit F) that only pertain to the UGB expansion area north of Day Road. Those conditions require the area north of Day Road to complete Title 11 planning within 2 years from decision of a connector ROW location. Also, those conditions indicate that Title 11 planning can occur North of Day Road as long as it incorporates the general location of the Connector and the Tonquin Trail per Metro 2004 RTP.

Purpose and Objectives

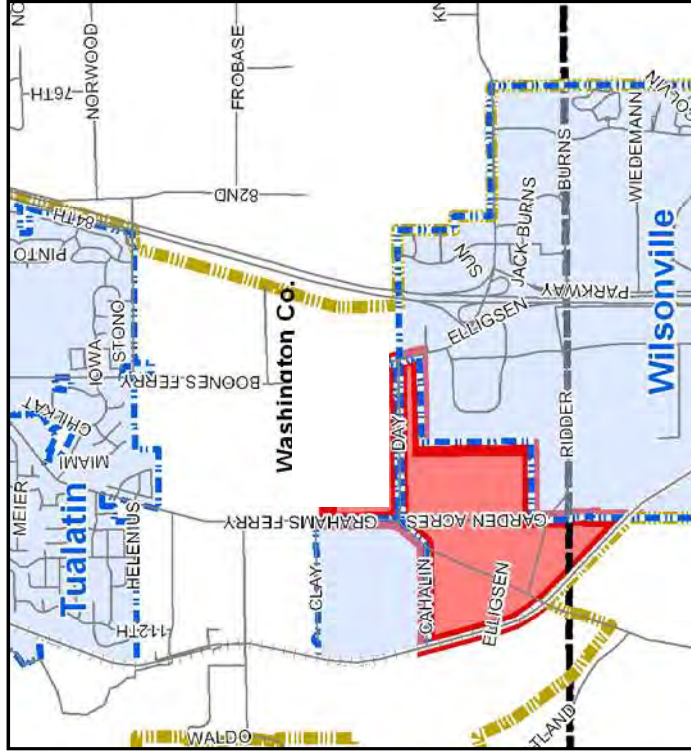
The south Metro region has experienced rapid growth over the past two decades. The Cities of Wilsonville, Tualatin and Sherwood have undergone significant increases in population, households and employment. As future growth continues, these cities need to carefully consider the affects of new development on existing and planned public facilities, including roads, transit, sewer, water, and parks facilities. Coordinated planning also needs to continue on the potential I-5/99W Connector, Kinsman Road, and larger transportation planning efforts in the Metro Region.

The Objectives for the Coffee Creek Industrial Area planning project include:

- Conducting an effective public involvement program.
- Creating a detailed transportation and land use Master Plan for the area South of Day Road consistent with the Concept Plan that was completed in 1998.
- Continuing to work with involved public and private stakeholder on the potential I-5/99W Connector.
- Identifying infrastructure improvements needed to mitigate future development.
- Analyzing the costs, funding sources, and phasing options for infrastructure improvements.
- Allowing efficient and cost-effective industrial development to proceed south of Day Road, with local adoption of the Master Plan and necessary changes to the City's Comprehensive Plan, Development Code and Transportation System Plan.

Context and Setting

The Coffee Creek Industrial Area includes a Master Plan for 216 +/- gross acres south of Day Road. The Master Plan area is “sandwiched” between City of Wilsonville municipal boundaries. It is primarily located in unincorporated Washington County, with a small triangle (south of Clutter Road) located in unincorporated Clackamas County. The Master Plan area is generally bounded by the Coffee Creek Correctional Facility and Day Road on the north, the Portland and Western Railroad to the west and south, and the existing city limits to the east. Please refer to Figure 1.



Plan Summary

Key features of the Master Plan for the area south of Day Road are summarized in Table 1.

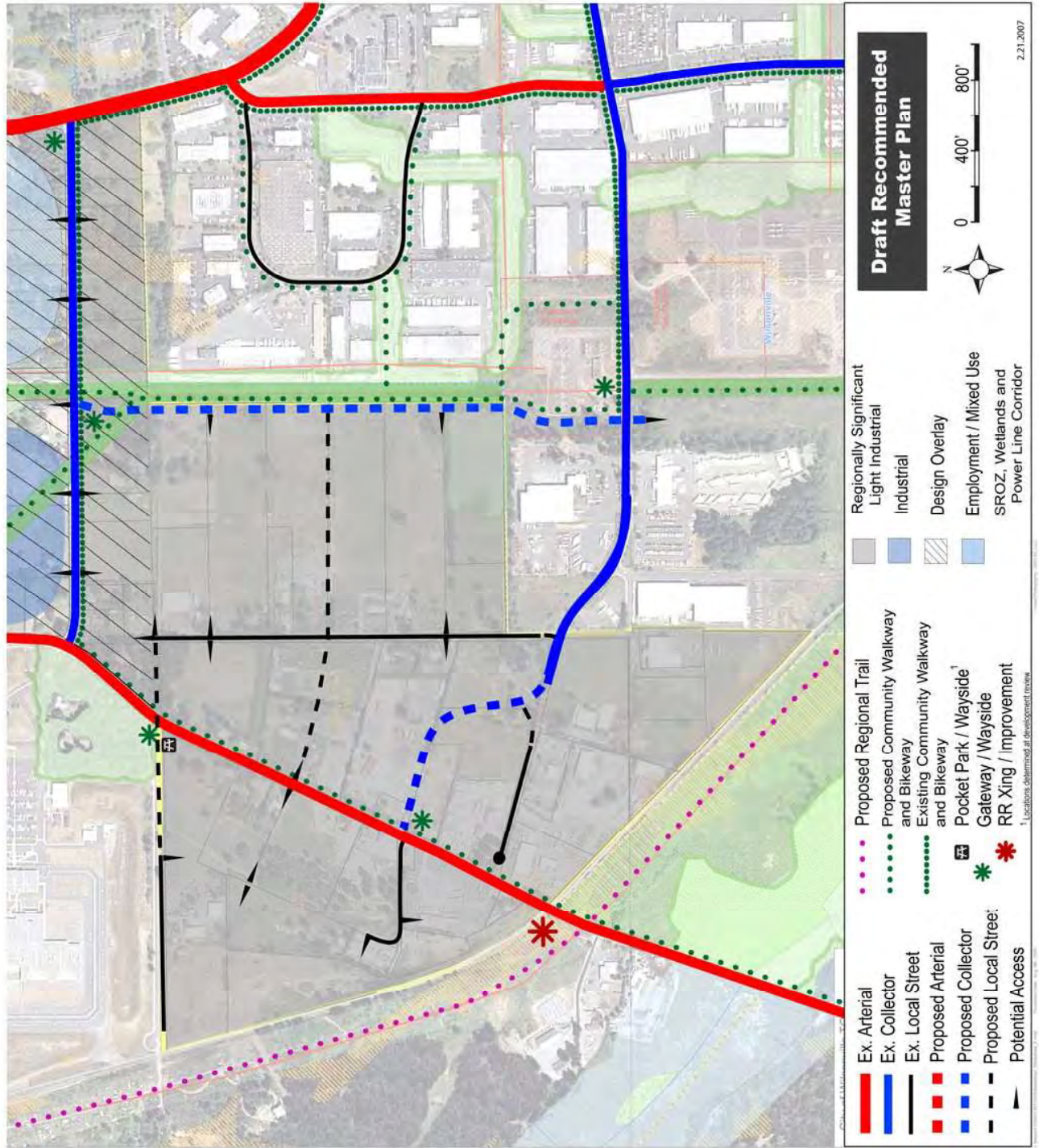
TABLE 1
Master Plan Summary

Element	Description
Land Use	Regionally Significant Industrial Area; allows light industrial with strict limits on non-industrial uses.
Transportation	Primary access is planned from I-5/Elligsen Road via SW Boones Ferry Road and Day Road. Access will also be provided via Grahams Ferry Road, Ridder Road, and the planned Kinsman Road. Transit routes are located within a 1/2 mile walk of the Master plan area, with bus stops located near Commerce Circle/95 th Avenue.
Water	The City operated Willamette River Water Treatment Plant provides the City's water needs, with its main transmission line that runs up Kinsman Road (south of the Master Plan area). The City's Water Master Plan includes a capital improvement phasing plan that serves the Coffee Creek Industrial Master Plan area.
Sewer	The Coffee Creek Master Plan area is to be served with sanitary sewer by the City of Wilsonville and is reflected as Urban Planning Area 4 (UPA-4) in the City's Sewer Master Plan. This area was assumed to include the Coffee Creek Correctional Institution (on 113-acres) and Master Plan area. Future unit flow assumptions for industrial uses were forecasted to be 2,000 gallons/day/acre. After considering factors for average daily flows, the industrial portion of UPA-4 is assumed to generate 626,000 gallons per day (gpd) of sewer flow at build-out.

TABLE 1
Master Plan Summary

Element	Description
Storm Drainage	<p>The Coffee Creek Planning Area is located within the Coffee Creek Basin. The north tributary to Basalt Creek is located south of Day Road. Basalt Creek drains into Coffee Creek Lake and extends north of Day Road into the City of Tualatin UGB. The Wilsonville Storm Water Master Plan and the Coffee Creek Master Plan identifies potential regional detention facilities in the Coffee Creek Planning Area as effective pollution reduction facilities. In addition, all surface water generated by private development would be handled and treated on site, and with subdistrict facilities, such as detention swales and ponds. The Master Plan also supports construction of "green street design standards" for collector street improvements including Kinsman Road and Grahams Ferry Road.</p>
Parks and Recreation	<p>The Master Plan minimizes potential adverse effects on resources, by identifying and protecting areas within the Significant Resource Overlay Zone, and promotes a variety of open spaces, parks, waysides, and linear pathways for employees and residents.</p>

FIGURE 1. COFFEE CREEK | RECOMMENDED MASTER PLAN



2 PLANNING PROCESS

What is a Master Plan?

A Master Plan guides how land newly added to the UGB will be used, provided with urban services, and developed in the context of existing adjacent communities. Master Plans typically focus on issues of land use, transportation, public infrastructure, and natural resources, are defined in Statewide Land Use Planning Goal 14: Urbanization, and Metro Title 11. The basic parts of a master plan are listed below, with those relevant to the scope for the Coffee Creek Master Plan document shown in italics.

1. *Orderly, economic provision for public facilities and services;*
2. *Availability of sufficient land for the various uses to insure choices in the market place;*
3. LCDC goals or the acknowledged comprehensive plan;
4. Encouragement of the development within urban areas before conversion of urbanizable areas.

How Was the Plan Developed?

The planning process consisted of four key components:

- Input from the Plan Advisory Committee
- Involvement of stakeholders and the public
- Establishment of Master Plan goals and objectives
- Review of existing conditions and development alternatives

INPUT FROM TECHNICAL ADVISORY COMMITTEE

Development of the Master Plan was guided by input from a multi-agency Planning Advisory Committee that met four times during the

planning process. This Committee included representatives from the City of Wilsonville, City of Tualatin, City of Sherwood, Washington County, Oregon Department of Transportation (ODOT), Oregon Department of Land Conservation and Development (DLCD), Wilsonville Chamber of Commerce, local property owners, and industrial real estate brokers. Documentation of the Planning Advisory Committee meetings is provided in Appendix A.

INVOLVEMENT OF STAKEHOLDERS AND THE PUBLIC

The broader community was involved in the Master Plan process through public invitation to the Planning Advisory Committee Meetings, and a public open house event. Documentation of the public open house is provided in Appendix B.

ESTABLISHMENT OF MASTER PLAN EVALUATION CRITERIA

Evaluation criteria for the Master Plan alternatives were established early in the planning process by the Planning Advisory Committee. The evaluation criteria included general goals and more specific objectives which were reviewed and affirmed by the Planning Advisory Committee. Table 2 provides a listing of the evaluation criteria.

Table 2
Master Plan Land Use and Transportation Alternatives Evaluation Goals

1	Local, Regional and State Plans (consistency)
2	Adequate Transportation (multimodal facilities and connections)
3	Adequate Public Facilities (public/private cost sharing)
4	Citizen/Stakeholder Participation and Property Owner Support
5	Maintain High Quality Industrial Development

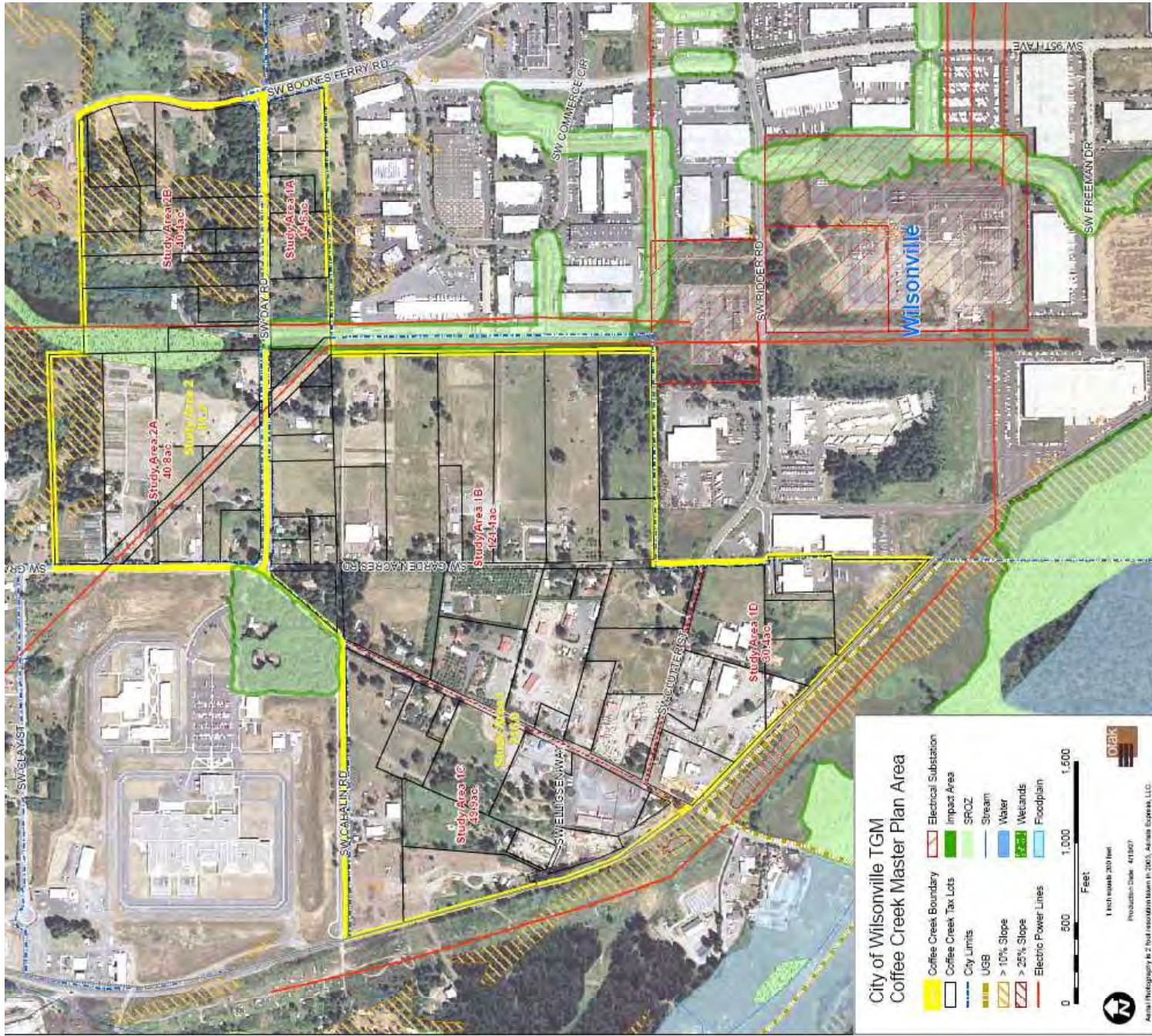
These goals were used to prepare detailed plan evaluation objectives and review criteria which are summarized in Appendix D.

REVIEW OF EXISTING CONDITIONS

The first portion of the technical work for the Master Plan focused on the review and analysis of existing conditions. This included a document review, site visit, and an analysis of land use policies, and transportation and infrastructure conditions. Figure 2 reflects existing tax lots, slopes, and Significant Resource Overlay Zone.

Existing conditions documentation, including a summary of land use and infrastructure policies and plans are included in Appendix C, and a traffic impact assessment (Appendix D). Maps illustrating key existing public facilities are included in Appendix E.

FIGURE 2. EXISTING CONDITIONS



3 MASTER PLAN

The Master Plan is described in the text below and illustrated in Figure 2. The Master Plan was selected following the development and evaluation of two land use/transportation alternatives. Please refer to Appendix D for a summary of the evaluation results.

Land Use and Development Plan

ZONING

In adding the Master Plan area to the UGB, Metro required the City to agree to plan the land to be used for Regionally Significant Industrial purposes: which allow large lot and standard industrial users; and limit non-industrial uses. When land in the Master Plan area is annexed to the City of Wilsonville, the land shall be zoned Planned Development Industrial – Regionally Significant Industrial (PDI-RSIA).

Planned Development Industrial – Regionally Significant

Industrial Area (PDI-RSIA) is the City’s newest industrial zone district. This zone designation currently applies to the Coffee Creek Master Plan area and two others in the city. It is appropriate for most light manufacturing, warehousing, distribution, and flex uses. Corporate headquarters and technology campuses are also allowed. Retail and service uses are allowed as long as their uses are limited in floor area as to not exceed 3,000 square feet per use in one building, and not more than 20,000 square feet in multiple buildings. Office uses must not exceed 20% of total floor area within a site. Prohibited uses include any use that violates performance standards regarding: screening of outdoor storage; vibration; emission of odorous gases; night time operations; heat and glare; dangerous substances; liquid and solid wastes; noise; electrical disturbances; discharge standards; open burning; and unscreened outdoor storage.

The PDI-RSIA designation will help meet the Region’s documented needs for high wage light industrial development, and provide a land use type that is compatible with surrounding industrial uses, and the Coffee Creek Correctional Facility.

Key development assumptions associated with the PDI-RSIA planning designation are shown on Tables 3 and 4.

**Table 3
Permitted Uses within PDI-RSIA Zone District**

Industrial Uses		
Warehousing & distribution		P
Outdoor Storage (with proper screening)		P
Product assembly and packing		P
Light manufacturing and processing		P
Motor vehicle services (ancillary only)		P
Fabrication		P
Office complexes- technology or corporate headquarters		P
Call Centers		P
Research & Development, laboratories		P
Industrial Services		P
Product repair, finishing and testing		P
Residential Uses		
Residential Uses (not to exceed 10% of total floor area)		P

TABLE 3 (continued)

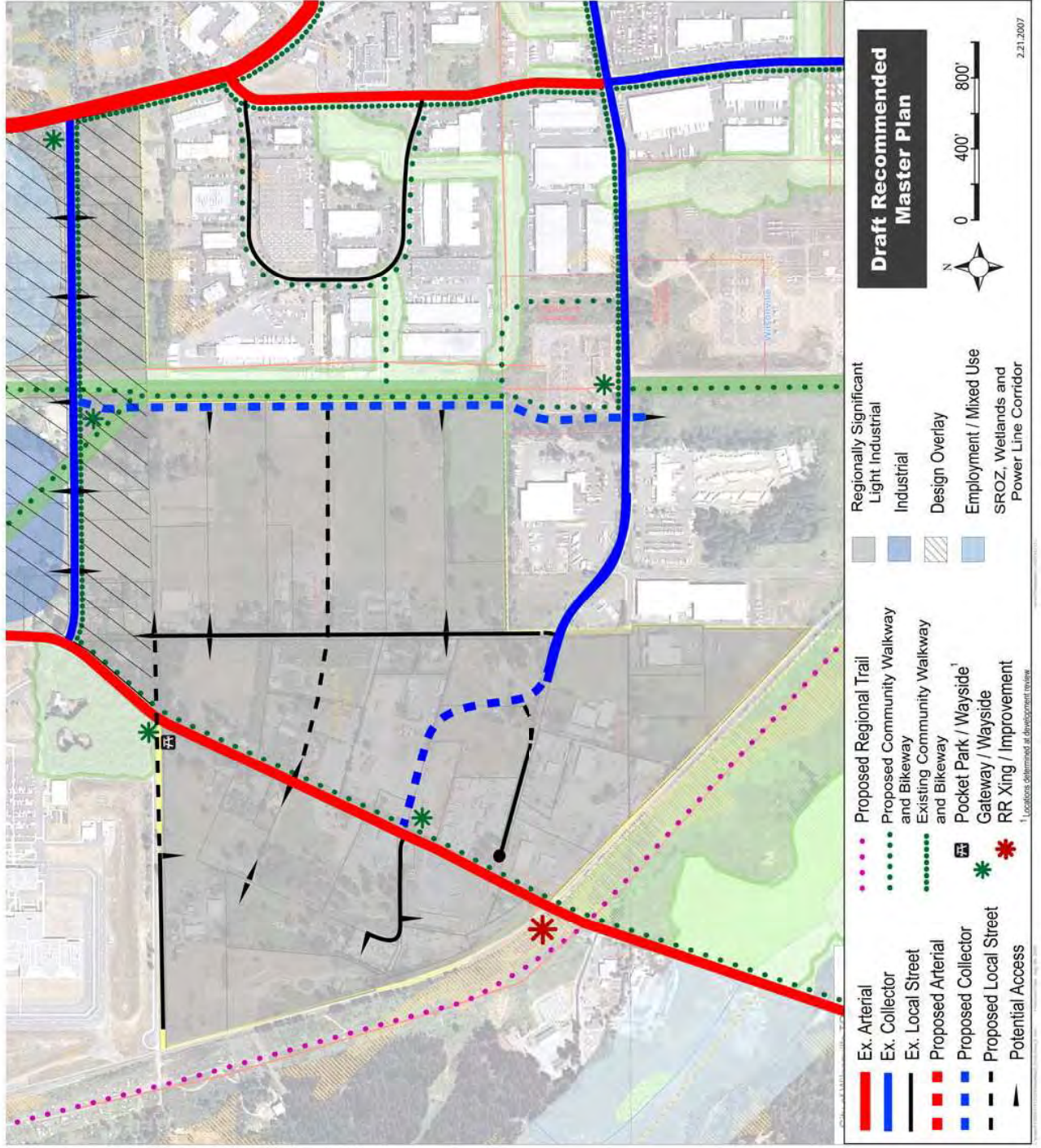
Commercial Uses	
Service or retail uses (not to exceed 3,000 s.f. in floor area in single building or 20,000 s.f. within multiple buildings.	P
Office complexes (not to exceed 20% of total floor area within a site)	P
Training facilities with primary purpose to meet industrial needs	P
Temporary buildings or structures (removed within 30 days)	P
Public and Other Uses	
Public facilities (e.g., utilities, school district bus facilities, public works yards, vehicle storage)	P
Accessory Uses, incidental to permitted uses	P
Expansion of buildings or uses approved prior to Oct. 25, 2004 of up to 20% of added floor area and/or 10% of added land area	P
Other uses, per judgment of Planning Director to be consistent with purpose of PDC Zone	P
Public park and recreation facility and open space	P

**TABLE 4
Development Assumptions for PDI-RSIA Zone District**

Parking	0.3 spaces/1,000 square feet of building area for storage, warehouse, wholesale, rail or truck freight operations. Maximum of 0.5/1,000 sq.ft. 1.6 spaces/1,000 minimum for manufacturing establishments. No maximum limit.
Setbacks	Front: 30 feet Side/back: 30 feet
Landscaping and Open Space	At least 15% of the site must be landscaped. Parking lots with more than 200 cars require additional tree planting, and pedestrian paths.
Design Review and Performance Standards	New Design Overlay Zone recommended for properties fronting Day Road. Additional performance standards apply to: screening of outdoor storage; vibration; emission of odorous gases; night time operations; heat and glare; dangerous substances; liquid and solid wastes; noise; electrical disturbances; discharge standards; open burning; open storage; light pollution and inadequate landscaping.
Minimum Lot Size	There are no tax lots greater than 50 acres in the Master Plan area. Parcels less than 50 acres are allowed land divisions in conformance with an approved site master plan. Minimum lot size dimensions are 160 feet by 160 feet.
Maximum Structure Height	No set minimum or maximum.

Notes: P = Permitted Use. Source: Wilsonville Development Code, Chapter 4, Section 4.135.5.

FIGURE 3. RECOMMENDED MASTER PLAN PHASE 1



DEVELOPABLE AREA

Of the approximately 216 acres in the Master Plan area, the actual developable area is reduced by the following factors shown in Table 5, including:

- Approximately 2.4 acres are within Significant Resource Overlay Zone (SROZ) protection areas. This estimate of SROZ land area assumes a 3.6 acre reduction in SROZ mapped land within the Master Plan area is approved by the City Council this year.
- Approximately 12.9 acres within the Master Plan area are considered to be within un-developable easements or public right-of-ways controlled by the City of Wilsonville, Portland and Western Railroad, Portland General Electric, and Bonneville Power Administration.
- Approximately 4.4 acres are within areas that include slopes greater than 10%, which may be considered too steep for certain types of industrial uses.

Table 5 Master Plan Area, Existing Land Use Constraints

	Acres
SROZ*	2.4
Easements & R.O.W.	12.9
Slopes > 10%	4.4
Unconstrained Area	196.3
Total Gross Acres (approximate)	216.0

**Significant Resource Overlay Zone per City of Wilsonville ordinance. Includes 3.6 acre SROZ reduction amendment that is pending Council approval as of May 2007.*

FUTURE URBAN EXPANSION

When the Master Plan area is annexed into the City of Wilsonville, it will form the northwestern city limits. The land to the north and west of

the Master Plan area is designated by Metro for industrial development. The Master Plan for the area south of Day Road was prepared with a simultaneous analysis of development alternatives for an area north of Day Road as part of a separate Concept Planning effort by the City of Wilsonville. The City wanted to conduct the Concept Plan north of Day Road to better understand development opportunities and constraints north of Day Road, and to evaluate potential traffic impacts of additional development in the vicinity of the Coffee Creek Master Plan area.

Traffic Analysis

BACKGROUND

As part of the traffic analysis for the Coffee Creek Master Plan, DKS Associates performed an evaluation of existing conditions of the following intersections:

- I-5 Northbound Ramp @ Boones Ferry Road-Elligsen Road;
- I-5 Southbound Ramp @ Boones Ferry Road-Elligsen Road;
- Boones Ferry Road @ Day Road
- Boones Ferry Road @ Commerce Circle/95th Avenue
- Grahams Ferry Road @ Clutter/Ridder
- Grahams Ferry Road @ Day Road
- Grahams Ferry Road @ Tonquin Road
- Day Road @ Kinsman Road (future)
- Ridder Road @ Kinsman Road (future)

The traffic impact analysis was conducted for the City and ODOT to ascertain the specific capacity and multimodal improvements needed

to accommodate planned development, and to recommend appropriate amendments to the City and County Transportation System Plans.

RECOMMENDED MITIGATION MEASURES

To maintain adequate traffic performance standards within the study area during the PM peak period, mitigation measures are necessary to reduce the negative transportation impacts of future traffic growth.

NON-PROJECT ORIENTED TRANSPORTATION MITIGATION (NO BUILD AND SAFETY)

The following measures are related to estimated traffic growth on study area roadways. These mitigations would be necessary whether or not the Coffee Creek industrial area was developed. Additional safety related mitigations have been identified as well. Non-project oriented mitigations are summarized in Table 6.

Table 6: 2030 No Build and Safety Related Mitigations (PM Peak Hour)

Intersection	Recommended Mitigation
Tonquin/SW Grahams Ferry Road	<ul style="list-style-type: none"> • Install eastbound left turn lane • Install northbound left turn lane • Install traffic signal
Day Road/Boones Ferry Road	<ul style="list-style-type: none"> • Construct a four-lane roadway on Boones Ferry Road north of Day Road.
Kinsman Rd. Extension	<ul style="list-style-type: none"> • Construct two-lane extension of Kinsman Road from RxR tracks to Day Road. • Construct traffic signals at Kinsman Road/Day Road and Kinsman Road/Ridder Road intersections. • Construct left turn pockets on all approaches at the Kinsman Road/Ridder Road intersection.

<ul style="list-style-type: none"> Construct an eastbound right turn lane on 95th Avenue. The eastbound approach would consist of a shared through-left turn lane and dual right turn lanes. Stripe a westbound separate left turn pocket on the private industrial park approach Install median on 95th Avenue to modify the Commerce Circle north approach to 95th Avenue to right in and right out movements only. The median would provide for improved operation of the intersection and increased storage with the existing center turn lane being available for left and through movements. Construct a second northbound left turn pocket on Boones Ferry Road at 95th Avenue. Additional widening for two southbound through lanes (a minimum of 500' plus taper) would be required on 95th Avenue to facilitate the dual left turns. 	<p>Boones Ferry Road/95th Avenue</p>
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<ul style="list-style-type: none"> Construct a westbound left turn pocket on Clutter Road Construct a southbound left turn pocket on Grahams Ferry Road Construct a traffic signal 	<p>Grahams Ferry Road/Clutter Road</p>
<p>Safety Improvement Recommendation</p> <ul style="list-style-type: none"> Reconstruct Grade Separated Railroad Crossing to City of Wilsonville Minor Arterial standards. 	<p>Grahams Ferry Road Grade Separated Railroad Crossing</p>
<ul style="list-style-type: none"> Realign Clutter Road to the North as shown in Alternative 2. 	<p>Clutter Road/Grahams Ferry Road Intersection Sight Distance</p>
<ul style="list-style-type: none"> As part of the Boones Ferry Road widening, bring horizontal curve up to current standards. 	<p>Boones Ferry Road Horizontal Curve</p>

As new industrial development is added in the Coffee Creek Master Plan area south of Day Road, additional transportation improvements would be required. The following measures as shown in Table 7 are related to the impacts of the proposed Coffee Creek Master Plan area south of Day Road. The mitigations as shown are in addition to the improvements identified for the 2030 No build scenario.

Table 7: Coffee Creek Master Plan Area South of Day Road Mitigations

Intersection/ Roadway	Recommended Mitigation
Day Road/Kinsman Road	<ul style="list-style-type: none"> Construct northbound left turn pocket
Grahams Ferry Road/Day Road	<ul style="list-style-type: none"> Construct dual southbound left turn lanes
Boones Ferry Road	<ul style="list-style-type: none"> Construct a third southbound through lane on Boones Ferry Road from Day Road that would drop at the I-5 southbound on-ramp. The existing southbound right turn lane on Boones Ferry Road at 95th Avenue could be removed at the time the third through lane is constructed.

Transit, Bicycle and Pedestrian Facilities

There are currently few existing bicycle and pedestrian facilities and no transit service within the Coffee Creek Master Plan area today. The closest transit stop is located nearby with a SMART bus line that provides stops along 95th Avenue and Commerce Circle (within ½ mile of the Master Plan area).

In addition to providing bike lanes and sidewalks or pathways along planned collectors and arterial roadways, the Master Plan supports local and regional pedestrian and bicycle trail connections that are consistent with the City's Parks and Open Space Plan. These future

pathways can be constructed within existing power line easement corridors and should connect with Metro's planned regional trail that will parallel the Portland and Western Railroad. Please refer to Appendix F for a map of existing and planned parks and natural areas and trails.

A pedestrian/bicycle trail connection is recommended between the planned Kinsman Road and Commerce Circle to provide more direct, safe and convenient access to existing SMART bus service. Future transit service routes and bus stops are recommended as the Master Plan area develops over time with new uses and additional employment.

Existing Conditions: Existing bicycle and pedestrian facilities are limited to Day Road and portions of Ridder Road. SMART bus transit stops are located approximately ½ mile east of the Master Plan area along 95th Avenue and Commerce Circle.

Development Issues: Future development has the opportunity to provide adequate setbacks from roadways and property boundaries to allow public access easements for development of future pedestrian and bicycle trails in accordance with the Master Plan. Funding for additional transit service within the Master Plan area will be supported, in part, through increased transit tax revenues that result from the additional employment/payroll that is attracted to the Master Plan area over time.

Please refer to Appendix G Traffic Impact Analysis; and Appendix H Fiscal Impact/Annexation Analysis for added information.

Infrastructure Needs

WATER SYSTEM

Prior to the construction of the City of Wilsonville's Willamette River Water Treatment Plant in 2002, the City relied on eight underground wells in the Troutdale Aquifer to serve its needs. The Willamette River Water Treatment Plant now provides for the City's water needs, with its main transmission line that runs up Kinsman Road. The Water Master Plan provides a plan for evaluating future water system needs to meet anticipated growth.

The Water Master Plan assumes current water usage rates of 44-gallons per day for industrial (average) and 176-gallons per day (peak) per user. The City's Community Development Department has also assumed that two 1.0 mgd average daily demand (ADD) industrial users will locate in the City by 2020 that will also need to be accommodated. The resulting analysis of water demand indicates that average peak day demand for industrial uses will increase from 1.25 mgd (2000) to 8.35 mgd (2020). Total water demand for the city is forecasted to increase from 6.8 mgd (2000) to 20.02 mgd (2020).

The existing Willamette Treatment Plant combined with existing wells has the capacity to handle approximately 10 mgd of total water demand. Future capacity expansion is planned to include 5 mgd through reservoirs (using aquifer storage and recovery wells) and another 5 mgd through expansion at the Willamette Treatment Plant.

The Water Master Plan includes a capital improvement phasing plan that identifies the need to add 4,220 linear feet of 12-inch water line between Grahams Ferry to Ridder Road and Ridder Road to Garden Acres. A preliminary list of recommended water system improvements for the Coffee Creek Industrial Area is provided in Appendix E, and Tables 3-4.

It is important to note, that all identified projects and cost estimates are made for preliminary planning purposes. Site survey work will need to occur and the City will need to update its water system model to determine more accurate on and off-site water system improvements and trunk line size, location and cost. Hence, additional water system

improvements could include a pro rata share of off-site improvements for the new reservoir and pump stations. The City operates Willamette Water Treatment Plant, which provides the majority of the City's water needs, with its main transmission line that runs up Kinsman Road (south of the Master Plan area).

The City's Water Master Plan includes a capital improvement phasing plan that serves the Coffee Creek Industrial Master Plan area.

Development Issues: Water main transmission supply lines exist through the central and southern portions of the Master Plan area.

Infrastructure Needs: The water master plan needs to be updated to reflect more accurate site topography and current long-range demand levels. An additional reservoir would be needed at some point to provide adequate peak capacity prior to build out of the Master Plan area. Once the water master plan has been updated, more specific estimates of future infrastructure needs can be made.

SEWER SYSTEM

The Coffee Creek Master Plan Area is located in the City of Wilsonville's United Disposal Interceptor sewer trunk line basin subarea. The majority of the Coffee Creek Urban Planning Area was included as Urban Planning Area 4 (UPA-4) in the Sewer Master Plan. This area was assumed to include the Coffee Creek Correctional Institution (on 113-acres) and 313-acres of future industrial land. Future unit flow assumptions for industrial uses were forecasted to be 2,000 gallons/day/acre. After considering factors for average daily flows, the industrial portion of UPA-4 is assumed to generate 626,000 gallons per day (gpd) of sewer flow at build-out.

It should also be noted that the assumptions included in the Preliminary Urban Reserve Plan for Coffee Creek Area 42 (prepared in 1998), calculated sewer flows at 3.0 mgd for the prison and industrial sites that can serve between 12 and 21 persons per acre. The current sewer master plan assumes 0.8 mgd of average flows from this area, which is consistent with the lower end of the range in employment (12 jobs/acre).

The master plan for Coffee Creek Industrial Area (south of Day Road) estimates potential employment to be 9 jobs/gross buildable acre for each Alternative. Hence, the sewer capacity assumptions appear to be in line with current sewer master plan assumptions.

The sewer master plan identifies two specific capital improvements that would be required to adequately serve the majority of the Coffee Creek Planning Area. These include:

- United Disposal Parallel Pipe (CIP-UD1 and listed as SS-1 in Appendix C). Includes construction of a 12-inch line from SMH3503 to SMH0269 to convey peak wastewater flows over a distance of 5,315 feet. The project includes an 8-foot diameter manhole with a diversion weir. Rail-crossing will require trenchless technology. Alternative alignments should be investigated to minimize impacts to wetland and natural areas. This project should coordinate with Kinsman Road extension where possible. Estimated cost for the Kinsman segment of this pipe is \$680,000. Additional off-site costs were estimated by the City in 2001 to be approximately \$1,105,704. After adjusting for cost escalation, the current cost for off-site construction for this project is likely to be approximately \$1.47 million.
- Garden Acres Road New Trunk Sewer (CIP-UD3 and SS-3 in Appendix C). Includes a new 12-inch trunk service extension along Garden Acres Road between Day Road and SW Ridder Road to serve future development. A portion of this project was constructed a few years ago to accommodate the prison demand. Remaining cost for the Garden Acres extension segment of this pipe is approximately \$200,000.

Additional sewer line improvements that are recommended for the Planning Area are reflected in the sewer facility maps in Appendix F. It is important to note, that all identified projects and cost estimates are made for preliminary planning purposes.

Development Issues: Sewer Main trunk links are located within the central portion of the Coffee Creek Master Plan area.

Infrastructure Needs: The sewer master plan includes the Master Plan area in the hydraulic modeling and long range capital improvement program. Site survey work will need to occur and the City will need to update its sewer system model to determine more accurate on and off-site sewer system improvements and trunk line size/location, pump station requirements, and cost.

STORM DRAINAGE

The Coffee Creek Master Plan area is located within the Coffee Lake Creek Basin. The north tributary to Basalt Creek is located south of Day Road. Basalt Creek drains into Coffee Creek Lake and extends north of Day Road into the City of Tualatin UGB. The master plan area is relatively flat with topography that varies 1-5 feet in elevation, and gently slopes from north to south.

The Storm Water Master Plan identifies potential regional detention facilities in the Coffee Creek area as effective pollution reduction facilities. Planned facilities in the Planning Area include:

- North Wilsonville Planning Area comprehensive storm drainage system. The former Urban Reserve Area 42 (portion of Coffee Creek Planning Area) requires a system of storm drainage improvements in addition to on-site storm water detention and treatment provided by developers.

The City requires each new development within the Coffee Creek Industrial Master Plan area to detain and treat any projected runoff per existing City Code, it is recommended that the planned Kinsman Road and Grahams Ferry Road improvements be constructed as "green streets." Green streets will require a variance from existing City Street Standards to allow bio-swales and pervious surfaces to be used in lieu of curb and gutter to help convey storm water runoff.

Another recommendation of the Coffee Creek Master Plan is for the City to conduct a Basalt Creek and Coffee Creek sub-basin analysis to better define existing storm water events and flooding-related issues. Future development within the sub-basin should be modeled to

ascertain likely impacts of urban development, and to identify impacts of beneficial storm water design standards. The possibility for a new regional storm water detention pond within the Coffee Creek Planning Area should be assessed. Please refer to Appendix F for a map of existing and planned storm water facilities.

Development Issues: Storm Water facilities are an important element of the Coffee Creek Master Plan area given the site's proximity to the Coffee Creek Lake wetlands area, and its tributaries.

Infrastructure Needs: Runoff from future streets or access roads and development will need to meet City design criteria for storm water quality and quantity control, by handling potential runoff with on-site detention and treatment facilities. A new conveyance system can be installed along the roadways. Site development runoff will need to be treated and detained, if necessary, before being discharged to the public drainage systems.

OTHER UTILITIES

Northwest Natural Gas currently serves the master plan area.

Portland General Electric provides local power distribution and has a high power transmission main running parallel to the east side of the master plan area.

Communications, internet, and television services are provided by a variety of service providers within close proximity.

Parks and Recreation

Protecting natural resources is a hallmark of the Wilsonville Comprehensive Plan and the Parks and Recreation Master Plan. Natural resource protection and opportunities to partner with private land owners, as has historically been the case in Wilsonville, should be considered during the planning process for the Coffee Creek Area. Focus is placed on creating an interconnected park system including

greenways and trails, but also connections for bike, pedestrian, and transit transportation choices.

The recommended plan for the Coffee Creek Master Plan area includes at least four new waysides which can function as strategic "gateway" design features with informational displays that depict area site/building configurations. These waysides should also function as "pocket parks" for local employees and residents with picnic tables and benches.

There are also local and regional pedestrian and bicycle trail connections that are included in the Coffee Creek Industrial Area plan. These pathways can be constructed within existing power line easement corridors and should connect with Metro's planned regional trail that will parallel the Portland and Western Railroad. Please refer to Appendix F for a map of existing and planned parks and natural areas and trails.

Existing Conditions: No existing parks facilities exist within the Master Plan area.

Development Issues: Future development has the opportunity to incorporate pocket parks/wayside facilities into the Master Plan area. In addition to providing facilities along roadways, pedestrian and bicycle paths can be provided as linear parks along existing power line easements, and adjacent to SROZ areas.

4 IMPLEMENTATION

This section addresses four key considerations for Master Plan implementation: provision of urban services, costs, funding options, and consistency with City plans and policies.

Provision of Urban Services

The Coffee Creek Industrial Master Plan will provide a framework to guide the development of public facilities and private uses.

Developers will be responsible for providing local streets and utility connections to trunk line systems. However, to maintain flexibility, the plan focuses primarily on collector and arterial roadway improvements, and water and sewer trunk lines and does not identify specific locations or configurations for local connections. Assumptions are that the best configuration of development would be determined by market opportunities and constraints at the time of development, allowed uses, and other Wilsonville Development Code requirements.

Cost Estimates

Total capital costs for major roads, sewer, water, and stormwater systems have been estimated for buildout of the Master Plan area. (See Table 8) Unit costs were prepared based on local and regional experience with a variety of roadway and pathway projects.

The preliminary capital cost estimates do not include extraordinary cost for right-of-way acquisition, permitting or geotechnical soils work. Extraordinary costs may include special environmental mitigation, subsurface soil enhancements, structural engineering systems, and business/residential relocation assistance.

The preliminary cost estimates also assume “green street” design standards for Kinsman Road and Grahams Ferry Road which are

assumed to consist of 2-lanes with landscaped medians, buffer strips, bike lanes, sidewalks, underground utilities and street illumination. Pathways are assumed to be a mix of pervious and paved surfaces.

TABLE 8 ESTIMATED CAPITAL COSTS FOR COFFEE CREEK MASTER PLAN

Public Facility System	Years 1-5	Years 6+	Total
Water (mainline system)	\$420,000	\$720,000	\$1,140,000
Sanitary Sewer (trunk system)	\$680,000	\$850,000	\$1,530,000
Surface water	*	\$300,000	\$300,000
Transportation			
Collector & Arterial Streets**	\$6,280,000	\$19,840,000	\$26,120,000
Local Streets***	—	—	—
RR-xing	—	\$4,000,000	\$4,000,000
Parks and Waysides			
Other (planning/permitting/legal)	\$200,000	\$300,000	\$450,000
Total	\$7,630,000	\$26,580,000	\$34,210,000

*Source: Otak, Inc. All costs are stated in 2007 dollar amounts for public facilities within Master Plan area. Additional off-site costs may be required. * Storm water improvements also include benefits derived from construction of green streets for Kinsman Road. ** These transportation projects include \$16.7 million for roads and \$4.0 million for the railroad crossing that is recommended under the “no build” scenario. *** Local street costs are not estimated and will be incurred by developers.*

Major public infrastructure items including roads, trails, water, sewer, and storm water facilities are estimated to cost approximately \$7.6 million over the initial five years, as indicated in Table 8. Additional capital costs are expected to require another \$26.6 million for on-site public facility investments (excluding local streets, which are assumed to be paid and constructed by private developer(s)). It should be noted that

ECONOMIC AND FISCAL IMPACTS

If we assume the Master Plan area is fully built out by year 2030, the general conclusions that can be reached by this analysis include:

- Total assessed value of development would increase from approximately \$16 million today to \$258 million per year.
 - At current property tax rates, the increase in local assessed value would generate about \$1.4 million in new annual property tax revenues for the City, and \$6.5 million in new annual property tax revenues for Washington County.
 - Annual net city revenue collections (revenues from fees less governmental service costs for water, sewer, police, planning, etc.) are expected to yield a net annual fiscal benefit to the City of Wilsonville of approximately \$325,000 per year (before any additional debt service).
 - Significant positive economic impacts are anticipated from the more than hundreds of construction jobs and 1,470 permanent jobs.
 - The added permanent income of \$55 million in direct payroll to the site's 1,470 employees is expected to generate an total direct/indirect regional economic impact of approximately \$135 million per year.
 - The direct payroll is expected to support over \$4.0 million in annual state income tax revenues at buildout.
 - Additional transit tax revenues will be realized by SMART (local transit provider) as new payroll is added within their service district.
- Please refer to Appendix H for a detailed analysis of economic and fiscal impacts.

approximately \$16.7 million in road costs and the \$4.0 million rail road crossing improvement are recommended even without annexation and development in Coffee Creek.

Funding Strategies

As with most successful large master planned developments, the Coffee Creek Industrial Area will require a mix of public and private funding and financing for on- and off-site improvements.

The first step in the funding process entails amendments to local (City of Wilsonville and Washington County) Transportation System Plans to identify the facilities identified in Appendices F and G. After the TSP amendment processes occur (assuming there is support from ODOT and other state, Metro and local agencies/stakeholders), the county and/or city can work with ODOT and local stakeholders to update local ordinances (such as the Wilsonville and Washington County Systems Development Charge Methodology), capital improvement programs, and the ODOT State Transportation Improvement Program (STIP) to designate appropriate improvements for funding.

As local plan amendments are adopted, funding sources should be identified. Potential local funding sources may include the following:

- Local Systems Development Charges (City and County)*
- Local Improvement District (LID)*
- Developer Dedications*
- Wilsonville Urban Renewal Program*
- Metro Transportation Improvement Program*
- Oregon Statewide Transportation Improvement Program*
- Oregon Immediate Opportunity Program*
- Oregon Community Development Block Grant Program*
- Oregon Industrial Development Revenue Bond Program (financing)*
- Oregon Infrastructure Bank (financing)*
- OECD Special Public Works Fund (financing)*

Consistency with City Plans and Policies

The Coffee Creek Industrial Master Plan will provide a framework to guide the development of public facilities and private uses. This means that the policies, zoning, and codes must be consistent with the Master Plan to support the long-term vision. Implementation is strengthened by the supportive City policies including:

- Establish new design overlay zone for properties along Day Road that are achievable and flexible yet focused on building forms, site layout, landscaping, and transit/pedestrian connectivity.
- Ensure that existing remaining SROZ areas are protected with natural landscaping, vegetation, and mature trees “incorporated” into future site development plans and projects.
- Adopt new code language that requires coordinated annexation requests for a stated minimum threshold of land area not less than 50 acres at a time, unless this condition cannot be met.
- Explore ways to limit storm water run-off impacts caused by increases in impervious surface areas (e.g., building rooftops, parking areas, streets, etc.) by conducting a sub-regional storm water basis analysis and action strategy. This storm water analysis should consider impacts of various public and private improvements, such as green streets, sub-regional detention/treatment ponds, bio swales, filtration devices, and eco-roofs.
- Allow green street design standards as a potential variation to the City’s current roadway design standards within the Master Plan area.
- Explore and quantify potential local funding sources that can be used to pay for new collector and arterial roads, transit service, bicycle/pedestrian facilities, storm water mitigation, water, and sewer improvements. This additional analysis should include but not be limited to the formation of a new System Development Charge overlay district, Local Improvement Districts, and/or an Urban Renewal District.

Draft development code amendments are included in Appendix I. In addition to the development code amendments, the City of Wilsonville and Washington County may be required to adopt additional

amendments to Comprehensive Plans, Public Facility Plans, Transportation System Plans, and Capital Improvement Programs to implement the Master Plan. The City of Wilsonville and Washington County should also review and update their intergovernmental agreement for planning and providing urban services for areas north of Day Road and west of the Portland and Western Railroad.

Washington County Transportation System Plan

Amendments may be required to the County TSP pending the outcome of the Traffic Impact work. Potential TSP amendments may include:

- Identification of planned improvements to widen Lower Boones Ferry Road north of Day Road to four lanes.

Wilsonville Transportation System Plan

Amendments will be required to the Wilsonville TSP to address adequate public facility requirements in accordance with Oregon Land Use Planning Goal 12 Transportation and Metro Title 11 requirements. Recommended TSP amendments include amending Chapter 5 of the 2003 TSP by adding the projects listed in Table 9.

Table 9 City of Wilsonville Draft TSP Amendments

ID #	Project Name	Prelim. Cost Estimate (millions)	Priority
C-24	Kinsman Road (Day Road to Ridder Road)	\$6.00	Years 1-5
T-4	Boones Ferry Road/95 th Avenue northbound turn lane	\$0.20	Years 6+
T-5	Clutter Road/Grahams Ferry Road westbound left turn lane	\$0.85	Years 6+
T-6	Grahams Ferry Road/Clutter Road southbound turn lane	\$0.30	Years 6+

Table 9 (continued)

T-7	Grahams Ferry Road/Clutter Road signal	\$0.28	Years 6+
T-8	Grahams Ferry Road Railroad Crossing	\$4.00	Years 6+
T-9	Boones Ferry Road widen four-lane section north of Day Road	\$2.49	Years 6+
T-10	Tonquin/SW Grahams Ferry Road westbound turn lane	\$0.30	Years 6+
T-11	Tonquin/SW Grahams Ferry Road northbound turn lane	\$0.30	Years 6+
T-12	Tonquin/SW Grahams Ferry Road signal	\$0.28	Years 6+

Source: *Otak and DKS Associates.*

Wilsonville Capital Improvement Program

Additional projects that are recommended for inclusion in the City's CIP include:

- Kinsman Road Engineering and Permitting (with \$500,000 to identify corridor issues, traffic conditions, right-of-way requirements, design sections, land use forecasts, improvement alternatives analysis, capital costs, environmental impacts, and recommendations regarding design sections, alignment, improvement, and phasing/funding);

- Coffee Creek I water transmission line extension along Kinsman Road with approximately \$420,000 for planning, design, and capacity improvements;
- Coffee Creek I sanitary sewer transmission line extension along Kinsman Road with approximately \$680,000 for planning, design, and capacity improvements;
- Coffee Creek Industrial Area SDC Overlay and Urban Renewal Study, with an approximately \$60,000 in funding to be scheduled in 2007/08.
- Coffee Creek I survey work and update of the City's water and sewer capacity models, with approximately \$40,000 in funding, to be schedule in 2007/08.
- Coffee Creek area storm water sub basin analysis, with approximately \$100,000 in funding, to be scheduled in 2008/09.

Note, that all of these recommended CIP improvements would likely require funding that exceeds existing local SDC funding commitments. Hence, the city should work closely with ODOT and other state and local entities to leverage non-city public and private funding resources.

The city should adopt the Master Plan, and then subsequently complete updates to the City Water and Wastewater Master Plans. There are several preliminary water and sewer improvements identified in the Master Plan that can be incorporated into annual updates of the City's Water and Wastewater Improvement Programs.

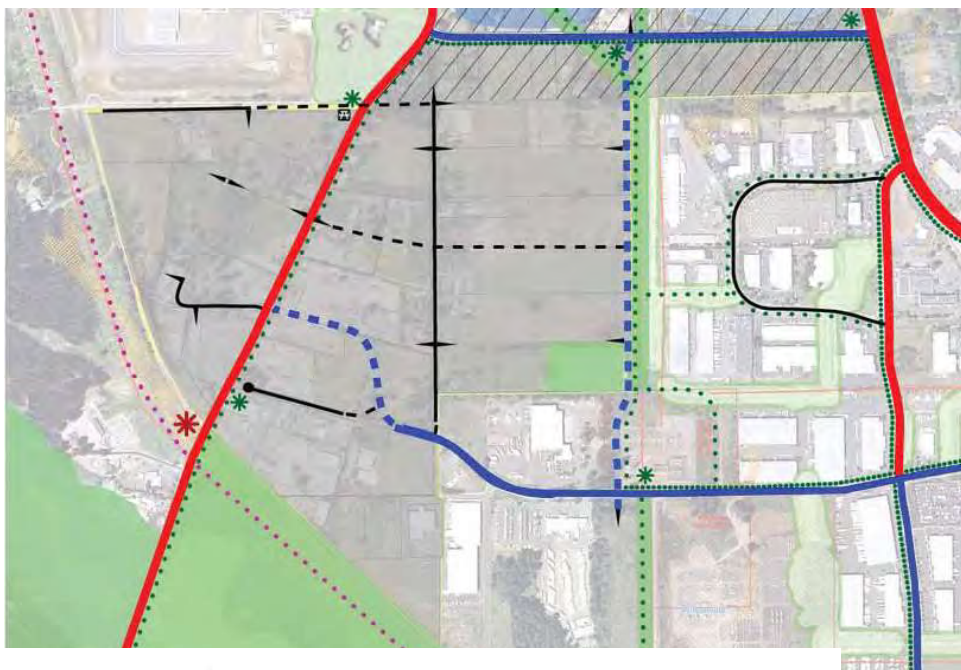
OTHER

To codify the Master Plan, a number of refinements to public facility plans and the draft code amendments for the Master Plan may need updating with map changes and additional text. Recommended code amendments include a new design overlay district for Day Road (Figure

4) and Green Street roadway standards (Figure 5). Additional amendments will be identified by City of Wilsonville planning staff as part of the adoption process.

The Coffee Creek Master Plan recommends adoption of green street design standards (example shown in Figure 5) within the Master Plan area. Green streets can be an element of an overall storm water control plan and Action Strategy for the Basalt Creek/Coffee Lake sub-basin to mitigate storm water run-off impacts caused by increases in impervious surface areas (e.g., building rooftops, parking areas, streets, etc.), and to alleviate impacts that would be caused during peak flood events.

COFFEE CREEK MASTER PLAN APPENDIX



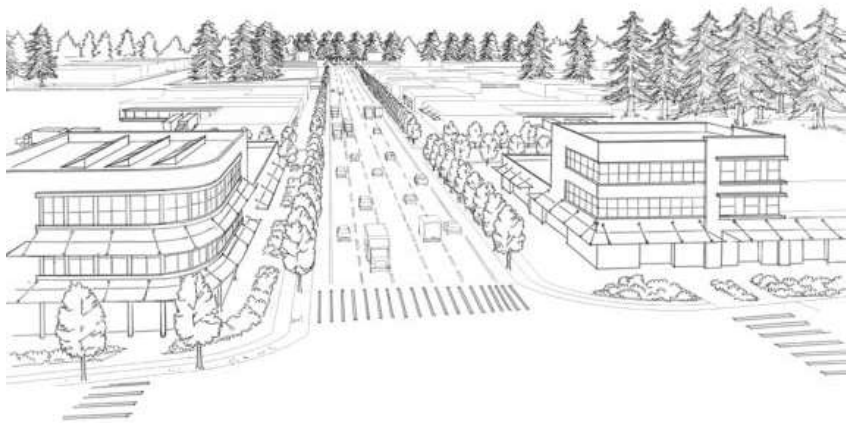
Prepared for:



City of
WILSONVILLE

Prepared by:

Otak, Inc.
DKS Associates, Inc.



Adopted October 15, 2007

CONTENTS (VOLUME II: APPENDIX)

Section:

- A PAC Meeting Documentation**
- B Public Input Documentation**
- C Existing Policies Overview**
- D Plan Alternatives Evaluation**
- E Existing Conditions Maps**
- F Future Conditions Maps**
- G Traffic Analysis**
- H Fiscal / Annexation Analysis**
- I Draft Code Amendments**

The City of Wilsonville Industrial Lands Master Planning Project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development.

Coffee Creek Master Plan Appendix

Section A. PAC Meeting Documentation

Coffee Creek Master Plan Advisory Committee Meeting #5

April 6, 2007 – Wilsonville Water Treatment Plant Conference Room

Attending: please refer to sign in sheet.

Todd Chase summarized the project scope and work schedule, noting that the team is on schedule.

Todd summarized this meeting's agenda and welcomed all in attendance.

Project Schedule Update

Todd summarized the overall work program for members of the public and interested stakeholders that have not attended prior meetings. Sandi Young identified tentative next meeting dates to include:

April 11, City Planning Commission Work Session #2 (to review Draft Plan)

May 16, City Planning Commission Hearing (to open hearing on recommending Draft Plan for adoption)

Late May: public open house (TBD)

Late May/June: City council work session and hearing

Draft Master Plan Discussion

Next, Todd opened up the discussion regarding the Draft Recommended Master Plan, dated March 30, 2007).

Todd provided an update to the PAC members regarding activities that have occurred between now and the last PAC meeting in later February, including: receipt of a letter from Washington County citing concerns with any adoption efforts for the Coffee Creek area before location and traffic impact issues are fully understood regarding the I-5/99W Connector. Other activities included input from the City Parks and Recreation Committee Meeting, and ongoing effort by the City to remap some of the SROZ land in Coffee Creek I. Marah Danielson noted that ODOT has provided comments on the traffic analysis to DKS which have been addressed.

Questions and recommendations from the PAC members included:

- Washington County, Sherwood (Rob Dixon) and Tualatin (Doug Rux) all cited similar concerns regarding moving forward with adoption of both the Master Plan south of Day and the Concept Plan (north of Day Road) at this time, in advance of location and traffic impact determinations regarding the I5/99W Connector Project.
- Rob Dixon indicated that the I-5/99W committee and consultant team working on the connector study have narrowed down the alignment options from 127 to a dozen to be further evaluated this year. While none of the 5 “green alignments” and 16 “yellow alignments” directly impact land within the Coffee Creek Master

Plan and Concept Plan areas, there could still be traffic impacts that are significantly different than what have been determined thus far in the Coffee Creek Planning Process.

- Doug Rux indicated that a “no build” option is also being advanced for future study.
- John Michael indicated that all future land use planning and development in this portion of the Metro Region cannot be put on hold indefinitely because of a lack of decision on the preferred alignment for the connector. Todd reminded the PAC that Metro has conditioned future completion of Title 11 Planning to be completed within 2 years of a I-5/99W Connector location decision for the area north of Day Road, but placed no conditions on the planning and annexation/development process relating to the Connector south of Day Road.
- Doug and Steve Kelley expressed concerns that the property owners in the Coffee Creek industrial area, and others will not know the true impact of traffic and related roadway mitigation improvements and costs until the Connector project location is determined and traffic models are completed.
- John Michael noted that the City has already coordinated with ODOT as part of the TSP, and has identified the I-5/Eligson interchange area as “an area of special concern” that will be subject to ongoing refinement planning and mitigation.
- Steve Kelley indicated that Day Road may need to be reclassified as an Arterial roadway depending upon Connector impacts. Todd indicated that the city may want to ensure that building setbacks in new developing areas are adequate to accommodate additional travel lanes that may be needed in the long term, depending upon the indirect traffic impacts generated by the Connector.
- John Michael recommended that the Introduction to the Master Plan be expanded to reference the desire for ongoing coordination with regard to the Connector Project.
- Julie Kahoe reminded the PAC that there is an regional need for industrial land that is driving up land prices beyond what most tenants can afford, which could weaken the city and regional ability to compete for strategic employment growth. This issue will worsen if Coffee Creek I cannot move forward with annexation in the near term.
- Doris Wehler asked about the PGE substation that is seeking a development permit north of Day Road in the Concept Plan area. Todd indicated that it was his understanding that this project would help address existing power supply deficiencies and help with long term growth in the area, and that such plans are preliminary. Steve Kelley had no knowledge of a PGE development application at this time.
- Terry Tolls requested that a revised Master Plan be prepared that shows potential driveway access points along the east segment of Day Road.
- Terry Tolls also recommended that the Day Road Design Overlay District allow up to 30% of the site to be developed with office (rather than the recommended 20%) in light of increased construction costs due to higher quality building and site design standards.

- Stacey Humphrey indicated that prior to adjusting any commercial land allocation; the City should make sure that it remains consistent with Metro Title 3 regulations.
- Todd and Sandi recommended that concerned PAC members should direct written input via email to Sandi prior to April 10 so that the Wilsonville Planning Commission can take them into account.
- Peter Stahick noted that employee parking for industrial buildings is often located near the front administrative/office building area, so parking should be allowed along Day Road. Todd indicated that buffered parking would be an appropriate use along Day Road as long as any truck loading is screened and/or moved to behind the building.

Acceptance of February 16 meeting notes

After deliberation, the PAC agreed to accept the prior meeting notes without changes.

Todd indicated that this would likely be the last PAC meeting for the Coffee Creek planning process, and thanked all for their interest and contributions in this planning process.

Meeting notes prepared by Todd Chase.

Coffee Creek Master Plan Advisory Committee Meeting #4

February 16, 2007 – Wilsonville Water Treatment Plant Conference Room

Attending: Sandi Young, Chris Neamtzu, John Michael (City of Wilsonville); Todd Chase (Otak); Scott Mansur (DKS); Doug Rux (City of Tualatin); Steve Kelley (Washington County); Stacey Humphrey (DLCD); Marah Danielson (ODOT); Julie Kahoe (ICPS); Rob Hatch (Hatch Western); Kevin McKoy; et.al.

Todd Chase summarized the project scope and work schedule, noting that the team is on schedule.

Todd summarized this meeting's agenda and welcomed all in attendance.

Project Schedule Update

Todd summarized the overall work program for members of the public and interested stakeholders that have not attended prior meetings. Todd indicated that a 45 day project delay was incurred when the decision was made to utilize most recent Metro 2030 land use forecasts that are consistent with the I-5/99W Connector Study. Todd identified tentative next meeting dates to include:

March 30, PAC meeting #5 (to review Draft Plan)
April 5, Public open house event (to review Draft Plan)

Transportation and Infrastructure Recommendations

Next, Todd and Scott Mansur summarized the findings from the traffic analysis memorandum from DKS dated February 12, 2007) and the Fiscal Impact/Annexation Memorandum (dated February 6, 2007).

Questions and recommendations from the PAC members included:

- Steve Kelley questioned the assumptions made for the I-5 off-ramp movement to 95th Avenue left turn connection. Scott indicated that there is a current ODOT project that would signalize this movement to allow trucks to make the lane change from the ramp to 95th Avenue that would occur this summer. Scott indicated that additional access management measures are also recommended.
- Doug Rux asked the consultant team to clarify whether the no build improvements and recommendations for Alt. 1 and Alt. 2 (south and north of Day Road) are subsets or cumulative improvements. Todd indicated that they are cumulative, but the “no build” improvements are not necessary prior to the “build” improvements.
- Stacy Humphrey indicated that the Tonquin Road/Grahams Ferry Road intersection improvements are outside existing urban growth boundaries, and would require special exceptions to be permitted.
- Ray Phelps asked how much the traffic results would change if the I-5/99W connector project alignment was moved south of the Coffee Creek Industrial

Area, and what other major arterial improvements are assumed in the traffic model. Scott indicated that he would have to check on these assumptions.

- Doug reminded the PAC and members in attendance that the project recommendations, impacts, and costs, are based on a “snap shot” of assumptions for 2007-2027. He indicated that in reality the actual costs will be much higher (as they are escalated to future year dollar amounts) and the impacts will change depending upon actual vs. projected regional and local growth, and any change in street connections.
- Todd indicated that the preliminary list of project priorities will be revisited with City staff and refined as appropriate.
- Todd also indicated that all water, sewer and storm water improvement recommendations are considered to be “place holders” until more detailed system modeling is conducted by the city.
- Todd also noted that the fiscal impact findings generally indicate a positive fiscal impact for Alternatives 1 and 2 (south of Day Road). Fiscal impact findings for the area north of Day indicated a positive fiscal impact for Alt. 1, but a slight loss for Alt. 2 (given more housing and less jobs in that alternative).

Evaluation of the Alternatives:

Todd summarized the preliminary evaluation matrix dated February 13, 2007. Following discussion, the PAC conclusions for the area south of Day include:

- With regard to Goal 1, Consistency with Local, Regional and State Plans; Alternative 1 is more favorable than Alt. 2. DLCD staff (Stacey Humphrey) indicated preference to Alt. 1. Metro leadership also has openly supported Alt. 1. ODOT staff (Marah Danielson) had no preference at this time.
- With regard to Goal 2, Transportation, Alternative 2 is more favorable than Alt. 1. This is mostly due to the proposed realignment of Clutter/Grahams Ferry Road. Alt. 2 also included a Kinsman Road to Commerce Circle street connection, but the analysis by DKS indicated that it could hurt the level of service at the 95th Avenue intersection with Boones Ferry Road.
- With regard to Goal 3, Public Facilities, Alternative 1 is more favorable than Alt. 2 given the potential cost economies that could be realized if storm water drainage improvements are made in conjunction with the Kinsman Road alignment shown in Alt. 1.
- With regard to Goal 4, Citizen Stakeholder Participation, Todd indicated that the initial public meeting provided “soft support” for the concept of a special design overlay standard for industrial buildings along Day Road, but mixed support for the two different road way networks. PAC members in attendance (and other property owners) at the meeting generally favored the simplified street network shown with Alt. 1, but supported the Design Overlay Concept shown with Alt. 2.

North of Day Road, the Alternatives were essentially tied for the area west of Basalt Creek. However, Alternative 1 scored relatively higher than Alternative 2 with regard to Goal 1 (Plan Consistency), and tied for most of the other criteria.

Doug voiced support for Alt. 1 in light of the additional traffic impacts it would likely generate (about 30% more peak hour trips than Alt. 2) and the inconsistent Metro and Washington County land use planning assumptions. John indicated that the Mixed Employment PUD concept would be preferable from the City's perspective since it would help achieve a better housing/jobs balance and keep the traffic impacts relatively high (which is considered to be a more conservative approach for long term planning). Doris Wehler and other PAC members noted the rolling topography in this quadrant which would not be conducive to industrial buildings.

Recommended Draft Alternative

Doris Wehler provided the PAC with the mix of improvements and land use assumptions that were endorsed by the Wilsonville Chamber of Commerce membership. They included:

- Alt. 1 road network, with exceptions for the Clutter Road realignment and Commerce Circle connection shown in Alt. 2.
- Design overlay along entire length of Day Road.
- Support for the Mixed Employment PUD concept north of Day Road as shown with Alt. 2

Following a discussion about the advantages and disadvantages with each alternative, the PAC generally agreed to support the Chamber suggestions with the exception of the Commerce Circle-Kinsman Road connection, which is to be shown as a trail.

Acceptance of October 20 meeting notes

Todd and Chris indicated that in response the prior meeting issues regarding the mapped SROZ areas south of Day Road, City staff and property owner (Ray Phelps) have met and walked the subject property. It is likely that the subject site was inaccurately mapped in prior adopted SROZ ordinance and that a map revision could be appropriate. Todd also indicated that Washington County Commission is now considering a proposed ordinance (#67) that would create holding zones for most of the areas brought into the UGB by Metro in 2004, and also designated most of the area north of Day Road as a "significant resource" for environmental planning purposes.

Next meeting: tentatively set for Friday, March 30, 2007 at 9 am at the City's Water Treatment Plant.

Meeting adjourned at 11:35 am.

Meeting notes prepared by Todd Chase.

Coffee Creek Master Plan Advisory Committee Meeting **August 18, 2006 – Wilsonville Water Treatment Plant Conference Room**

Attending: Todd Chase, OTAK; Scott Mansur, DKS; Andrew Johnson, ODOT; Doug Rux, City of Tualatin; Eldon Johansen, City of Wilsonville; Doris Wechler, Wilsonville Chamber; Dave Brown, property owner; Tom Moes, Root Holdings, LLC; Ray Phelps, Allied Waste, property owner; Stacy Rungay, property owner; Bob Jonas, property owner, Dick Kruger, property owner; Rob Hatch, property owner; Stacey Hopkins, DLCD, Tim Marshall, MBI; Ron Snyder, property owner, Chris Neamtzu, City of Wilsonville, Sandi Young, City of Wilsonville (partial attendee).

Updated project schedule flow chart was distributed. Todd Chase summarized the project scope and work schedule, noting that the team is on schedule.

Questions were raised about notification for the upcoming open house in September. The City indicated that newspaper ads would be supplemented with direct mailings to folks near the planning area. Doug recommended inviting CPO leaders. Todd recommended signs posted along major roadways.

Todd noted that the two northerly property owners in Area 2 have opted to be removed from the Concept Planning effort, and that the City and ODOT have agreed with these requests to amend the plan area boundary.

Draft Goals and Objectives:

Todd distributed a two-page summary of the draft project goals, objectives and evaluation criteria, which summarizes the longer version already provided to Advisory Committee members.

Questions and recommendations from the PAC members included:

- Doug Rux recommended inclusion of any specific Metro Ordinance provisions for properties brought into the UGB.
- It was noted that since there appears to be no 50 acre parcels within the plan areas, there should be some effort to encourage aggregation of tax lots. Sandi Young indicated that the City always utilizes Planned Unit Developments and it would be a requirement for new development to proceed.
- Doug and Stacey recommended adding Objective E. Compatibility with Statewide Planning Goals to Goal 1.
- Andy Johnson mentioned that we need to add objective G “compliance with State of Oregon Transportation Plans and policies” and objective H “implement Washington County TSP” under Goal 2. Transportation.
- Doris Wehler recommended that we add criteria 10 “Level of support from I-5/99W Connector Coordination committee(s)” to Goal 2.
- Tom Moes recommended we move criteria D from Goal 5 up to Goal 2.
- Todd Chase recommended we reduce redundant criteria where possible.

- Doug Rux recommended adding Criteria 8 “relative measure of Fiscal Impact” to Goal 3 Public Facilities.
- Andy Johnson recommended Criteria 2 within Goal 4, and to gauge level of support from property owners regarding the potential marketability of their property.
- PAC members felt Goal 5, Objective B should focus more emphasis on the opportunities for Green development of facilities, not types of uses.
- As the Parks and Recreation Department representative, Chris will seek level of support from Parks and Recreation subcommittee for a new criteria under Goal 5, “support for Parks and Open Space”.

Draft Alternatives:

Todd described the two planning areas in terms of gross and net buildable land area. Todd noted that Area 1 (South of Day) has 216 gross acres, with about 207.5 suitable for industrial development. An additional 25% would be needed for public collector/arterial roads and various easements, leaving about 155.6 net acres for land development.

North of Day Road Area 2 has approximately 81.2 acres, but because there are more slopes and drainages than the areas south of Day, there are only 65.9 acres suitable for industrial development (excluding 25% for streets). To better optimize urbanization potential, Todd recommended consideration of some non-industrial uses such as office and housing in Area 2 for one of the alternatives.

Todd described both of the draft Alternatives. Todd noted that Alt. 1 is intended to be the more traditional industrial master plan with lower costs than Alt. 2. Alt. 2 is focused on employment corridors and higher density development with efforts made to improve the area’s market image with higher building design standards than in Alt. 1, and a new neighborhood north of Day along Boones Ferry Road.

The PAC’s comments included:

- Stacey Hopkins recommended that we make one alternative 100% compliant with the Metro Ordinance that was adopted when this area was brought into the UGB. Todd recommended we amend Alt. 1 to be 100% compliant.
- Several PAC members felt we should keep as many existing roadway alignments as possible on Alt. 1 and Alt. 2 to keep down the capital costs.
- Todd recommended a separate definition for gateway/waysides versus pocket park/waysides. Gateway waysides would be oriented towards area signage, landscaping and way finding (tenant/building rosters). Pocket parks would have picnic shelters, open space, and perhaps sport courts with trail linkages.
- Several PAC members recommended focusing the higher standards for building design along Day Road in Alt.2, and liked the potential transition to a new residential neighborhood between the basalt creek drainage and Boones Ferry Road.

Next meeting: Friday, October 20 at 9 am at the City's Water Treatment Plant.

Meeting adjourned at 11:30 am.

Meeting notes prepared by Todd Chase

Coffee Creek Master Plan Advisory Committee Meeting **October 20, 2006 – Wilsonville Water Treatment Plant Conference Room**

Attending: please refer to sign in sheet

Todd Chase summarized the project scope and work schedule, noting that the team is on schedule.

Todd summarized this meeting's agenda and welcomed all in attendance.

Public Open House Input

Todd summarized the Task 3 Conceptual Master Plan Evaluation Brief, and highlighted feedback from the well-attended open house.

Next, Todd and Scott Mansur summarized the findings from the existing traffic analysis and the revised Transportation Policy Memo, which takes into account issues raised by Steve Kelley of Washington County. One key unresolved issue pertains to which land use inputs to utilized for the transportation impact model. New land use assumptions have been developed since the city adopted its TSP. These "new" land use assumptions are being reviewed by the City and are being used for the Hwy.99/I-5 connector study, and if used for the Coffee Creek TGM project, would require a scope change.

Questions and recommendations from the PAC members included:

- Ray Phelps and Steve Kelley recommended that the consultant team be directed by the city to utilize the latest land use inputs to be consistent with the connector study. Most TAC members agreed.
- Ray recommended a short-term fix for the Boones Ferry/95th Ave. intersection (which is out of the TGM study area) to include changing left-turn signal timing from Boones Ferry Road.
- Scott mentioned that the Boones Ferry/95th Ave. intersection is Level of Service "E" today, but can be improved to "D" after stage II improvements are made to it. Steve recommended realignment of Boones Ferry Road to be considered.
- Doug Rux would like to see the trip distribution and growth assumptions when the draft transportation analysis is presented. Doug would like to see changes in the roadway patterns in conjunction with this work.
- Ray expressed concern that the Hwy. 99/I-5 Connector study area includes all of the Coffee Creek Industrial Planning Area. Todd indicated that Metro ordinance allows development to proceed south of Day Road, but not north of Day until 2 years after the connector alignment is chosen.
- Ray recommended (and TAC members agreed) that the alignment for Kinsman Road be shifted eastward along the SROZ corridor in Alt. 1 to keep as much contiguous land open for development as possible.
- Ray questioned the Significant Resource Overlay Zone (SROZ) designation for the portion of this land north of his operations. Sandi indicated that the SROZ designation was adopted by City Council and is subject to restrictions.

- A property owner asked when the new taxes/regulations would apply to them. Sandi indicated that the City will only allow annexation when the majority of property owners in a sub-area support it—which would not be until property owners ask for it.
- Paul Ketcham indicated that it would be difficult for the Metro Council to endorse a change from Industrial designation to mixed use in the NE portion of the study area. There would need to be justification based on traffic, land constraints, etc.

Proposed Revised Alternatives:

Todd described the public input on the two concept plans, and after discussion the TAC recommended the following revisions:

Alternative 1: Industrial

- Keep land use the same, but attempt to simplify local road and proposed pedestrian network.
- Align Kinsman Road to the east along the SROZ corridor.

Alternative 2: Industrial/Mixed Use

- Consider mixed use area in NE portion of the planning area (North of Day Road)
- Reconfigure proposed Kinsman Road alignment, but keep traffic roundabout and connection to Commerce Circle, and realigned Clutter Road.
- Simplify the proposed local street and pedestrian network.

Next meeting: Friday, January 11, 2007 at 9 am at the City's Water Treatment Plant.

Meeting adjourned at 11:45 am.

Meeting notes prepared by Todd Chase

Coffee Creek Master Plan Advisory Committee Meeting

June 15, 2006 – Wilsonville Water Treatment Plant Conference Room

Attending: Todd Chase, OTAK; Scott Mansur, DKS; Doug Rux, City of Tualatin; Eldon Johansen, City of Wilsonville; Doris Wechler, Wilsonville Chamber; Dave Brown, property owner; Ray Phelps, Allied Waste, property owner; Jean Taylor, property owner; Stacy Rungay, property owner; Rob Hatch, property owner; Steve Kelly, Washington County; Tim Marshall, MBI; Don Richards for the Thompson property, Ron Snyder, property owner, Stu Peterson, Macadam Forbes; Chris Neamtzu, City of Wilsonville, Sandi Young, City of Wilsonville.

Minutes of the first meeting were distributed.

Todd Chase summarized the project scope and described the study area as lands east and north of the railroad, south of the correctional facility, lands south of Day Road outside the city boundary, lands north of Day Road and east of Grahams Ferry Road to approximately Clay Road extending east to Boones Ferry Road. He said that the planning south of Day Road would be master planning, and the work north of Day Road would be concept planning.

Questions were raised about notification. Doug Rux said he is referring folks to Wilsonville. Signing the area was suggested. Sandi Young said that there are two interested groups, the Advisory Committee members and a second group who wish to participate via e-mail. A map of represented property owners was distributed. Sandi said that information will be placed on the city's website. It was suggested that the existing Concept Plan be put on the website.

Todd presented the planning schedule.

The draft Goals and Objectives were distributed at this meeting. They are taken from the City's Comprehensive Plan, the Metro Urban Growth Management Functional Plan and other existing documents. Please send any comments to Sandi via email to Linda Straessle at the city.

The summary of Existing Plans and Policies prepared by OTAK was distributed for review by the committee.

The next step is to develop Evaluation Criteria for the review of the various alternative scenarios, and then to develop the actual alternatives.

The first public meeting will be on the draft Plan Alternatives in late September.

The draft Master Plan will be prepared and reviewed in January/February 2007 with a final draft plan then prepared for review by the Planning Commission and City Council in April through June 2007.

Todd said that the Existing Plans and Policies document pulled the direction of a variety of applicable plans and documents. He said that Metro had designated the area known as Coffee Creek I as Regionally Significant Industrial Land (RSIA), and that the remaining study area was taken into the UGB as Industrial land in 2004. He began a review of the draft document.

Todd said that the Metro Urban Growth Management Functional Plan sets criteria for RSIA lands, has restrictions on subdivision, while industrial lands can be subdivided if there is an approved master plan or shadow plat. Metro's RSIA regulations limit retail and commercial activities to no more than 3,000 square feet per user for a single user, and no more than 20,000 square feet. Lots or parcels larger than 50 acres may be divided into smaller lots pursuant to a master plan. Lots smaller than 50 acres may be divided into any number of smaller parcels.

Doug asked if there were job/acre conditions applied when Metro added Coffee Creek I area to the UGB. Todd responded that no unique job targets have been established by Metro for the study area by Metro, and the City of Wilsonville has an adopted RSIA Zone that appears to comply with Metro guidelines.

Infrastructure:

Todd referred to page 17 of the Existing Plans and Policies report. The water master plan indicates that there is plant capacity, and plans for a new line in Grahams Ferry, together with a new reservoir and pump station (2015) to serve this area. Eldon Johanson said that a large water line was installed as part of the correctional facility infrastructure.

Doug asked about Tualatin Valley and plans for a water line to serve Sherwood. Eldon responded that plans are very fluid right now. Several alternative line locations are being reviewed.

Parks: (pg. 20) The City's draft Parks Plan includes plans for linear trails, waysides and green spaces within and adjacent to this area. The Parks Plan is expected to be adopted by council in Fall 2006.

The Emergency Services Plan will be added to the report.

Zoning in the area is both Clackamas and Washington Counties. The line between counties is Ridder Road. Clackamas County maintains all traffic signals in the area.

Traffic: Scott Mansur of DKS noted that, of the 6 road improvements in the Transportation Systems Plan affecting this area, 4 had been built. The remaining 2 are related to the northerly extension of Kinsman Road to Day Road. There are some wetland issues in the potential alignment which may cause problems. The intersection of 95th /Commerce Circle has capacity problems which will need to be addressed as part of this planning effort. Stu Peterson remarked that the city owns much of the Kinsman ROW. Eldon responded that actually Metro owns a good share of it. Steve Kelly

remarked that the County currently maintains Ridder, Clutter and Graham's Ferry Roads and that they are truck routes.

Bike and trail improvements, as proposed by metro and the City's draft Bike/Ped Plan were reviewed. Steve Kelly said that the Tonquin Trail location, etc. should be coordinated with metro. Sandi responded that Chris Neamtzu, the City's Parks Planner was working closely with Metro on all parks and trails work in and near the city. The Bike/Ped Plan is expected to be adopted by Council in Fall 2006.

The City's draft Transit Plan proposes service to the Coffee Creek planning area. The draft Transit Plan is expected to be adopted by Council in Fall 2006.

Railroad, both a potential spur to serve the area, and any improvements to the overpass on Graham's Ferry Road. Todd said that ODOT has a railroad fund for projects related to jobs. He will check with Andy Johnson (ODOT) on rail issues.

Private Utilities: Sandi remarked that PGE is represented on the Advisory Committee. It was recommended that we work to get BPA at the table.

Draft Goals and Objectives:

Sandi said that the draft goals and objectives are taken from the City's Comprehensive Plan, the Metro UGM Functional Plan and other applicable documents. Discussion centered around Policy 1c: Encourage energy efficient, low pollution industries. Suggestions were: a solar oriented street grid, use of recycled water on site, creating walkable street/pedestrian networks, or specific development code requiring sustainable development. Todd described an industrial park in Bend that is being planned to include transit, passive solar street grids, recycled water use, etc. He said that it allows those buying sites in the park to get LEED credit if they pursue this US Green Building Council certification. Stu remarked that ecoroofs are costly for industrial buildings.

Based on this discussion, Todd recommended that the design team come back with two development alternatives for the area: one focused on the most economically efficient street/land use layout; the other focused on the most environmentally sensitive layout. Both of these alternatives could be refined based on TAC and public input, and then subjected to the plan evaluation criteria.

Sandi said that there were probably other goals and objectives to be added to the draft. She would do this prior to the next meeting, and for folks to get their comments to her.

Next meeting: Friday, August 18 at 9 am at the City's Water Treatment Plant.

Meeting adjourned at 11 am.

Meeting notes prepared by Sandi Young

Coffee Creek Master Plan Appendix

Section B. Public Input Documentation

M e m o r a n d u m



620 Kirkland Way, #100
Kirkland, WA 98033
Phone (425) 822-4446
Fax (425) 827-9577

To: Sandi Young, AICP Planning Director, City of
Wilsonville; Andrew Johnson, ODOT Region 1
From: Todd Chase, Otak
Copies: File
Date: October 3, 2006
Subject: Task 3 Conceptual Master Plan Evaluation Brief
Project #: 13612

Summary of Open House Input

Otak and the City of Wilsonville conducted a public open house on September 28, 2006 at Wilsonville City Hall to review and discuss preliminary master plan alternatives for the Coffee Creek Industrial Area. Approximately 40 members of the public attended the meeting, which was advertised in the Oregonian newspaper, through direct mailings to over 2,000 residents and through signs posted throughout the area. Exhibit A includes that meeting sign in sheet.

This Open House served as the first of two public open house meetings that are planned as part of the Wilsonville Coffee Creek TGM project that is underway. The Agenda for the open house included:

1. Welcome and Introduction
2. Project Schedule and Overview
3. Existing Conditions
4. Alternatives Planning Concepts
5. Open Discussion

Public Input

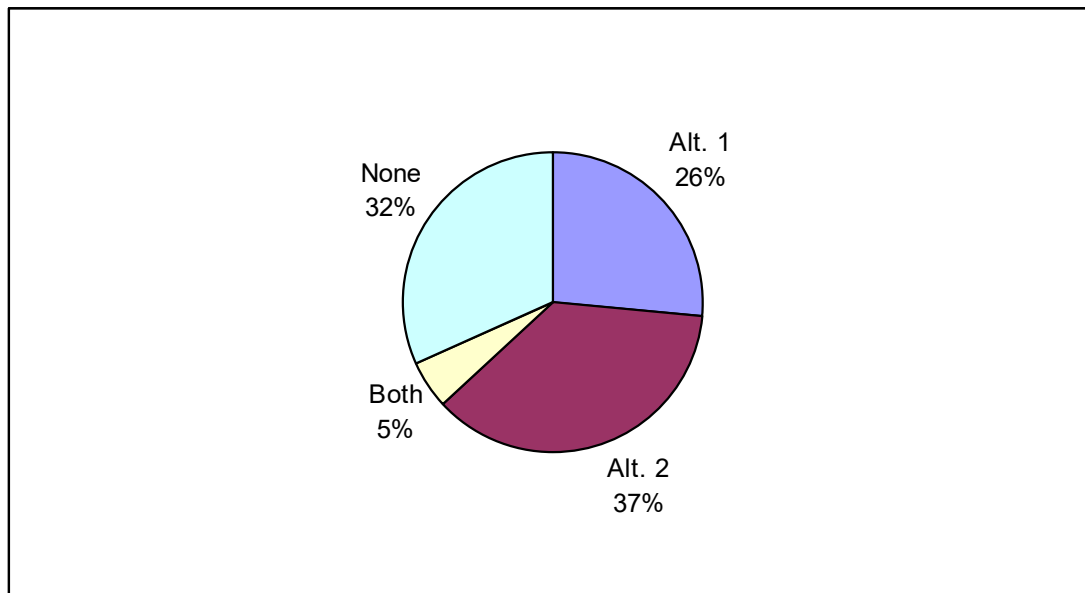
Public exist surveys were distributed to all attendees (see Exhibit B), and 19 have been tabulated to date. Comments were also recorded by Todd Chase on flip charts. A summary of the public input is provided below.

Which Alternative is Preferred?

Todd indicated to the public in attendance that the alternatives being presented are considered to be very preliminary and conceptual at this stage in the planning process. The alternatives were refined based on input from the Technical Advisory Committee (at TAC meeting number 2) and will be refined again based on the public input, with the goal of narrowing the alternatives into one preferred alternative. Hence, the intent of this public meeting is to obtain some general direction from the public regarding elements of each alternative that are liked or disliked, so the design team can create a hybrid alternative that has the most support from the City, the public, and other state, regional and local agencies.

The results of the 19 tabulated surveys regarding overall preference is shown below in Figure 1.

Figure 1, Which Alternative Do You Prefer?



Additional comments regarding specific likes and dislikes are summarized below.

Alternative 1

What Folks Liked Most about Alt. 1

- Less restrictions, no design overlay (2)
- Like simple roadway and land use layout (4)
- Potential less cost burden on public infrastructure
- Like bicycle/ped layout (2)
- Like the fact that there would be more large industrial parcels

What Folks Liked Least about Alt. 1

- Too many pocket parks/waysides (1)
- Too many road connections
- Too many bicycle/ped connections (4)
- Keep bike/ped network along streets not in power easements or trails
- Would like to show more land for light industrial, less for RSIA
- Prefer if Kinsman connection shifted to the east in existing power line easement (2)
- Need to include realignment of Clutter Road
- May want to consider office in lieu of housing in NE corner
- Consider additional trail network along Basalt Creek

Alternative 2

What Folks Liked Most about Alt. 2

- Liked the residential neighborhood shown in NE corner (1)
- Like the connection to Commerce Circle (3)
- Like Kinsman alignment
- Like all roadway connections (4)
- Like all bike/ped connections (5)
- Like the greenway and pocket parks/waysides
- Like relocation of Clutter Road
- Like Design Overlay on Day Road (2)
- Like variety of land use and building types in Alt. 2
- Like the traffic roundabout

What Folks Liked Least about Alt. 2

- Kinsman should be shifted west to make larger parcels on east side of road (3)
- Do not like connection to Commerce Circle
- Should plan for retail along Day Road to support planned housing
- Do not like traffic roundabout (2)
- Do not like design overlays on industrial zone
- Too many bike/ped connections (5)
- Too many pocket parks/waysides
- Consider additional trail network along Basalt Creek

There were additional comments made by the public that reflect broader policy questions with regard to transportation, and local land use and traffic issues that the TAC should consider. These other comments are summarized below.

Other Comments

- Put entire master plan on hold until bypass alignment is determined (1)
- Need to show public what is planned at 95th Ave./Freeway Interchange area to resolve existing traffic congestion (2)
- Include an option that shows how I-5/99W connector corridor can be accommodated south of the prison site through the master plan area.
- Concern about conflicts between this Master Plan and Metro's policy stance on major roadway improvements
- Be sure to involve BPA in early discussions on planning
- How and when will annexation impact tax structure (2)
- Consider potential mixed-use PUD in area NE of Day Road

Next Steps – Creating a Preferred Alternative

Based on the public input it is apparent that there is a mix of support for either Alternative. It appears that the preferred alternative could maximize the public's support if reflects elements that people are most passionate about, particularly the likes and dislikes noted below.

Preliminary Modifications to Alternative 2 to consider include:

- Kinsman should be shifted west to make larger parcels on east side of road
- Attempt to simplify the local street network, by eliminating some internal east-west connections
- Limit the bike/ped connections to major streets and BPA easements, but explore possibility of adding a planned trail along Basalt Creek north of Day Road.
- Limit the number of pocket parks/waysides
- Ensure that the roundabout is designed for large trucks
- Evaluate the traffic impacts of the Commerce Circle connection
- Consider a mixed-use PUD as an alternative in the NE area

These items shall be discussed with the TAC at the next planned meeting on October 20, 2006 at the Wilsonville Water Treatment Plant.

Please contact me with any questions regarding these findings or conclusions.

M e m o r a n d u m



17355 SW Boones Ferry Rd.

Lake Oswego, OR 97035

Phone (503)635-3618

Fax (503) 635-5395

To: Chris Neamtzu and Sandi Young, City of Wilsonville,;
From: Todd Chase, Otak
Copies: Marah Danielson, ODOT Region 1
Date: March 7, 2007
Subject: Task 4, Evaluation of Alternatives, Parks Commission
Work Session Input
Project #: 13612

Introduction

In accordance with the Coffee Creek Industrial Area Transportation Growth Management planning grant, we are seeking direction from the City of Wilsonville's Parks and Recreation Advisory Board to endorse the Preliminary Preferred Plan (shown in Figure 3) with or without conditions.

This memorandum describes the revised draft ranking of evaluation findings and recommended next steps for the advancement of planning alternatives for the Coffee Creek Industrial Area TGM project. At this point, we have applied the revised draft evaluation criteria to the two alternatives (based on Planning Advisory Committee {PAC} input on August 18, 2006, October 20, 2006 and February 16, 2007), and have taken into account public input (based on a Public Open House on September 28, 2006).

Park Facilities Recommendations

The Wilsonville Parks and Recreation Master Plan addresses the park, recreation, and service needs of Wilsonville residents over the next 20 years, specifically envisioning *...a comprehensive and interrelated system of parks, recreation, and natural areas, that:*

- *Offers a range of experiences, including active and passive recreation, for all ages and abilities;*
- *Contributes to a healthy and livable community;*
- *Conserves and educates about the natural environment; and*
- *Promotes community connectivity by linking parks, recreation facilities, schools, and other key community centers by trails, pathways, and public transit.*

The Parks and Recreation Master Plan implements Policy 3.1.11 of the Comprehensive Plan, which states that, *The City of Wilsonville shall conserve and create open space throughout the City for specified objectives including park lands.*

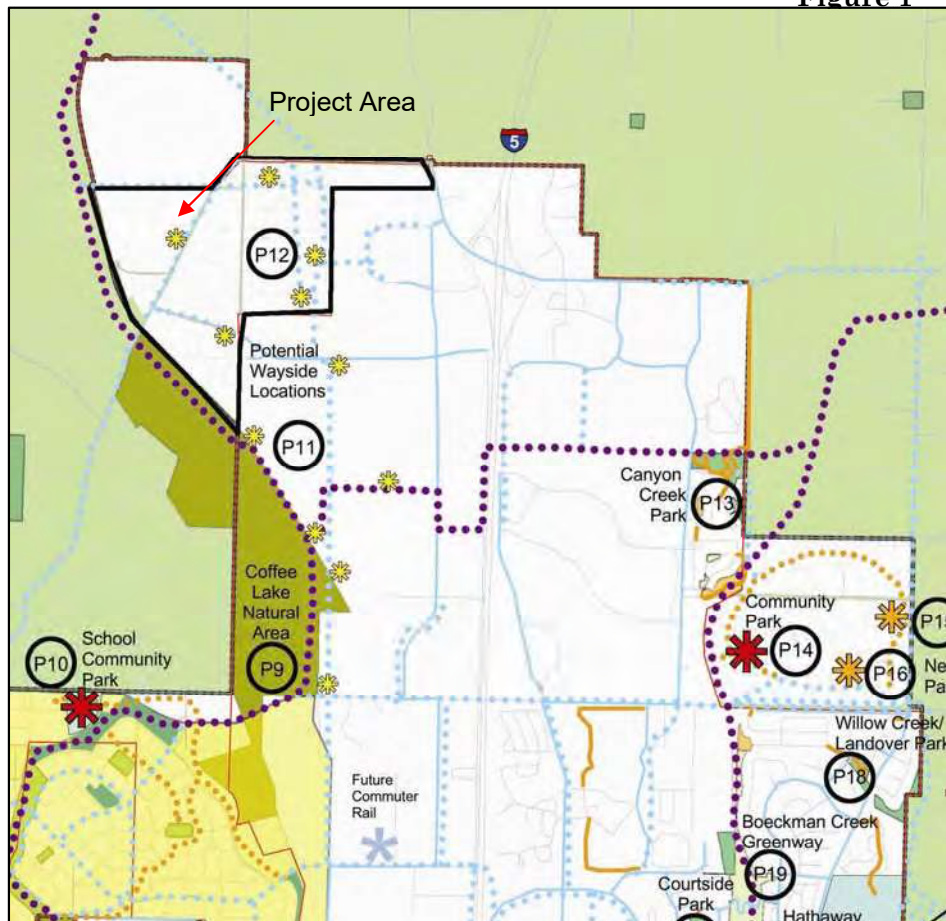
The Master Plan specifically identifies the Northwest Industrial Area as having a strong need for accessible green space and recreation opportunities and recommends providing parks in this area and/or improving linkages between the Industrial Area and existing parks.

Northwest Industrial Area: Parks are just as significant in commercial and industrial areas as in residential areas. However, the recreation and leisure needs of workers are different from residential needs, and they are often overlooked. The City of Wilsonville can be a leader in this regard by providing parks designed to serve the city's workforce. For example, the Bike and Pedestrian Plan recommends a regional trail and community trail through the Northwest industrial area, offering opportunities to incorporate recreation amenities to serve nearby employees as well as trail users. Benches, picnic areas, and similar facilities may provide healthy opportunities to relax and socialize during lunch and work breaks. As these industrial areas are developed, the City can encourage employers to offer additional recreation opportunities, and other healthy-living amenities. (Wilsonville Parks and Recreation Master Plan, Chapter 2)

Protecting natural resources is a hallmark of the Comprehensive Plan and the Parks and Recreation Master Plan. Natural resource protection and opportunities to partner with private land owners, as has historically been the case in Wilsonville, should be considered during the planning process for the Coffee Creek Area. Focus should also be placed on creating an interconnected park system including greenways and trails, but also connections for bike, pedestrian, and transit transportation choices.

The project area has one identified parks improvement shown in Figure 1, which is listed in the Parks and Recreation Plan as "P12 Industrial Area Waysides."

Figure 1

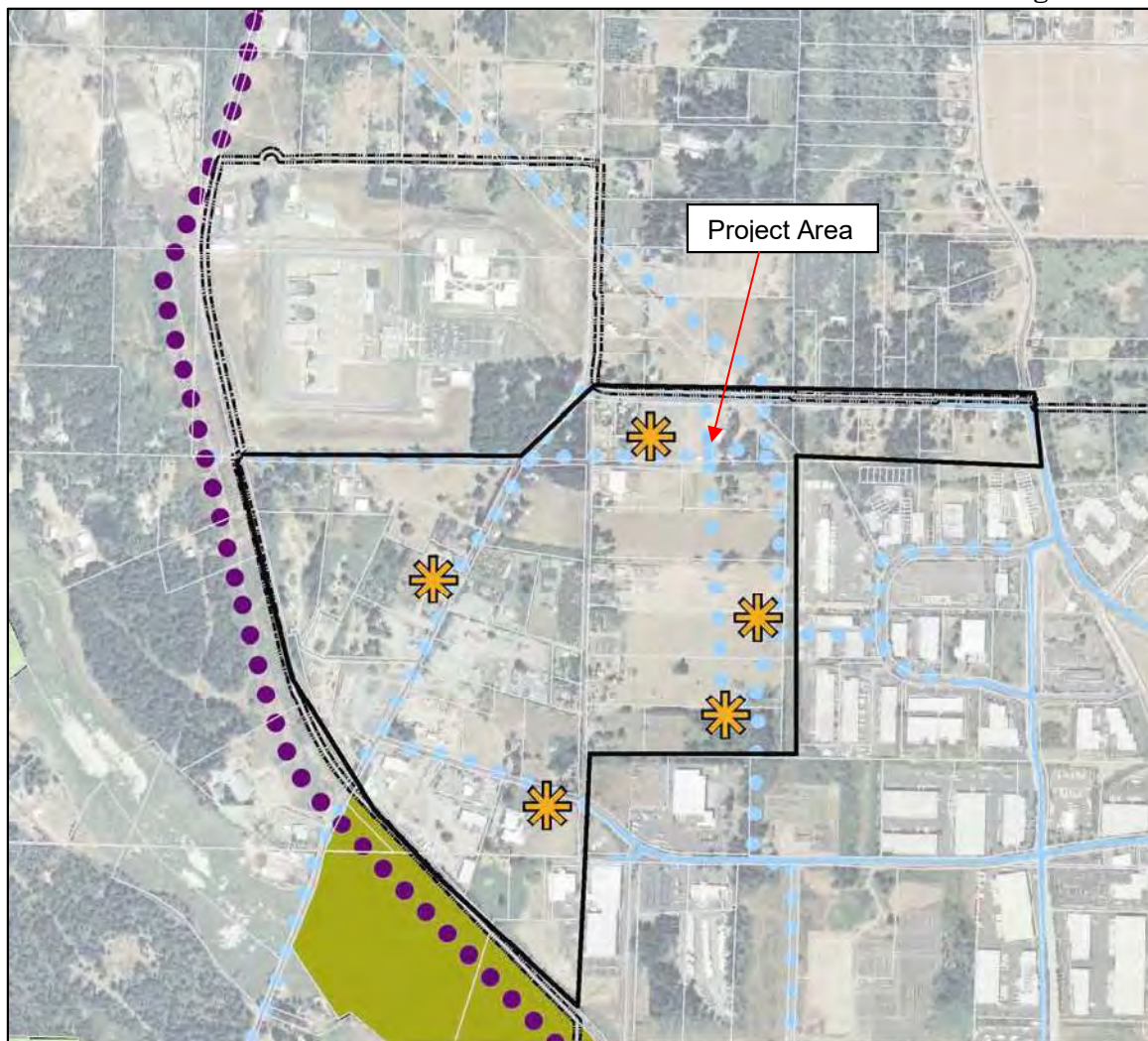


P12 Industrial Area Waysides (Excerpt from the Parks and Recreation Master Plan)

Wilsonville is currently planning for industrial uses in the Northwest Area, just south of the prison. There is a great opportunity to design pocket parks that serve social and recreational needs of employees into the overall plan for the area. The vision for this area is to provide pocket parks along the community trails that are easily accessible to employees. Figure 2 depicts potential wayside locations in this area. Recommendations for the waysides include:

1. In this area, waysides should be provided within about 1/4-mile of employees.
2. As development occurs in this area, locate and design the waysides. Securing easements or land for each of the waysides should occur as part of the development review and approval process.
3. Each wayside should include a small picnic shelter to increase year round usability, site furnishings, and a paved plaza area.

Figure 2



Chapter 6 of the Parks and Recreation Master Plan provides capital project costs, including costs for the two projects within the plan area.

- P11 Industrial Area Waysides: Allowance for design and implementation of 3 pocket parks along regional trails R1 and R6 and community trail C10. Allowance based on average cost of \$200,000 per wayside, not including trail construction – \$600,000 (2005 dollars).
- P12 Industrial Area Waysides: Allowance for design and implementation of 3 pocket parks along community connector trails. Allowance based on average cost of \$200,000 per wayside, not including trail construction – \$600,000 (2005 dollars).

Preliminary Plan Recommendations

The draft planning goals, objectives, and evaluation criteria were discussed and revised based on PAC input in August. Otak applied general findings to the draft criteria that were presented to the public at the Open House in September. The results from the preliminary evaluation were presented to the PAC in October, and again in February 2007. During the February PAC meeting, the members discussed how each criterion can be used to make informed decisions regarding the advantages and disadvantages of the alternatives, then identified an overall recommendation for each Goal.

The overall recommendation from the PAC is to prepare a draft Plan that is a “hybrid” combination of Alternatives 1 and 2 as a Preferred Alternative, as illustrated in Figure 3.

Recommended long range parks and trails include:

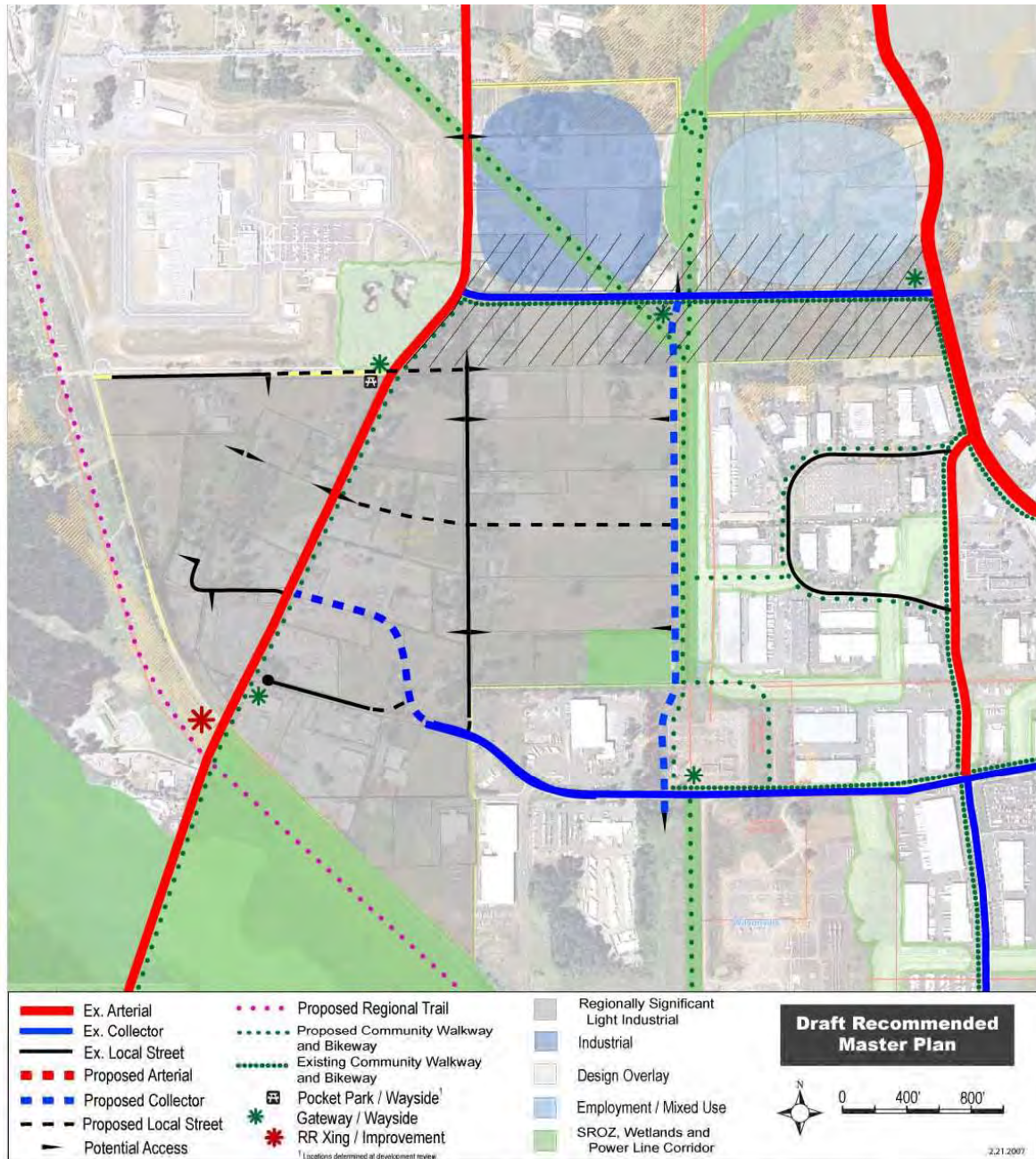
- Kinsman Road Green Street Improvement (with parallel bike lanes/sidewalks)
- Grahams Ferry Road Green Street Improvements (with parallel bike lanes/sidewalks)
- Commercial Circle to Kinman Road pathway connection (estimated capital cost of \$270,000)
- Construction of three new waysides south of Day Road (estimated capital cost of \$60,000)
- Construction of one new wayside north of Day Road (estimated capital cost of \$20,000)
- Basalt Creek trail north of Day Road (estimated cost of \$90,000)
- BPA Powerline Easement Trail (to be dedicated for public use by private developers)
- Metro Regional Trail (to be constructed and maintained by Metro)

Action Requested

In accordance with the Coffee Creek Industrial Area Transportation Growth Management planning grant, we are seeking direction from the City of Wilsonville’s Parks and Recreation Advisory Board to endorse the Preliminary Preferred Plan (shown in Figure 3) with or without conditions.

Please contact Todd Chase with any questions or comments.

Figure 3





29799 SW Town Center Loop E
Wilsonville, Oregon 97070
(503) 682-1011
(503) 682-1015 Fax Administration
(503) 682-7025 Fax Community Development

**NOTICE OF PUBLIC HEARING
PLANNING COMMISSION AND CITY COUNCIL**

THIS IS TO NOTIFY YOU THAT THE CITY OF WILSONVILLE HAS PROPOSED A LAND USE REGULATION THAT MAY AFFECT THE PERMISSIBLE USES OF YOUR PROPERTY AND OTHER PROPERTIES.

Notice is hereby given that the **WILSONVILLE PLANNING COMMISSION** will hold a **PUBLIC HEARING** on **WEDNESDAY, MAY 16, 2007, AT 6:30 P.M.**, at Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon.

Notice is further given that the **WILSONVILLE CITY COUNCIL** will conduct a public hearing on the same matter, at the same location. The City Council hearing is scheduled to conduct its public hearing at **7:00 P.M. on WEDNESDAY, JUNE 18, 2007.**

FILE NO.: LP07-0001-Coffee Creek Industrial Area Master Plan

APPLICANT: City of Wilsonville

AREA SUBJECT TO AMENDMENT: See map on back of notice

REQUEST: A Comprehensive Plan amendment adopting a Coffee Creek Industrial Area Master Plan. *The Planning Commission action is in the form of a recommendation to the City Council.*

CRITERIA: **Statewide Planning Goals:** 1- Citizen Involvement, 2-Land-Use Planning, 5-Natural Resources, 6-Air, Water and Land Resources, 8-Recreational Needs, 9-Economic Development, 11-Public Facilities and Services, 12-Transportation, 13-Energy Conservation and 14-Urbanization. **Metro 2040 Plan, Urban Growth Management Functional Plan, Titles 1, 4, 8 and 11.**

Wilsonville Comprehensive Plan: Plan Amendments, Citizen Participation: Goal 1.1, Policy 1.1.1 and Implementation Measures 1.1.1a – 1.1.1h, Urban Growth Management Policy 2.2.1 and Implementation Measures 2.2.1a – 2.2.1h, Public Facilities and Services: Goal 3.1, Implementation Measures 3.1.1.a, 3.1.1d, Policy 3.1.2, Policy 3.1.3, Implementation Measures 3.1.3a – 3.1.3c, Implementation Measures 3.1.4e, 3.1.4f, Implementation Measure 3.1.5e, Implementation Measure 3.1.6c, 3.1.6k, 3.1.6p, 3.1.6t, Implementation Measure 3.1.7d, 3.1.7e, 3.1.7f, 3.1.7g, 3.1.7h, 3.1.7n, Implementation Measure 3.1.11b, 3.1.11i; **Land Use and Development:** Implementation Measure 4.1.1e, Policy 4.1.3.

Planning and Land Development Ordinance: Section 4.198: Comprehensive Plan Amendments.

CONTACT PERSON(S): Sandi Young, Planning Director, young@ci.wilsonville.or.us or, Chris Neamtzu, Long-Range Planning Manager, neamtzu@ci.wilsonville.or.us (503) 682-4960,

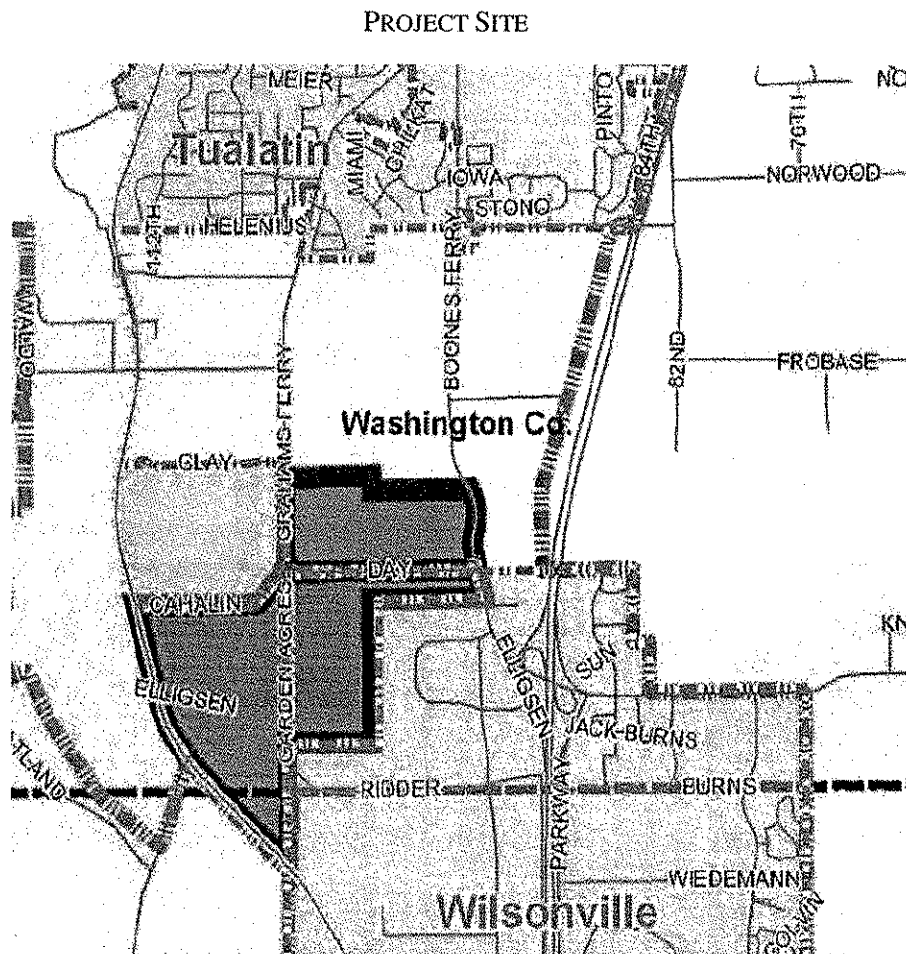
The City of Wilsonville has determined that adoption of this Ordinance may affect the permissible uses of your property, and other properties in the affected zone, and may change the value of your property.



Detailed copies of the approval criteria are available from the Wilsonville Planning Division, located at 29799 SW Town Center Loop East, Wilsonville, Oregon. A complete copy of the relevant file information, including the staff report and recommendations, will be available for inspection seven days prior to each hearing. Copies will also be available for review at the Wilsonville Public Library. All testimony and evidence shall be directed to the applicable criteria, or the person providing testimony shall state which other criteria is believed to apply to this proposal. Copies of applicable criteria may be purchased at the cost of twenty-five cents per page.

Oral and written public testimony regarding this matter will be accepted at the hearings. Written statements are encouraged and may be submitted prior to each hearing date. Those submitted by 5:00 p.m. on May 8, 2007, will be included with the staff report on this matter. **Mail written statements to 29799 SW Town Center Loop East, Wilsonville, OR 97070, or email them to Sandi Young or Chris Neamtzu.**

Assistive Listening Devices (ALD) are available for persons with impaired hearing and can be scheduled for this meeting. The City will also endeavor to provide qualified sign language interpreters and/or bilingual interpreters, without cost, if requested at least 48 hours prior to the meeting. To obtain such services, please call Linda Straessle, Administrative Assistant, at (503) 570-1571.





29799 SW Town Center Loop E
Wilsonville, Oregon 97070
(503) 682-1011
(503) 682-1015 Fax Administration
(503) 682-7025 Fax Community Development

PLANNING COMMISSION
WEDNESDAY, APRIL 11, 2007
6:00 P.M.

Wilsonville City Hall
29799 SW Town Center Loop East
Wilsonville, Oregon

AGENDA

- I. 6:00 PM CALL TO ORDER - ROLL CALL**
Richard Goddard, Chair Sue Guyton, Vice Chair
Craig Faiman Steve Hurst
Robert Meyer Yvonne Peck
Ray Phelps City Council Liaison Alan Kirk
- II. 6:05 PM CITIZEN'S INPUT** - This is an opportunity for visitors to address the Planning Commission on items not on the agenda.
- III. 6:10 PM CONSIDERATION OF THE MINUTES**
Consideration of the March 14, 2007 Planning Commission Minutes
- IV. 6:15 PM WORK SESSIONS**
A. LP07-0001 Coffee Creek I Industrial Area Master Plan (Todd Chase, Otak)
B. LP06-0003 Outdoor Lighting Standards (Jim Benya)
- V. 8:15 PM OLD BUSINESS**
A. 2007 Planning Commission Work Program
- VI. 8:20 PM NEW BUSINESS**
A. City Council Liaison Report
B. Commissioners' Concerns
- VII. 8:30 PM PLANNING DIRECTOR/CITY STAFF COMMENTS**
A. Statewide Planning Goal 9 Economic Opportunity Analysis Project Update
B. Old Town Neighborhood Planning Update
- VIII. 8:45 PM ADJOURNMENT**

Time frames for agenda items are not time certain.



Public Testimony

The Commission places great value on testimony from the public. People who want to testify are encouraged to:

- *Provide written summaries of their testimony*
- *Recognize that substance, not length, determines the value of testimony*
- *Endorse rather than repeat testimony of others*

Thank you for taking the time to present your views.

For further information on Agenda items, call Linda Straessle, Planning Administrative Assistant, at (503) 570-1571 or e-mail her at straessle@ci.wilsonville.or.us.

Meeting packets are available on the City's web site at: <http://www.ci.wilsonville.or.us/boards/PlanningComm.html>

Assistive Listening Devices (ALD) are available for persons with impaired hearing and can be scheduled for this meeting.

The City will also endeavor to provide the following services, without cost, if requested at least 48 hours prior to the meeting:

- *Qualified sign language interpreters for persons with speech or hearing impairments
- *Qualified bilingual interpreters.

To obtain services, please call the Planning Administrative Assistant at (503) 682-4960

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September 13, 2006

Sandi Young, Planning Director
City of Wilsonville
30000 Town Center Loop E.
Wilsonville, OR 97070

Dear Ms Young,

At the Coffee Creek Planning Advisory Committee on June 15th, you asked for comments on the work completed thus far by your planning staff. Washington County believes that Wilsonville should focus on ensuring that the concept planning proceeds only in the context of other ongoing regional plans and policies.

In an earlier meeting, it was noted that Metro will take longer than your project timeline to finalize the MetroScope allocations. However, Metro has now completed those allocations for 2005 and 2030. The Coffee Creek study should use the I-5 to 99W traffic forecasting data as the basis for the traffic analysis. Use of another traffic forecasting technique would result in consistency questions as both projects proceed.

The goals and objectives of the planning process need to be adjusted to reflect a regional context. We suggest modifying goal 3 to state: "To protect the capacity and efficiency of the region's transportation system for the movement of goods and services – **to, within, and through the area**. Objective 3b should also be modified to state: "Site industries where they can take advantage of existing **and future** transportation corridors such as the **Interstate-5 and the proposed I-5 to 99W connection**. We suggest adding an objective 3d. "**Implement the direction of the Oregon Highway Plan, the Regional Transportation Plan and the Washington County Transportation System Plan. Particular attention ought to be given to the conceptual location(s) of the proposed Highway 99W to Interstate 5 connection listed in all 3 plans.**

The goals and objectives also need to be adjusted to address the Washington County traffic impact fee statutes. Your objective as drafted is not consistent with the ordinance for most of the area under consideration since the majority of this area lies within Washington County and will be subject to the Washington County Traffic Impact Fee (TIF). The TIF is not a discretionary fee; it is a tax and it must be applied to any development within Washington County. Development within the Coffee Creek area will need to consider the TIF rules and plan accordingly.

In technical memo #1, additional plans and policies must be addressed, specifically the Washington County Transportation System Plan, the Oregon Highway Plan, the commuter rail project, the I-5 to 99W connector studies and the Tonquin Trail Study. Discussion of the regional transportation plan needs to be expanded to include the I-5 to 99W connection as described in the adopted RTP.

Since this planning project will be occurring largely within Washington County, CPO 5 should be notified and updated as it proceeds. The County looks forward to continuing to work with the City of Wilsonville as the Coffee Creek concept planning proceeds.

Sincerely,

A handwritten signature in black ink that reads "Steve Kelley". The signature is written in a cursive style with a large, stylized "S" and "K".

Steve L Kelley, AICP, Senior Transportation Planner

cc: Kathy Lehtola, Director Land Use & Transportation
Brent Curtis, Planning Division Manager
Andy Back, Principal Planner
Barry Hennelly, Project Manager

**METRO**

May 14, 2007

Sandi Young, Planning Director
City of Wilsonville
30000 Town Center Loop E
Wilsonville, OR 97070

Dear Ms. Young:

I appreciate the opportunity to comment on Wilsonville's proposed Coffee Creek I Master Plan (Plan). The City has included a small area north of Day Road in its analysis, which is not part of the master plan. These comments apply only to the area south of Day Road. Metro is not commenting on any potential plans or uses north of Day Road at this time since that area is part of a larger 2004 urban growth boundary (UGB) expansion area. It is our understanding that the planning for this larger area will take place in partnership with the City of Tualatin. That planning effort is conditioned on the right-of-way alignment for the I-5/99W Connector.

The Plan refers to Area 42 as the area brought in the UGB in 2002. Metro Ordinance 02-969B, however, refers to Area 49. Area 42 is a reference to a former urban reserve study area dating back to the late 1990s. To be consistent with Metro's legislation, I would suggest that the Plan make it clear that the area being planned is Area 49.

The Metro Council adopted one condition specific to this area in addition to the general conditions that apply to all areas brought into the UGB: "Washington County or, upon annexation of the area to the City of Wilsonville, the city shall complete title 11 planning for the portion of Study Area 49 shown on Exhibit N." Because Wilsonville has not yet annexed this area, we request that Wilsonville include a provision for future annexation of the area.

Metro did not condition planning of Area 49 on the selection of the right-of-way alignment for the I-5/99W Connector nor did Metro amend the conditions affecting this area when it brought additional land into the UGB in 2004. While the master plan area is located within the I-5/99W connector study area, we understand that there is currently not an alternative for an I-5/99W connector alignment south of Day Road. The master plan appears consistent with the Regional Transportation Plan (RTP) as required by Title 11. With this demonstration, Metro supports moving forward with the master plan and future annexation of this area.

During our periodic review work in 2002, Metro heard from local officials, businesses and economic development experts that our region's supply of land for industrial uses was severely lacking and additional land within the UGB for industrial uses was a critical need. To this end, Metro designated Area 49 as a Regionally Significant Industrial Area (RSIA). The City's draft Comprehensive Plan Amendment

states that the RSIA zone will not be applied to specific property until such time as an annexation, rezone and development proposal is received from property owners. The land in this area is currently zoned FD-20 (Future Development – 20 Acre District) by Washington County. We assume that this zoning designation protects this area from uses inconsistent with an RSIA. If the County's FD-20 zoning does not protect this area from incompatible RSIA uses, the city will need to provide Metro with information on how the city intends to protect this area until it can be zoned RSIA.

Metro finds that, with the requested process for annexation and zoning protections, the proposed master plan dated March 30, 2007, appears to be consistent with the requirements of Title 11 of Metro's Urban Growth Management Functional Plan and Metro Ordinance 02-969B conditions.

The deadline for completion of Title 11 concept planning for this area was March 2007. I want to commend you on your hard work to meet this deadline.

Please forward these comments to your Planning Commission and City Council. If you have any questions, please contact Sherry Oeser at (503) 797-1721 or at oesers@metro.dst.or.us.

Sincerely,



Andy Cotugno
Director, Planning Department
Metro

AC/l db

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Oregon

Theodore R. Kulongoski, Governor

Oregon Department of Transportation

ODOT Region 1
123 NW Flanders St
Portland, OR 97209 - 4037
Telephone (503) 731-8200
FAX (503) 731-8259

May 16, 2007

Sandi Young, Planning Director
City of Wilsonville
29799 Town Center Loop E.
Wilsonville, OR 97070

Dear Sandi,

The Oregon Department of Transportation commends the City for conducting a planning process that included active participation of a wide range of stakeholders for the Coffee Creek Master Plan. The resulting Coffee Creek Master Plan identifies a good local street network to address the needs of the properties in the study area. ODOT has jurisdiction of Boones Ferry Rd and the I-5/Boones Ferry Rd interchange within the study area. ODOT has an interest in ensuring that planned land uses are consistent with the identified function of these facilities in the Oregon Highway Plan (OHP).

ODOT supports all of the identified mitigations to State facilities identified in the DKS Coffee Creek Transportation Technical Memorandum #2 prepared May2, 2007 with the exception of the recommendation to restripe the northbound left turn pocket on Boones Ferry Rd at the Day Rd intersection to provide additional storage. The traffic analysis identified that the existing northbound left turn lane at the Day Rd/Boones Ferry Rd intersection would not have adequate storage to accommodate the future demand under the 2030 condition. DKS proposed striping modifications to address this issue which is not acceptable to ODOT. To accommodate the high volume of northbound left turning vehicles at the Day Rd/Boones Ferry Rd intersection, we recommend the City consider the following options:

Option 1: Provide dual left turn lanes northbound on Boones Ferry Rd at Day Rd, or
Option 2: Restrict Pioneer Court to right in/right out movements and provide an alternate access for the "auto Tech" building located north of Pioneer Court. The alternative access could be achieved when the adjacent property at the northeast quadrant of the intersection development. This option recommends extending Day Rd to the east to create a new north/south connection between Day Rd and Pioneer Court (see figure below). There is currently a partial fourth leg that has been constructed at the intersection.

Day Road Extension



The City of Wilsonville is participating in the OR 99W to I-5 Connector Study being lead by Washington County with ODOT and Metro. The study is still in the process of identifying alignments to be studied. The Coffee Creek Master Plan is within the study area of the OR 99W Connector and planning for transportation facilities in this area may be effected by the outcome of this study and the preferred alternative. ODOT recommends that the City wait to annex the properties within the Coffee Creek Master Plan area until such time as a preferred alternative has been identified through the OR 99W Connector Study.

I have appreciated working with the City through the Transportation Growth Management program. Please contact me if you have any questions or concerns at 503-731-8258.

Sincerely,

A handwritten signature in black ink that reads 'Marah Danielson'.

Marah Danielson
ODOT Senior Planner

C: Lainie Smith, Fred Eberle, Lidwien Rahman, Tim Wilson, Amy Gibbons, Thanh Tran, Simon Eng, ODOT Region 1
Stacy Humphrey, DLCD
Todd Chase, OTAK and Scott Mansur, DKS
Andy Back, Steve Kelly, Washington County
Sherri Oeser, Metro

ODOT Log No:



City of Tualatin

18880 SW Martinazzi Avenue
Tualatin, Oregon 97062-7092
Main 503.692.2000
TDD 503.692.0574

May 8, 2007

Sandi Young, Planning Director
City of Wilsonville
30000 Town Center Loop E
Wilsonville, OR 97070

Re: Coffee Creek Master Plan

Dear Ms. Young,

Thank you for the opportunity to comment on the Coffee Creek Industrial Area Master Plan. We understand that the Coffee Creek study area has been broken into two distinct geographic areas, south of Day Road and north of Day Road, with the master plan covering the area south of Day Road and the concept plan covering the area north of Day Road. At the April 6, 2007 Technical Advisory Committee meeting it was stated that the Concept Plan portion of the work product was not being forwarded to the Planning Commission for review and that only the Master Plan portion (south of Day Road) would be before the Planning Commission and City Council. Documents distributed at that meeting support this view as no information was distributed associated with a Concept Plan north of Day Road. The Public Hearing Notice received on May 2, 2007 indicates that the area north of Day Road is included in the proposal. We find this inconsistent with statements made and information presented on April 6, 2007 and request that any comprehensive plan amendment provisions north of Day Road be taken off the Planning Commission agenda.

The City of Tualatin would like to provide the following information to support removing the area north of Day Road from any land use consideration at this time:

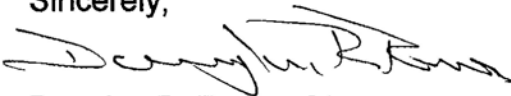
1. The area north of Day Road is covered by the Metro Urban Growth Boundary (UGB) expansion from 2004 (ORD NO. 04-104B). The conditions placed on inclusion of this area in the UGB was that it needed to have the Concept Planning (Title 11) work done within 7-years or within 2-years of establishment of an alignment of the I-5 to 99W Connector project. Conditions went on to indicate that north of the Connect would be

residential and south of the Connector would be industrial. At this time the evaluation of the Connector is underway, but not complete. The alignment has not been established and the land use pattern cannot be determined until the alignment is established.

2. A mixed-use (commercial/residential) area had been identified at the northwest corner of Day Road and Boones Ferry Road in early study evaluation documents. This is in contradiction to Metro ORD. NO. 04-104B that the area was brought into the UGB for industrial purposes.
3. If a mixed-use area is necessary north of Day Road it should be looked at comprehensively with the entire area between Tualatin and Wilsonville (approximately 650 acres) so that a location can be identified that serves any future residential or industrial development to its fullest capacity. This needs to be done in coordination with the City of Tualatin and Washington County, while taking into consideration the I-5 to 99W Connector study. To date discussion amongst the parties has not occurred.
4. Title 11 of the Metro Urban Growth Management Functional Plan requires the conceptual plan transportation plan to be consistent with the RTP. No identification of a connector has been presented on any of the maps prepared.
5. The proposed Master Plan should be evaluated to ensure that it complies with Statewide Planning Goals 2, 9, 12 and 14.

Please forward this letter to your Planning Commission. If you have any questions, please feel free to contact me at 503-691-3018 or drux@ci.tualatin.or.us with any questions.

Sincerely,



Douglas R. Rux, AICP
Community Development Director

cc: Sherilyn Lombos, City Manager
Mike McKillip, City Engineer
Brenda Braden, City Attorney



Received 5/18/07

April 30, 2007

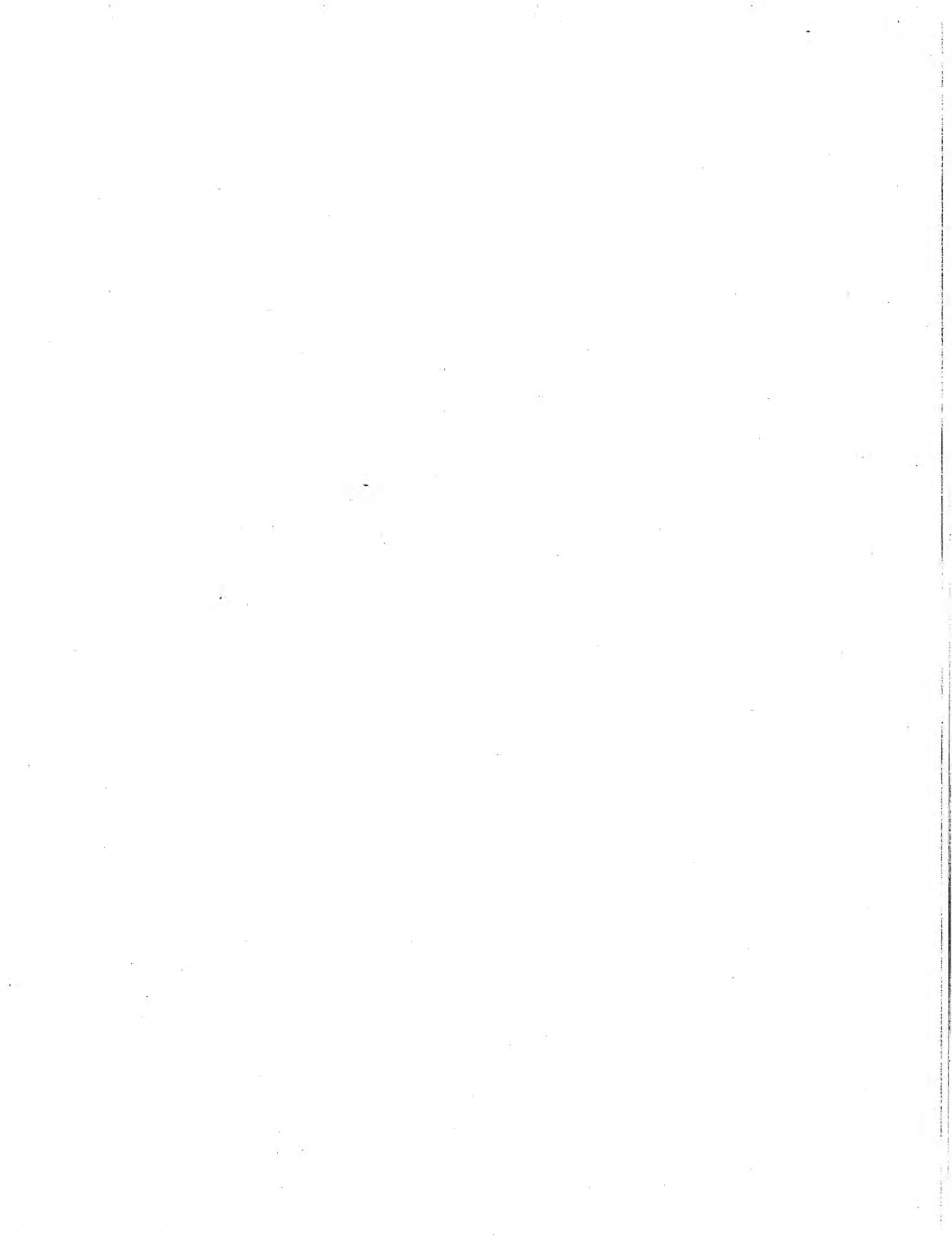
Sandi Young, Planning Director
City of Wilsonville
29799 SW Town Center Loop E
Wilsonville, OR 97070

Ms. Young,

Attached are the Washington County comments pertaining to the Coffee Creek Industrial Area Master Plan. Please enter the comments into the record at the Wilsonville Planning Commission public hearing on Wednesday May 16th, 2007 and at the Wilsonville City Council public hearing on Wednesday June 18th, 2007. Additionally, please notify Washington County of any final decision on this matter.

Sincerely,
Steve L Kelley, Senior Planner

- C. Kathy Lehtola, Director
- Lawrence Odell, Assistant Director
- Chris Gilmore, County Council
- Brent Curtis, Planning Manager
- Doug Rux, City of Tualatin
- Rob Dixon, City of Sherwood
- Stacy Hopkins, DLCD
- Andy Johnson, ODOT
- Sherry Oeser, Metro





March 7, 2007

Sandi Young, Planning Director
City of Wilsonville
30000 Town Center Loop E.
Wilsonville, OR 97070

Dear Ms. Young:

This letter is a follow up on the comments sent last fall regarding the Coffee Creek Master Plan. Thank you for responding to those comments, Washington County staff believes that the Coffee Creek Master Planning work has benefited from the adjustments made. However, Washington County staff continues to be concerned that the master plan should only proceed in the context of other ongoing regional plans and policies.

The primary issue is the timing of the Coffee Creek Master Plan in relation to the Interstate-5 to Highway 99W Connector Project. This ongoing regional planning process will likely affect the Coffee Creek area either directly with a physical alignment, or indirectly by affecting traffic patterns within the area. Washington County staff has noticed that 7 of the 17 concepts currently identified for consideration in the I-5 to 99W-corridor study could directly impact the Coffee Creek area. In addition, all the identified concepts will likely affect the traffic within the area to some degree. These direct and/or indirect impacts cannot be specifically evaluated until the I-5/ 99W planning process has progressed further.

Furthermore, additional areas to both the North and to the West of the Coffee Creek area have also been included within the Metro Urban Growth Boundary. The cumulative impacts (traffic and otherwise) from these areas is not known and has not been evaluated as part of the Coffee Creek Master Plan process. A regionally coordinated planning process for these areas, after the I-5 to 99W study has progressed further, is warranted. Of concern is that the improvements identified in the Coffee Creek Master Plan may not be adequate to serve the area once the cumulative impacts from these areas is known.

It is the opinion of Washington County staff that the goals identified for the Coffee Creek Master Plan have not been met. In particular Goal 1 "consistency with local, regional, and state plans" has not been adequately addressed by the plan – since the plan does not include provisions for the I-5 to 99W connection. Also Goal 2 "transportation" fails to meet the identified objective F "coordination with the I-5/99W connector alignment" for the same reason. These critical goals for the study need to be met before adoption of the plan. In addition, the designations within the Coffee Creek Master Plan area may need to be adjusted to accommodate an I-5 to 99W connection.

The county has not given the city authority to plan the unincorporated territory in the boundary of the Coffee Creek Master Plan. The subject area is located in the city's "coordination area", which is identified in the Washington County - Wilsonville Urban Planning Area Agreement. Because

Sandi Young, Planning Director
March 7, 2007
Page 2

this area is located outside of Wilsonville's Urban Planning Area, the responsibility and authority for the planning of this area is the County's. The UPAA does not grant this responsibility and authority to the city. Consequently, the city does not have the authority to adopt comprehensive plan amendments for this territory.

Washington County requests that the City of Wilsonville postpone adoption of the Coffee Creek Master Plan until after the I-5 to 99W connection project has advanced to selecting a preferred alternative. Washington County recognizes that planning is a continuous and ongoing activity, and that plans cannot be delayed indefinitely. However, Washington County anticipates that the I-5 to 99W connection project will make significant progress over the next year. The Coffee Creek plan would significantly benefit from a known preferred alternative from the I-5 to 99W connection project. This postponement would allow the Coffee Creek study team the opportunity to make sure the identified improvements are consistent with the findings of the I-5 to 99W connection study. It would also allow time for goals 1 and 2 of the Master Plan to be adequately addressed.

Furthermore, the delay is necessary to comply with the following planning requirements:

- Title 11 of the Metro Urban Growth Management Functional Plan (Section 3.07.1120 F. - requires the conceptual transportation plan to be consistent with the RTP)
- The Regional Transportation Plan & The Washington County 2020 Transportation Plan (identify the I-5 to 99W connector study area)
- Statewide Planning Goals 2, 9, 12, and 14 (ORS 197.015 (6) [definition of a comprehensive plan] states a comprehensive plan is coordinated "when the needs of all levels of governments.... have been considered and accommodated as much as possible."

At this point in the process Washington County does not believe the work to date has considered and accommodated the needs and concerns of state, and local governments, and the public as reflected by the goals and objectives. This is due to the timing of this study in coordination with other ongoing regional planning efforts.

We request that you transmit this letter to your planning commission and city council. Additionally, we request that you notify us of all hearing dates on this matter and when/if a final decision is made.

Sincerely,


Kathy Lehtola, Director

- C. Lawrence Odell, Assistant Director
Chris Gilmore, County Counsel
Brent Curtis, Planning Manager
Russ Knoebel, Principal Engineer
Steve L Kelley, Senior Planner ✓

Coffee Creek Master Plan Appendix

Section C. Existing Policies Overview

Memorandum



17355 SW Boones Ferry Rd.
Lake Oswego, OR 97035
Phone (503) 635-3618
Fax (503) 635-5395

To: Sandi Young, AICP, City of Wilsonville
From: Todd Chase, AICP, and Michelle Stephens, AICP
Copies: Andrew Johnson, ODOT
Date: August 18, 2006
Subject: Coffee Creek TGM Project, Technical Memo #1-
Plans and Policies, Goals and Objectives -
REVISED
Project No.: 13612

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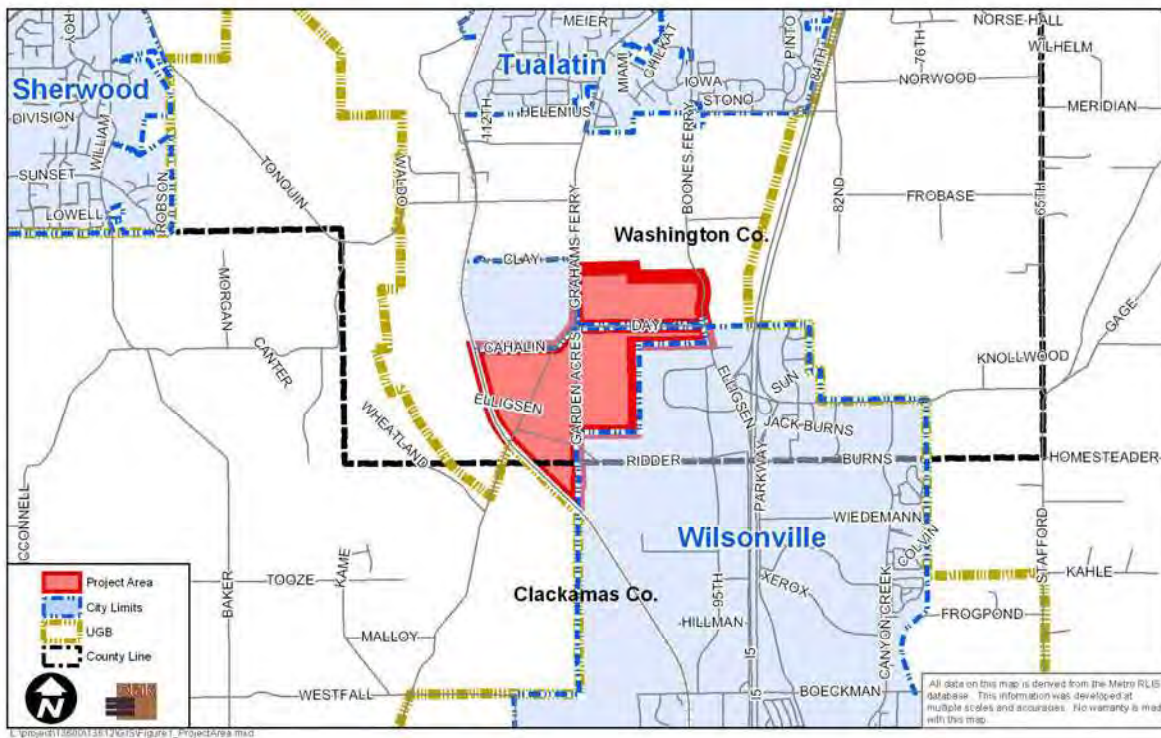
Appendix A – Transportation Goals and Policies – Summary

Appendix B – Revised Draft Goals and Policies

Introduction

This memorandum provides an overview of relevant existing local, regional, and state plans and policies for consideration in the Coffee Creek TGM planning process. The Coffee Creek planning effort is being conducted to create a detailed transportation and land use plan for the approximately 309-acre study area located in northwest Wilsonville and unincorporated Washington and Clackamas Counties (see Figure 1). The planning process will include an evaluation of alternative land use patterns, transportation system connections, and the consideration of urban facilities (water, sanitary sewer system, storm sewer system).

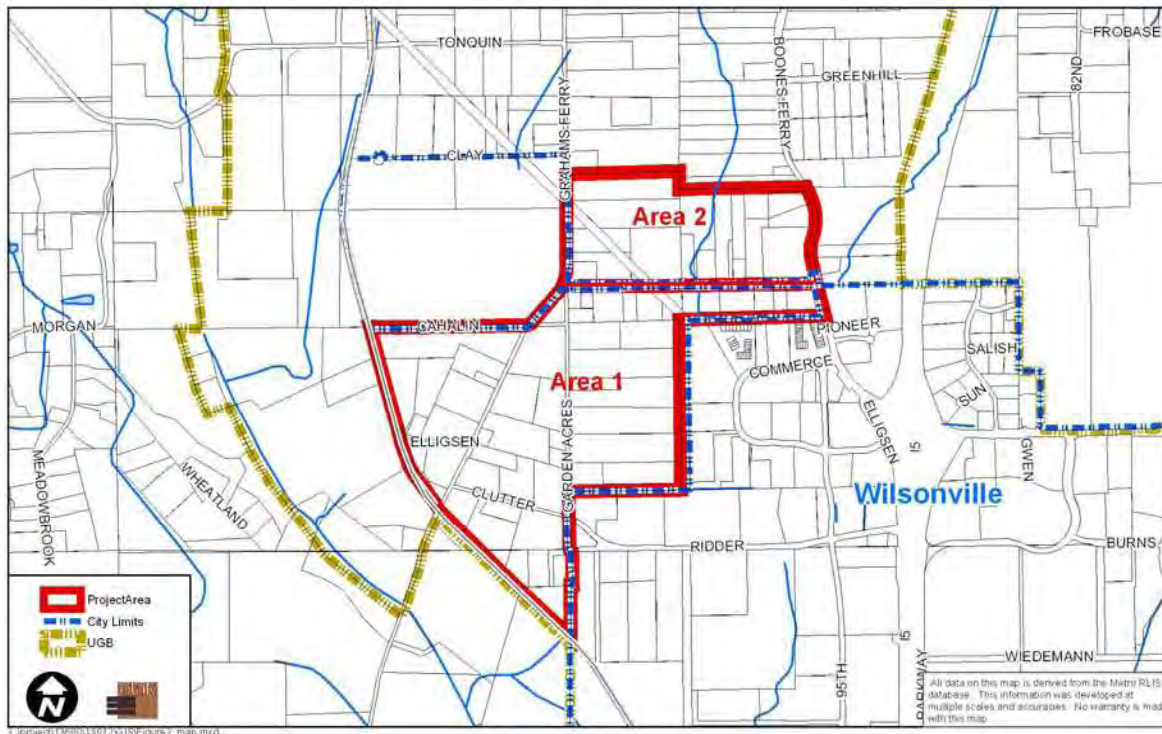
Figure 1



Ultimately, the project area will be annexed into the City of Wilsonville with the City providing urban services. Hence, the plan will result in an amendment to the Wilsonville Comprehensive Plan that may require amendments to the Wilsonville Planning and Land Development Code, and an addendum to the Wilsonville Transportation Plan.

The southern portion (Area 1 – Figure 2) of the study area was added to the Metro UGB in 2002 (urban reserve area 42). A Concept Plan for the former urban reserve area 42 was prepared in 1998. The northern portion (Area 2 – Figure 2) of the study area was added to the Metro UGB in 2004. A concept plan for Area 2 will be developed as part of this planning effort.

Figure 2



This memorandum provides a summary of the existing local and regional land use policy documents, which pertain to the Plan area, including:

- Metro Urban Growth Management Functional Plan
- Wilsonville Comprehensive Plan
- Wilsonville Planning and Land Development Code
- Wilsonville Designated Significant Resource Overlay Zone (SROZ) Inventories and Compliance Policies
- Wilsonville Wastewater and Storm water Master Plans
- Wilsonville Parks and Recreation Master Plan
- Wilsonville Emergency Service Objectives
- Washington County Community Development Code
- Clackamas County Zoning and Development Ordinance

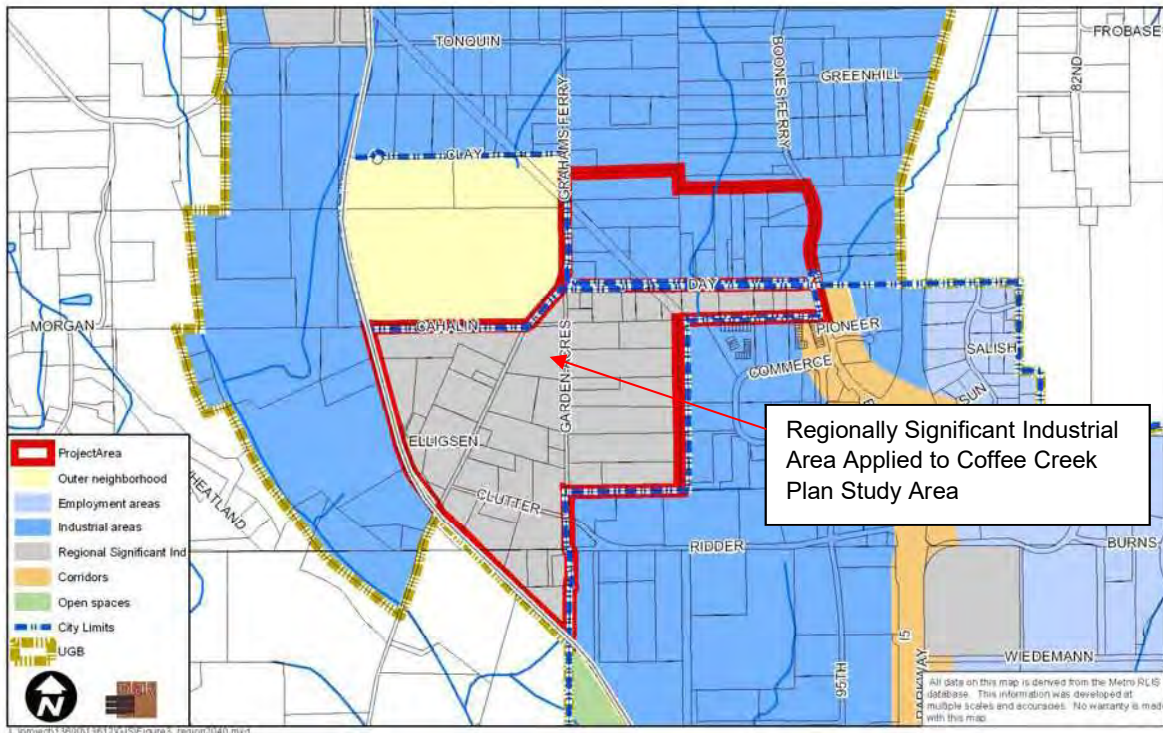
Transportation goals and policies as well as a summary of transportation related documents are summarized in Appendix A. These state, regional, and local transportation policy documents include:

- Metro Urban Growth Management Functional Plan
- Wilsonville Transportation System Plan
- Wilsonville Bicycle and Pedestrian Master Plan
- Wilsonville Parks and Recreation Master Plan
- Wilsonville Transit Master Plan

The Metro Urban Growth Management Functional Plan (effective 2/15/06)

This regional land use policy document identifies design types and density levels for local governments within Metro’s jurisdiction and seeks to improve the region’s economy by providing and protecting a supply of sites for employment. As shown in Figure 3, the design type applied to the Coffee Creek Study Area is Regionally Significant Industrial Area (RSIA) as well as Industrial Areas. The surrounding area is predominantly within the Industrial Area, except for the prison site, identified as Outer Neighborhood.

Figure 3



Regionally Significant Industrial Area (South of Day Road)

Regionally Significant Industrial Areas (RSIAs) are those areas near the region's most significant transportation facilities for the movement of freight and other areas most suitable for movement and storage of goods. Each city and county with land use planning authority over RSIAs shown on the Employment and Industrial Areas Map shall derive specific plan designation and zoning district boundaries of RSIAs within its jurisdiction from the Map, taking into account the location of existing uses that would not conform to the limitations on non-industrial uses in this section and the need to achieve a mix of employment uses.

According to section 3.07.170, the average density levels for employment design types are recommended to consist of 20 persons per acre in Employment Areas, nine employees per acre in Industrial Areas and nine employees per acre in RSIA.

According to Section 3.07.420 (B), in Regionally Significant Industrial Areas,
...cities and counties shall review their land use regulations and revise them, if necessary to include measures to limit the size and location of new buildings for retail commercial uses, such as stores and restaurants and retail and professional services that cater to daily customers – such as financial, insurance, real estate, legal, medical and dental offices – to ensure that they serve primarily the needs of workers in the area. One such measure shall be that new buildings for stores, branches, agencies or other outlets for these retail uses and services shall not occupy more than 3,000 square feet of sales or service area in a single outlet, or multiple outlets that occupy more than 20,000 square feet of sales or service area in a single building or in multiple buildings that are part of the same development project, with the following exceptions:

- 1. Within the boundaries of a public use airport...*
- 2. Training facilities, whose primary purpose is to provide training to meet industrial need.*

Section 3.07.420 (C) also requires that,
...cities and counties shall review their land use regulations and revise them, if necessary, to include measures to limit the siting and location of new buildings for the uses described in subsection B and for non-industrial uses that do not cater to daily customers—such as bank or insurance processing centers—to ensure that such uses do not reduce off-peak performance on Main Roadway Routes and Roadway connectors shown on Metro's Freight Network Map, November 2003, below standards set in the 2004 Regional Transportation Plan or require added road capacity to prevent falling below the standards.

No city or county shall amend its land use regulation that apply to lands shown as RSIA on the Employment and Industrial Areas Map to authorize uses described in subsection B that were not authorized prior to July 1, 2004. [Section 3.07.420 (D)].

Cities and counties may allow division of lots or parcels into smaller lots or parcels as follows:

- 1. Lots or parcels smaller than 50 acres may be divided into any number of smaller lots or parcels;*

2. *Lots or parcels larger than 50 acres may be divided into smaller lots and parcels pursuant to a master plan approved by the city or county so long as the resulting division yields at least one lot or parcel of at least 50 acres in size;*
3. *Lots or parcels 50 acres or larger, including those created pursuant to paragraph (2) of this subsection, may be divided into any number of smaller lots or parcels pursuant to a master plan approved by the city or county so long as at least 40% of the area of the lot or parcel has been developed with industrial uses or uses accessory to industrial use, and no portion has been developed, or is proposed to be developed, with uses described in subsection B.*
4. *Notwithstanding paragraph 2 and 3 of this subsection, any lot or parcel may be divided into smaller lots or parcels or made subject to rights-of-way for the following purposes:*
 - a. *To provide public facilities and services;*
 - b. *To separate a portion of a lot or parcel in order to protect a natural resource, to provide a public amenity, or to implement a remediation plan for a site identified by the Oregon Department of Environmental Quality pursuant to ORS 465.225;*
 - c. *To separate a portion of a lot or parcel containing a nonconforming use from the remainder of the lot or parcel in order to render the remainder more practical for a permitted use; or*
 - d. *To allow the creation of a lot for financing purposes when the created lot is part of a master planned development. [Section 3.07.420 (E)].*

Notwithstanding subsection B of this section, a city or county may allow the lawful use of any building, structure, or land existing at the time of adoption of this ordinance to implement this section to continue and to expand to add up to 20% more floor area and 10% more land area. Notwithstanding subsection E of this section, a City or county may allow division of lots or parcels pursuant to a master plan approved by the City or county prior to July 1, 2004 [Section 3.07.420 (F)].

General Industrial (North of Day Road)

Many of the regulations which apply to RSIA's also apply to Industrial areas, however the restrictions placed on retail uses and services in Industrial Areas is more relaxed than in RSIA's. The land uses allowed in Industrial Areas limit the amount of new buildings for retail commercial uses. These uses *...shall not occupy more than 5,000 square feet of sales or service area in a single outlet, or multiple outlets that occupy more than 20,000 square feet of sales or service area in a single building or in multiple buildings that are part of the same development project... [Section 3.07.430 (A)].*

In addition to restrictions on uses, the Industrial Areas also include similar restrictions to the RSIA on division of land including:

Cities and counties may allow division of lots or parcels into smaller lots or parcels as follows:

1. *Lots or parcels smaller than 50 acres may be divided into any number of smaller lots or parcels;*
2. *Lots or parcels larger than 50 acres may be divided into smaller lots and parcels pursuant to a master plan approved by the city or county so long as the resulting division yields at least one lot or parcel of at least 50 acres in size;*

3. *Lots or parcels 50 acres or larger, including those created pursuant to paragraph (2) of this subsection, may be divided into any number of smaller lots or parcels pursuant to a master plan approved by the city or county so long as at least 40 percent of the area of the lot or parcel has been developed with industrial uses or uses accessory to industrial use, and no portion has been developed, or is proposed to be developed, with uses described in subsection A of this section.*
4. *Notwithstanding paragraph 2 and 3 of this subsection, any lot or parcel may be divided into smaller lots or parcels or made subject to rights-of-way for the following purposes:*
 - a. *To provide public facilities and services;*
 - b. *To separate a portion of a lot or parcel in order to protect a natural resource, to provide a public amenity, or to implement a remediation plan for a site identified by the Oregon Department of Environmental Quality pursuant to ORS 465.225;*
 - c. *To separate a portion of a lot or parcel containing a nonconforming use from the remainder of the lot or parcel in order to render the remainder more practical for a permitted use; or*
 - d. *To allow the creation of a lot for financing purposes when the created lot is part of a master planned development. [Section 3.07.430 (D)].*

As a result of this planning process and in order to be compliant with Section 3.07.1120 of the Urban Growth Management Functional Plan, the City of Wilsonville will derive comprehensive land use plan designation and zoning district designations/boundaries to ensure that development in RSIA's and surrounding Industrial Areas is consistent with the Functional Plan.

Wilsonville Comprehensive Plan

This overall guiding policy document for the City of Wilsonville establishes general comprehensive plan policies for land use, transportation, public facilities, housing, economic development, citizen involvement, and related items. Goals and Policies which are specific to the study plan are included below.

The project study area is defined as *Area H* in the Areas of Special Concern section of the Wilsonville Comprehensive Plan,

AREA H

Note: the previous Area 8 has been replaced with Area H, dealing with the Day Road area, northwest of the current City limits, including the new State prison. This area is bordered by Clay and Day Roads on the north and railroad tracks on the west. A master plan for this neighborhood will be needed to address property-owner concerns and mitigate the effects of the 110-acre prison development. The City is providing urban services to the prison prior to annexation, and expects to provide services to the entire area when it has been master planned and annexed.

According to the Urban Growth Management section of the Comprehensive Plan, *Wilsonville's rapid growth is clearly demonstrated by the following statistics: of the land within the current City limits, three times as much was developed in 1999 as was the case in 1988; and the City's population increased by nearly*

400 percent in the same period. Economic development has grown just as rapidly, yielding an employment base that has grown as rapidly as the population. Figures provided by Metro in 1996 indicated that Wilsonville had more than three jobs for each housing unit within the City.

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

- Implementation Measure 2.1.1.c. Encourage a balance between residential, industrial, and commercial land use, based on the provisions of this Comprehensive Plan.
- Implementation Measure 2.1.1.d. Establish and maintain revenue sources to support the City's policies for urbanization and maintain needed public services and facilities.
- Implementation Measure 2.1.1.e. Allow new development to proceed concurrently with the availability of adequate public services and facilities as specified in Public Facilities and Services Section (Section C) of the Comprehensive Plan.

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

- Implementation Measure 2.2.1.a. Allow annexation when it is consistent with future planned public services and when a need is clearly demonstrated for immediate urban growth.
- Implementation Measure 2.2.1.b. The City of Wilsonville, to the best of its ability based on infrastructure provided at the local, regional, and state levels, shall do its fair share to increase the development capacity of land within the Metro UGB.
 - The City of Wilsonville shall comply with the provisions of the Metro Urban Growth Management Functional Plan, unless an exception to the requirements is granted as provided in that Functional Plan.
 - The City shall comply with the provisions of Metro's Urban Growth Management Functional Plan, as long as that compliance does not violate federal or state law, including Statewide Planning Goals.
- Implementation Measure 2.2.1.e. Changes in the City boundary will require adherence to the annexation procedures prescribed by State law and Metro standards. Amendments to the City limits shall be based on consideration of:
 1. Orderly, economic provision of public facilities and services, i.e., primary urban services are available and adequate to serve additional development or

- improvements are scheduled through the City's approved Capital Improvements Plan.
2. Availability of sufficient land for the various uses to insure choices in the marketplace for a 3 to 5 year period.
 3. Statewide Planning Goals.
 4. Applicable Metro Plans;
 5. Encouragement of development within the City limits before conversion of urbanizable (UGB) areas.
- Implementation Measure 2.2.1.g. Urban sanitary sewer and water service shall not be extended outside the City limits...

According to the Public Facilities and Services section of the Wilsonville Comprehensive Plan, *The City's policies for the provision of public facilities and services can be divided into three categories. The first is the City's overall commitment to provide, or coordinate the provision of facilities and services to meet the community's needs. The second concerns the timing of the provision of facilities and services relative to development (i.e., concurrency issues). The third concerns the costs of providing facilities and services and who is responsible for paying.*

Goal 3.1 To assure that good quality public facilities and services are available with adequate capacity to meet community needs, while also assuring that growth does not exceed the community's commitment to provide adequate facilities and services.

Policy 3.1.1 The City of Wilsonville shall provide public facilities to enhance the health, safety, educational, and recreational aspects of urban living.

- Implementation Measure 3.1.1.c. Developments shall continue to be required to extend services/facilities to the far side of the subject property – assuring that the adjacent properties have access to those services/facilities. It is noted that unusual existing circumstances may necessitate creative solutions for the extension of services/facilities.
- Implementation Measure 3.1.1.d. The City shall periodically review and, where necessary, update its development densities indicated in the land use element of the Plan, based on the capacity of existing or planned services and/or facilities.

Policy 3.1.2 The City of Wilsonville shall provide, or coordinate the provision of, facilities and services concurrent with need (created by new development, redevelopment, or upgrades of aging infrastructure).

- Implementation Measure 3.1.2.a. Urban development will be allowed only in areas where necessary facilities and services can be provided.

Policy 3.1.4 The City of Wilsonville shall continue to operate and maintain the wastewater treatment plant and system in conformance with federal, state, and regional water quality standards.

- Implementation Measure 3.1.4.b. The City shall continue to manage growth consistent with the capacity of sanitary sewer facilities.
- Implementation Measure 3.1.4.e. The City shall continue to require all urban level development to be served by the City's sanitary sewer system.

Policy 3.1.5 The City shall continue to develop, operate and maintain a water system, including wells, pumps, reservoirs, transmission mains and a surface water treatment plant capable of serving all urban development within the incorporated City limits, in conformance with federal, state, and regional water quality standards. The City shall also continue to maintain the lines of the distribution system once they have been installed and accepted by the City.

Policy 3.1.7 The City of Wilsonville shall develop and maintain an adequate storm drainage system. However, where the need for new facilities is the result of new development, the financial burden for drainage system improvements shall remain primarily the responsibility of developers. The City will use systems development charges, user fees, and/or other funding sources to construct facilities to improve storm water quality and control the volume of runoff.

- Implementation Measure 3.1.7.d. Major natural drainage ways shall be retained and improved as the backbone of the drainage system and designated as open space. The integrity of these drainage ways shall be maintained as development occurs. Where possible, on-site drainage systems will be designed to complement natural drainage ways and designated open space to create an attractive appearance and will be protected by conservation, utility, or inundation easements. Alteration of minor drainage ways may be allowed provided that such alterations do not adversely impact stream flows and in-stream water quality of the major drainage ways and provide for more efficient use of the land. Such alteration must be approved by the City. Remnant creek channels, which previously Public Facilities and Services Wilsonville Comprehensive Plan Page C – 16 Updated April 2004 carried water that has since been diverted, shall be evaluated for their wildlife habitat value before being selected for use as drainage ways. Where a remnant creek channel is found to provide unique habitat value without being a riparian zone, and that habitat value would actually be diminished through the re-introduction of storm water, alternate methods of conveying the storm water will be considered and, if feasible, used.
- Implementation Measure 3.1.7.e. Existing culverted or piped drainage ways will be “daylighted” (converted from underground to surface facilities) when doing so will help to achieve the City’s goals for storm drainage without overly conflicting with development.
- Implementation Measure 3.1.7.f. Conversion of existing swales or drainage ways to culverted or piped systems shall be permitted only where the City Engineer

determines that there is no other reasonable site development option. See Option A, above.

- Implementation Measure 3.1.7.i. It is the intent of these measures to maximize the use of the natural drainage system to allow for ground water infiltration and other benefits to community aesthetics as well as habitat enhancement. This does not mean that natural drainage ways will be left unimproved.

Policy 3.1.8 The City of Wilsonville shall continue to coordinate planning for fire safety with the Tualatin Valley Fire and Rescue District.

Policy 3.1.11 The City of Wilsonville shall conserve and create open space throughout the City for specified objectives including park lands.

- Implementation Measure 3.1.11.a. Identify and encourage conservation of natural, scenic, and historic areas within the City.
- Implementation Measure 3.1.11.b. Provide an adequate diversity and quantity of passive and active recreational opportunities that are conveniently located for the people of Wilsonville.
- Implementation Measure 3.1.11.i. Develop limited access natural areas connected where possible by natural corridors for wildlife habitat and watershed and soil/terrain protection. Give priority to preservation of contiguous parts of that network which will serve as natural corridors throughout the City for the protection of watersheds and wildlife.

Policy 3.1.13 The City of Wilsonville shall coordinate planning activities with the utility companies, to insure orderly and efficient installation of needed service lines and equipment.

Policy 3.1.14 The City of Wilsonville shall, pursuant to Statewide Planning Goal 11 and within the confines of the City budget, maintain a qualified staff adequate to support the various service functions of the City. The City shall plan for the provision of adequate work spaces and facilities in order to maximize the accessibility of City services to the public. Facilities shall be funded in the manner deemed most cost-effective and efficient by the Budget Committee and City Council.

According to the Economic Development section of the Wilsonville Comprehensive Plan, *Wilsonville is strategically located on the fringe of the metropolitan area, just south of the confluence of the I-5 and I-205 freeways, making it very desirable for economic development. Because of this, the City has an excellent opportunity to actively plan and guide its commercial and industrial development rather than remain in a passive review role. In this way, the City can ensure the type of development it wishes to occur.*

Goal 4.1 To have an attractive, functional, economically vital community with a balance of different types of land uses.

- Implementation Measure 4.1.1.a. To ensure overall economic stability, the City will continue to coordinate its policies with those of Clackamas County's and Washington County's Overall Economic Development Plans (OEDP), as well as the Oregon Economic Development Department.
- Implementation Measure 4.1.1.e. The City shall protect existing and planned industrial and commercial lands from incompatible land uses, and will attempt to minimize deterrents to desired industrial and commercial development.

Policy 4.1.2 The City of Wilsonville shall encourage commercial growth primarily to serve local needs as well as adjacent rural and agricultural lands.

- Implementation Measure 4.1.2.f. The City, in accordance with Title 4 of the Metro Urban Growth Management Functional Plan, will encourage development of lands designated by Metro as “Employment” and “Industrial” areas to include supportive retail development. Commercial uses in those areas can be expected to include some limited retail uses, primarily to serve the needs of people working or living in the immediate area and office complexes housing technology-based industries. Where the City has already designated land for commercial development within Metro’s employment areas, the City has been exempted from Metro development standards.

According to the Industrial Development section of the Wilsonville Comprehensive Plan, *Wilsonville is basically a compact City, for this reason all industrial development should be compatible with adjacent or nearby commercial and/or residential areas.*

Policy 4.1.3 City of Wilsonville shall encourage light industry compatible with the residential and urban nature of the City.

- Implementation Measure 4.1.3.b. Maintain high-quality industrial development that enhances the livability of the area and promotes diversified economic growth and a broad tax base.
- Implementation Measure 4.1.3.c. Favor capital intensive, rather than labor intensive, industries within the City.
- Implementation Measure 4.1.3.e. Site industries where they can take advantage of existing transportation corridors such as the freeway, river, and railroad.
- Implementation Measure 4.1.3.f. Encourage a diversity of industries compatible with the Plan to provide a variety of jobs for the citizens of the City and the local area.
- Implementation Measure 4.1.3.h. The City, in accordance with Title 4 of the Metro Urban Growth Management Functional Plan, supports appropriate retail development within Employment and Industrial Areas. Employment and Industrial areas are expected to include some limited retail commercial uses, primarily to serve the needs of people working or living in the immediate Employment or Industrial Areas, as well as office complexes housing technology-based industries. Where the City has already designated land for

commercial development within Metro's employment areas, the City has been exempted from Metro development standards.

Policy 4.1.5 Protect valuable resource lands from incompatible development and protect people and property from natural hazards.

- Implementation Measure 4.1.5.d. Conserve and create open space throughout the City for specified objectives.
- Implementation Measure 4.1.5.e. Protect the beneficial uses and functional values of resources within the Water Quality and Flood Management Areas identified by Metro by limiting or mitigating the impact on these areas from development activities.
- Implementation Measure 4.1.5.g. Encourage identification and conservation of natural scenic and historic areas within the City.
- Implementation Measure 4.1.5.h. Develop an attractive and economically sound community.
- Implementation Measure 4.1.5.k. Develop open, limited, or restricted access natural areas connected where possible by natural corridors, for wildlife habitat, watershed, soil and terrain protection. Preservation of contiguous natural corridors throughout the City for the protection of watersheds and wildlife will be given priority in land use decisions regarding open space.
- Implementation Measure 4.1.5.q. Continue to regulate development in potential disaster and hazard areas to minimize risks to life or property.
- Implementation Measure 4.1.5.y. Riparian corridors, wetlands and wildlife habitat that are determined to be significant through the Goal 5 process shall be designated as one or more overlay zones on the City Zoning Map.
- Implementation Measure 4.1.5.z. Protected natural resources within the Significant Resource Overlay Zone are intended to remain undeveloped with the possible exceptions of passive recreation and underground public facilities. These areas include the following:
 1. Riparian corridors, wetlands and wildlife habitat that are determined to be significant through the Goal 5 process and are included in the Significant Resource Overlay Zone.
 2. Water quality resource areas as defined by Metro's Title 3 of the Urban Growth Management Functional Plan.
- Implementation Measure 4.1.5.nn. Industrial and other potential noise generating activities will be located and designed so as to minimize noise conflicts with adjacent uses. The City Land Use and Development Wilsonville Comprehensive Plan Page D – 30 Updated April 2004 will cooperate with DEQ and ODOT in establishing and where practicable assisting in enforcing noise control standards.

Wilsonville Planning and Land Development Ordinance (January 2006)

The purpose of the Wilsonville Planning and Land Development Ordinance is to ...*promote the general public welfare by ensuring procedural due process in the administration and enforcement of the City's Comprehensive Plan.* Changes in future development levels and land use activities in the planning area will be regulated by zoning contained in the Wilsonville Planning and Land Development Ordinance. Regulations specific to the planning area are summarized below.

Section 4.117. Standards Applying To Industrial Developments in Any Zone

- (.01) *All industrial developments, uses, or activities are subject to performance standards. If not otherwise specified in the Planning and Development Code, industrial Section 4.118, developments, uses, and activities shall be subject to the performance standards specified in Section 4.135 (.07) (PDI Zone).*

Section 4.135. PDI- Planned Development Industrial Zone

- (.01) *Purpose: The purpose of the PDI zone is to provide opportunities for a variety of industrial operations and associated uses.*
- (.02) *The PDI Zone shall be governed by Section 4.140, Planned Development Regulations, and as otherwise set forth in this Code.*

Section 4.135.5: Planned Development Industrial – Regionally Significant Industrial Area

- (.01) *Purpose. The purpose of the PDI-RSLA Zone is to provide opportunities for regionally significant industrial operations along with a limited and appropriate range of related and compatible uses; to provide the flexibility to accommodate the changing nature of industrial employment centers, to protect industrially zoned lands for industrial uses, primarily in those areas near significant transportation facilities for the movement of freight and to facilitate the redevelopment of under-utilized industrial sites.*
- (.02) *The PDI-RSLA Zone shall be governed by Section 4.140, Planned Development Regulations, and as otherwise set forth in this Code.*

Tree Preservation and Protection Section 4.600.20. Applicability of Subchapter

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

Wilsonville Designated Significant Resource Overlay Zone (SROZ) Inventories and Compliance Policies (January 2006)

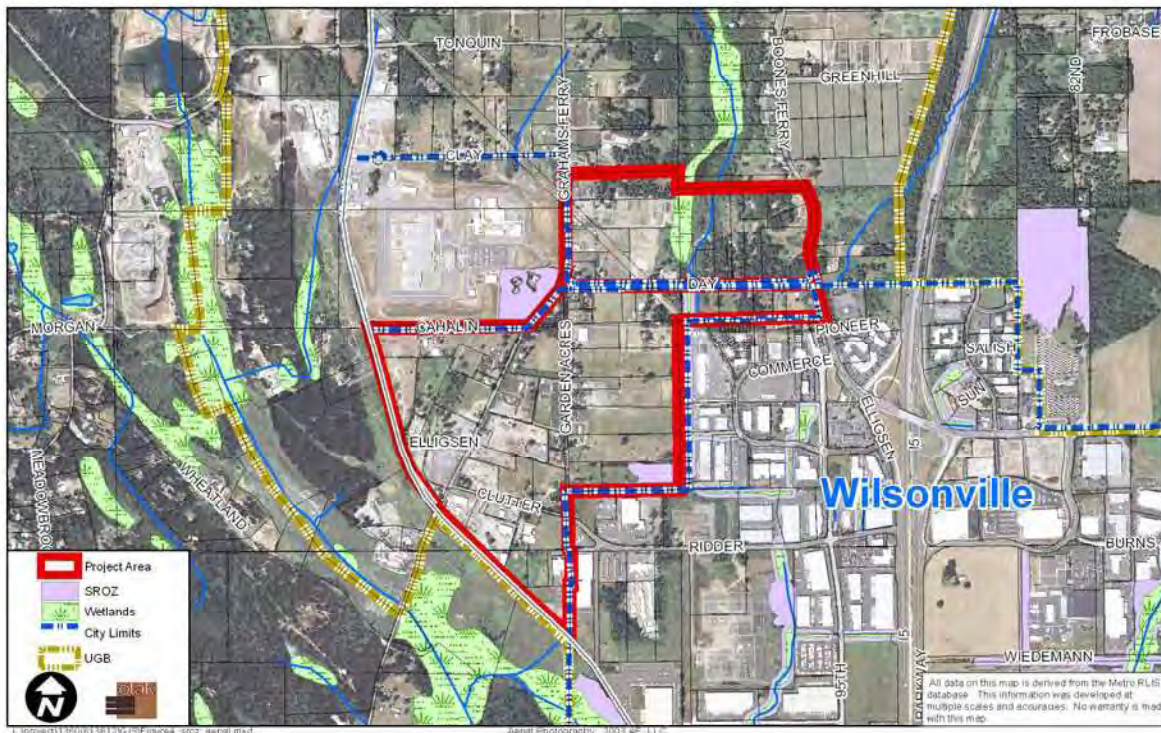
The Significant Resource Overlay Zone (SROZ) inventories and compliance policies are included in chapter 4.139.01 of the Wilsonville Planning and Land Development Ordinance. This zone is, *...intended to be used with any underlying base zone as shown on the City of Wilsonville Zoning Map. The purpose of the Significant Resource Overlay Zone is to implement the goals and policies of the Comprehensive Plan relating to natural resources, open space, environment, flood hazard, and the Willamette River Greenway. In addition, the purposes of these regulations are to achieve compliance with the requirements of the Metro Urban Growth Management Functional Plan (UGMFP) relating to Title 3 Water Quality Resource Areas, and that portion of Statewide Planning Goal 5 relating to significant natural resources. It is not the intent of this ordinance to prevent development where the impacts to significant resources can be minimized or mitigated. (Section 4.139.01 SROZ - Purpose)*

Section 4.139.02 Where These Regulations Apply

The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas". The text provisions of the Significant Resource Overlay Zone ordinance take precedence over the Significant Resource Overlay Zone maps. The Significant Resource Overlay Zone is described by boundary lines shown on the City of Wilsonville Significant Resource Overlay Zone Map. For the purpose of implementing the provisions of this Section, the Wilsonville Significant Resource Overlay Zone Map is used to determine whether a Significant Resource Impact Report (SRIR) is required. Through the development of an SRIR, a more specific determination can be made of possible impacts on the significant resources. Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations. Where the provisions of this Section conflict with other provisions of the City of Wilsonville Planning and Land Development Ordinance, the more restrictive shall apply. The SROZ represents the area within the outer boundary of all inventoried significant natural resources. The Significant Resource Overlay Zone includes all land identified and protected under Metro's UGMFP Title 3 Water Quality Resource Areas, as currently configured, significant wetlands, riparian corridors, and significant wildlife habitat that is inventoried and mapped on the Wilsonville Significant Resource Overlay Zone Map.

The lands within the SROZ are shown in Figure 4, below.

Figure 4



Wilsonville Wastewater Collection System Master Plan Final Report (July 2001)

This plan provides estimates of existing and future wastewater flows, including Urban Planning Areas outside the city, and sets forth a plan to adequately size a treatment plant, trunk lines, and interceptors within the service district. The existing service area is served by five interceptors, ranging in size from 10 to 30 inches. The existing sewer system includes 56 miles of gravity sewers and several pump stations.

The Coffee Creek Urban Planning Area is located in the United Disposal Interceptor basin subarea. The majority of the Coffee Creek Urban Planning Area was included as Urban Planning Area 4 (UPA-4) in the sewer master plan. This area was assumed to include the Coffee Creek Correctional Institution (on 113-acres) and 313-acres of future industrial land. Future unit flow assumptions for industrial uses were forecasted to be 2,000 gallons/day/acre. After considering factors for average daily flows, the industrial portion of UPA-4 is assumed to generate 626,000 gallons per day (gpd) of sewer flow at build-out.

It should also be noted that the assumptions included in the Preliminary Urban Reserve Plan for Area 42 (prepared in 1998), which includes a portion of the Coffee Creek Planning Area, calculated sewer flows at 3.0 mgd for the prison and industrial sites, that can serve between 12 and 21 persons per acre. The sewer master plan assumes 0.8 mgd of average flows from this area, which is consistent with the lower range of employment assumed by the Area 42 plan.

The sewer master plan identifies two specific capital improvements that would be required to adequately serve the majority of the Coffee Creek Planning Area. These include:

- United Disposal Parallel Pipe (CIP-UD1). Includes construction of a 12-inch line from SMH3503 to SMH0269 to convey peak wastewater flows over a distance of 5,315 feet. The project includes an 8-foot diameter manhole with a diversion weir. Railcrossing will require trenchless technology. Alternative alignments should be investigated to minimize impacts to wetland and natural areas. Coordinate with Kinsman Road extension where possible. Estimated cost of \$1,105,704 (2001 dollars).
- Garden Acres Road New Trunk Sewer (CIP-UD3). Includes a new 12-inch trunk service extension along Garden Acres Road between Day Road and SW Ridder Road to serve future development. Line covers 1,830 linear feet with estimated cost of \$383,568 (2001 dollars).

The sewer master plan also indicates that current operations and maintenance issues affecting system capacity, include ...*difficult access to the United Disposal line along the existing drainage way*. O&M efficiencies would likely be realized with implementation of the above mentioned projects.

City of Wilsonville, Stormwater Master Plan Final Report (June 2001)

This plan addresses the management of stormwater runoff quantity and quality within the City's Urban Growth Boundary and adjoining planning areas. The plan specifically addresses Comprehensive Plan Policy 3.1.7 which requires that, *The City of Wilsonville shall develop and maintain an adequate storm drainage system*. The Stormwater Master Plan is the mechanism which implements this Comprehensive Plan Policy and Implementation measures.

The Coffee Creek Planning Area is located within the Coffee Lake Creek Basin. The north tributary to Basalt Creek is located south of Day Road. Basalt Creek drains into Coffee Creek Lake and extends north of Day Road into the City of Tualatin UGB.

The Stormwater Maser Plan identifies potential regional detention facilities in the Coffee Creek Planning Area as effective pollution reduction facilities. Planned facilities in the Planning Area include:

- Project CLC-8, Detention Storage/Wetland Enhancement on North Tributary of Basalt Creek. The location north of Commerce Circle and south of Day Road contains existing wetlands on undeveloped property. A portion of the project may be located under BPA power lines. The project would need to be inspected two to four times per year, and maintained annual to prevent obstructions near outlets. Estimated capital cost is \$1,157,000 (2001 dollars).
- Project CLC-13, Channel West of Commerce Circle. High water levels are created by a lack of consistent channel slope or restrictions at the downstream ends of local storm water pipes. This project would remove two short sections of pipe located at the south end of the channel and re-grade pipework at the downstream end to remove restrictions to flow. Estimated cost is \$114,000 (2001 dollars).
- North Wilsonville Planning Area comprehensive storm drainage system. The former Urban Reserve Area 42 (portion of Coffee Creek Planning Area) requires a system of storm drainage improvements in addition to on-site stormwater detention and treatment provided by developers. The off-site public facility improvements are estimated to cost \$2.46 million (2001 dollars).

City of Wilsonville, Water Master Plan Final Report (January 2002)

Prior to the construction of the City of Wilsonville's Willamette Water Treatment Plant in 2002, the City relied on eight underground wells in the Columbia River Aquifer to serve its needs. The Willamette Treatment Plant now provides the majority of the City's water needs, with its main transmission line that runs up Kinsman Road. The Water Master Plan provides a plan for evaluating future water system needs to meet anticipated growth.

The Water Master Plan specifically addresses Comprehensive Plan Policies 3.1.1-3.1.5 and Implementation Measures:

To assure that good quality public water supply and distribution facilities are available with adequate but not excessive capacity to meet community needs, while also assuring that growth does not exceed the community's commitment to provide adequate facilities and services.

The Water Master Plan assumes current water usage rates of 44-gallons per day for industrial (average) and 176-gallons per day (peak) per user. The City's Community Development Department has also assumed that two 1.0 mgd average daily demand (ADD) industrial users will locate in the City by 2020 that will also need to be accommodated. The resulting analysis of water demand indicates that average peak day demand for industrial uses will increase from 1.25 mgd (2000) to 8.35 mgd (2020). Total water demand for the city is forecasted to increase from 6.8 mgd (2000) to 20.02 mgd (2020).

The existing Willamette Treatment Plan combined with existing wells has the capacity to handle approximately 10 mgd of total water demand. Future capacity expansion is planned to include 5 mgd through reservoirs (using aquifer storage and recovery wells) and another 5 mgd through expansion at the Willamette Treatment Plant.

The Water Master Plan is consistent with the Preliminary Urban Reserve Plan for Area 42 with regard to the preferred method of serving the Coffee Creek Planning Area. The Water Master Plan includes a capital improvement phasing plan that identifies the need to add 4,220 linear feet of 12-inch water line between Grahams Ferry to Ridder Road and Ridder Road to Garden Acres at a cost of \$462,723 (2002 dollars). Additional water system improvements could include a pro rata share of off-site improvements for the new reservoir and pump stations.

Wilsonville Parks and Recreation Master Plan (Draft May 2006)

The Wilsonville Parks and Recreation Master Plan addresses the park, recreation, and service needs of Wilsonville residents over the next 20 years, specifically envisioning *...a comprehensive and interrelated system of parks, recreation, and natural areas, that:*

- *Offers a range of experiences, including active and passive recreation, for all ages and abilities;*
- *Contributes to a healthy and livable community;*
- *Conserves and educates about the natural environment; and*
- *Promotes community connectivity by linking parks, recreation facilities, schools, and other key community centers by trails, pathways, and public transit.*

The Parks and Recreation Master Plan implements Policy 3.1.11 of the Comprehensive Plan, which states that, *The City of Wilsonville shall conserve and create open space throughout the City for specified objectives including park lands.*

The Master Plan specifically identifies the Northwest Industrial Area as having a strong need for accessible green space and recreation opportunities and recommends providing parks in this area and/or improving linkages between the Industrial Area and existing parks.

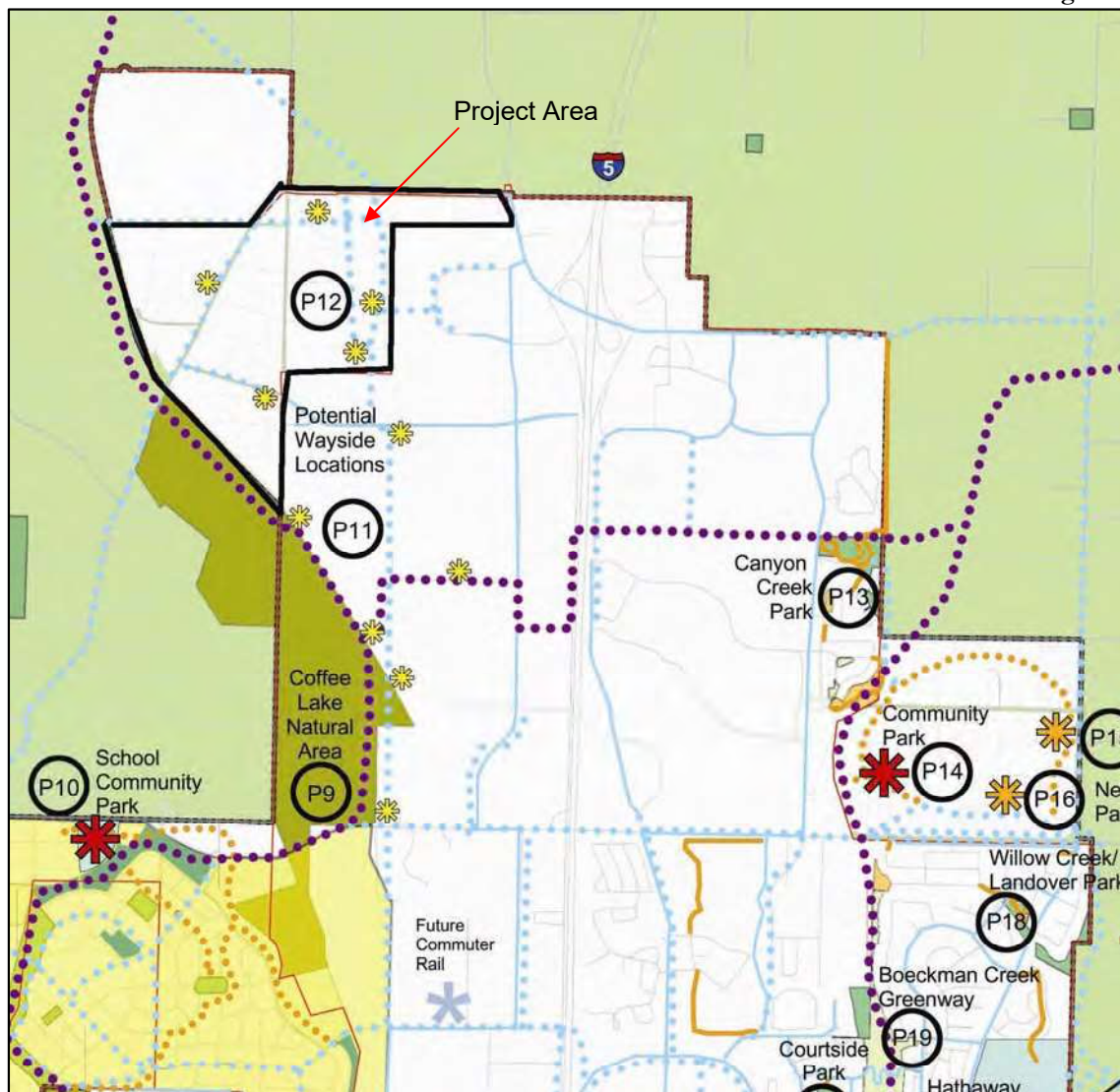
Northwest Industrial Area: *Parks are just as significant in commercial and industrial areas as in residential areas. However, the recreation and leisure needs of workers are different from residential needs, and they are often overlooked. The City of Wilsonville can be a leader in this regard by providing parks designed to serve the city's workforce. For example, the Bike and Pedestrian Plan recommends a regional trail and community trail through the*

Northwest industrial area, offering opportunities to incorporate recreation amenities to serve nearby employees as well as trail users. Benches, picnic areas, and similar facilities may provide healthy opportunities to relax and socialize during lunch and work breaks. As these industrial areas are developed, the City can encourage employers to offer additional recreation opportunities, and other healthy-living amenities. (Wilsonville Parks and Recreation Master Plan, Chapter 2)

Protecting natural resources is a hallmark of the Comprehensive Plan and the Parks and Recreation Master Plan. Natural resource protection and opportunities to partner with private land owners, as has historically been the case in Wilsonville, should be considered during the planning process for the Coffee Creek Area. Focus should also be placed on creating an interconnected park system including greenways and trails, but also connections for bike, pedestrian, and transit transportation choices.

The project area has one potential park site identified in Figure 5, which is the P12 Industrial Area Waysides.

Figure 5

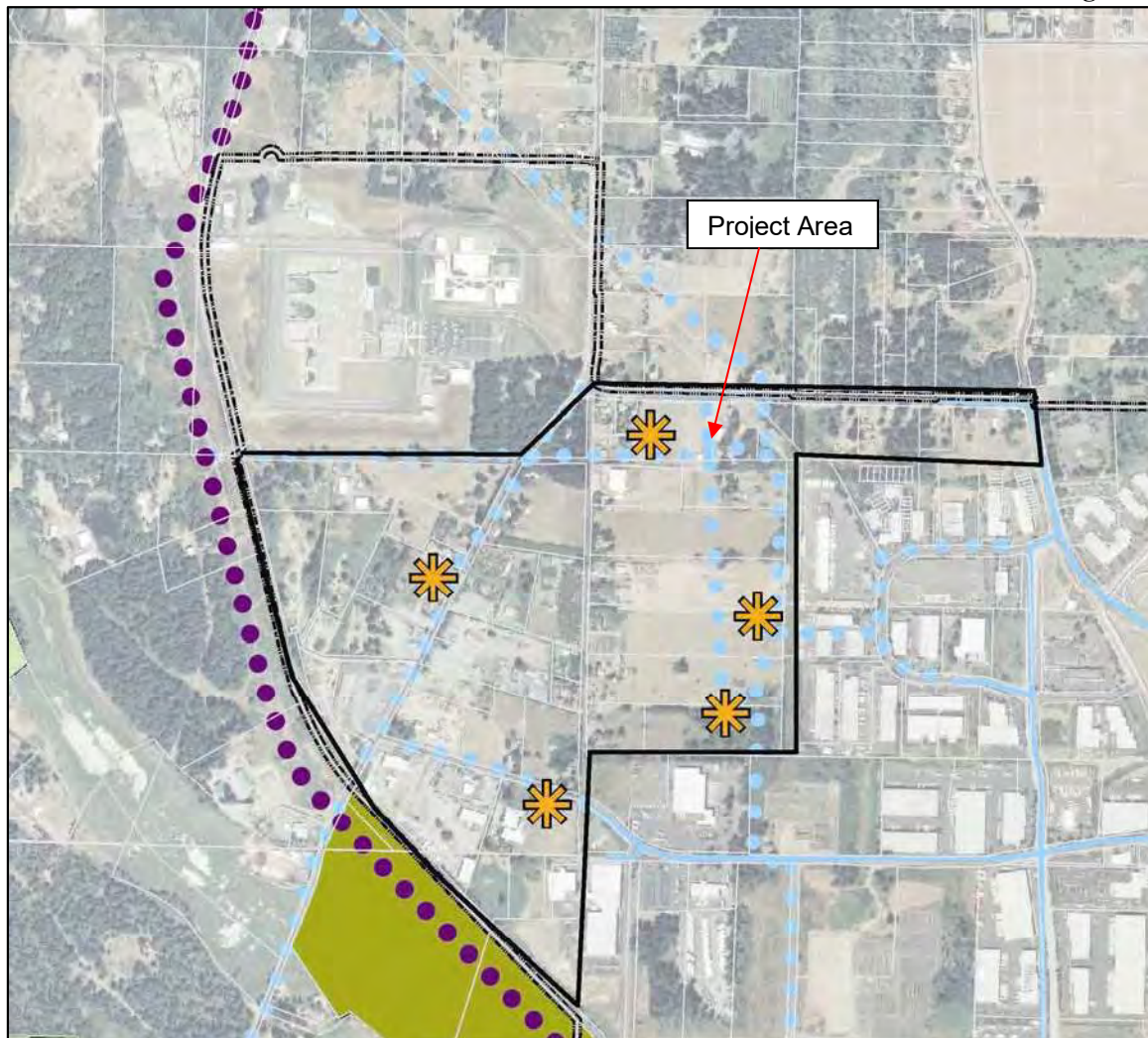


PI2 Industrial Area Waysides

Wilsonville is currently planning for industrial uses in the Northwest Area, just south of the prison. There is a great opportunity to design pocket parks that serve social and recreational needs of employees into the overall plan for the area. The vision for this area is to provide pocket parks along the community trails that are easily accessible to employees. Figure 6 depicts potential wayside locations in this area. Recommendations for the waysides include:

1. In this area, waysides should be provided within about 1/4-mile of employees.
2. As development occurs in this area, locate and design the waysides. Securing easements or land for each of the waysides should occur as part of the development review and approval process.
3. Each wayside should include a small picnic shelter to increase year round usability, site furnishings, and a paved plaza area.

Figure 6



Chapter 6 of the Parks and Recreation Master Plan provides capital project costs, including costs for the two projects within the plan area.

- P11 Industrial Area Waysides: Allowance for design and implementation of 3 pocket parks along regional trails R1 and R6 and community trail C10. Allowance based on average cost of \$200,000 per wayside, not including trail construction – \$600,000 (2005 dollars).
- P12 Industrial Area Waysides: Allowance for design and implementation of 3 pocket parks along community connector trails. Allowance based on average cost of \$200,000 per wayside, not including trail construction – \$600,000 (2005 dollars).

Wilsonville Bicycle and Pedestrian Master Plan

The Wilsonville Bicycle and Pedestrian Master Plan focuses on bicycling and walking as a way to enhance the quality of life for residents and visitors of Wilsonville. The Bicycle and Pedestrian Master Plan *...is for all residents who desire to bicycle or walk to work; improve their level of daily physical activity; go for a family bicycle ride to the park, library, or down to the Willamette River; or experience an undeveloped natural area such as Graham Oaks, (Wilsonville Bicycle and Pedestrian Master Plan, March 2006).*

The goal of the plan is *...to promote non-motorized travel and provide a safe, interconnected system of pedestrian and bicycle facilities, (Wilsonville Bicycle and Pedestrian Master Plan, March 2006).* This plan is integrated with the Parks and Recreation Master Plan to achieve city-wide goals.

Wilsonville Transit Master Plan

The Wilsonville Transit Master Plan provides strategies for reducing the demand on roads and parking as well as proposals for improved transit service. The Plan has two primary goals:

Goal 1

To promote an effective transit system that is a viable alternative to the single occupant vehicle; responds to the mobility needs of residents, employers, and employees; permits easy shifts from one mode to another; offers choice and convenience; and connects to other regional transportation systems.

Goal 2

To develop and implement Transportation Demand Management strategies in order to create greater choice and mobility; reduce automobile trips; make more efficient use of the roadway system; and minimize air pollution.

This plan is also integrated with the Parks and Recreation Master Plan and Bicycle and Pedestrian Master Plan to achieve city-wide goals.

Wilsonville Emergency Service Objectives

The City of Wilsonville has the authority per Oregon Revised Statutes (ORS) 401.309 to declare a state of emergency, as appropriate, through locally adopted Resolution 1959. Resolution 1959 defines emergencies as *“imminent danger of suffering from a tornado, storm, flood, high water, wind-driven water, earthquake, volcanic eruption, landslide, mudslide, snow or ice storm, drought, fire, explosion, health hazard, infestation, toxic substance, civil disorder, disruption of community services, or any other catastrophe whereby extraordinary measures must be taken to save lives, protect public health, safety and welfare; minimize destruction of property or the environment; or avert or lessen the threat of a major disaster.”*

The City of Wilsonville is also compliant with the use of the National Incident Management System (NIMS) through Resolution 1960.

The City of Wilsonville has an adopted an Emergency Management Plan, October 3, 2005 through Resolution 1961. The Emergency Management Plan identifies detailed policies and procedures regarding: city operations, responsibilities, city policies, and related items.

Washington County Community Development Code & Clackamas County Zoning and Development Ordinance

The Coffee Creek Planning Area is currently regulated by both the Washington County and Clackamas County Community Development Codes, although the majority of the land area is under Washington County jurisdiction. The purpose of these Codes is to implement the County(s) Comprehensive Plan and provide for the health, safety, and general welfare of County citizens.

The study area within Washington County is designated Future Development-20 (FD-20) which applies to the unincorporated urban lands added to the urban growth boundary by Metro through a Major or Legislative Amendment process after 1998. The FD-20 District recognizes the desirability of encouraging and retaining limited interim uses until the urban comprehensive planning for future urban development of these areas is complete. The provisions of this District are also intended to implement the requirements of Metro’s Urban Growth Management Functional Plan.

The Clackamas County portion of the project area is currently zoned R1, which permits residential development in accordance with the Clackamas County Zoning and Development Ordinance.

Once the planning process is concluded and the study area annexed into Wilsonville, the City’s zoning will apply to the area rather than Clackamas and Washington County zoning ordinances.

Revised Draft Goals and Objectives

The draft goals and objectives for this project are included in Appendix B, and will be revised based upon TAC input.

Next Steps

Otak will work closely with the project team to prepare draft land use and transportation alternatives for the study area, which will be presented to the Technical Advisory Committee (TAC) as well as other interested agencies. The alternatives will then be reviewed with subjective and objective evaluation criteria and a recommended plan for the study area will be identified for implementation.

Appendix A Transportation Goals & Policies – Summary

Prepared by DKS

MEMORANDUM

TO: Todd Chase, AICP, OTAK

FROM: Scott Mansur, P.E., DKS Associates

DATE: June 30, 2006

SUBJECT: Wilsonville Coffee Creek I TGM

Transportation Plans and Policies, Goals and Objectives Technical Memo #1

This is the first in a series of memorandums that presents technical findings and recommendations for the Wilsonville Coffee Creek TGM project. The purpose of this memorandum is to provide the Technical Advisory Committee (TAC) with a summary of key transportation issues specific to the Coffee Creek project area that were addressed in the following past plans:

- 2004 Regional Transportation System Plan
- 1999 Oregon Highway Plan
- City of Wilsonville Transportation System Plan
- City of Wilsonville Bicycle and Pedestrian Master Plan
- City of Wilsonville Transit Master Plan (Draft)
- Washington County Transportation System Plan

2004 Regional Transportation Plan, Metro, July 8, 2004.

The Regional Transportation Plan (RTP) is a 20-year blueprint to ensure our ability to get from here to there as the Portland region grows. The RTP establishes transportation policies for all forms of travel - motor vehicle, transit, pedestrian, bicycle and freight - and lays out the priority projects for roads and freight movement as well as bicycling, walking and transit. The plan is based on forecasts of growth in population, households, and jobs as well as future travel patterns and analysis of travel conditions. It considers estimates of federal, state and local funding which will be available for transportation improvements. The plan also comes with cost estimates and funding strategies to meet these costs. Local transportation plans are required by state law to be consistent with the RTP.

The following roadway classifications as shown in the table below as defined in the 2004 Regional Transportation Plan. It should be noted that there are no regional trails or greenways shown with the Coffee Creek project area.

Study Area Roadway Classifications as defined in the 2004 RTP:

<i>Roadway</i>	<i>Motor Vehicle Function Class</i>	<i>Transit</i>	<i>Bike</i>	<i>Pedestrian</i>	<i>Freight</i>
<i>I-5</i>	<i>Principal Arterial (Freeway)</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>Main Roadway Route</i>
<i>Boones Ferry Road</i>	<i>Minor Arterial</i>	<i>Regional Bus</i>	<i>Regional Corridor</i>	<i>Transit Mixed Use</i>	<i>Road Connector</i>

ND-No Designation

The following table provides the regional performance measures for the study area roadways.

Regional Motor Vehicle Performance Measures as defined in the RTP:

<i>Roadway</i>	<i>Classification</i>	<i>Preferred Operating Standard</i>		<i>Acceptable Operating Standard</i>	
		<i>1st Hour</i>	<i>2nd Hour</i>	<i>1st Hour</i>	<i>2nd Hour</i>
<i>I-5</i>	<i>Principal Arterial</i>	<i>E</i>	<i>D</i>	<i>E</i>	<i>E</i>
<i>Boones Ferry Road</i>	<i>Minor Arterial</i>	<i>E</i>	<i>D</i>	<i>E</i>	<i>E</i>

2004 Regional Transportation Plan, July 8, 2004 (Table 1.2). LOS D defined as demand to capacity ratio of 0.8 to 0.9, LOS E 0.9 to 1.0, and LOS F 1.0 to 1.1.

1999 Oregon Highway Plan, Oregon Department of Transportation, May 1999.

The Oregon Highway Plan (OHP) is a specific element of the Oregon Transportation Plan. The plan has three main elements: the Vision, the Policy Element and the System Element. The Vision portion of the plan considers what Oregon's highway system should look like, considering an anticipated 1.2 million new residents over the next 20 years, as well as projections for economic, demographic and technology forecasts. The Policy Element contains policies and actions under goals for System Definition, System Management, Access Management, Travel Alternatives, and Environmental and Scenic Resources. The System Element begins with an analysis of 20-year state highway needs and lays out investment strategies to meet these needs. This element also lays out an implementation plan for the goals, policies and actions identified in the Policy Element.

Currently, I-5 is classified as an Interstate Highway and Boones Ferry Road is classified as a District Highway within the Coffee Creek study area.

These policies apply to the following study area roadways:

Highway	Classification	V/C Standard*	
		1 st Hour	2 nd Hour
I-5	Interstate Highway	0.99	0.99
Boones Ferry Road	District Highway	0.99	0.99

*Based on the December 13, 2000 Amendment to the 1999 Oregon Highway Plan.

Transportation System Plan (TSP), City of Wilsonville, June 2003.

The City of Wilsonville TSP provides specific information regarding transportation needs to guide future transportation investment in the City and determine how land use and transportation decisions can be brought together beneficially for the City. The TSP also addressed current problem areas and looked into the future (20 years) to identify needs created by growth. The table below identifies the projects that were recommended specific to the project area.

Several projects have been listed in the TSP within the project area.

Number	Location	Description (Project Status)
W-2	Boones Ferry Road	Widen Boones Ferry Road from 95 th Avenue to Day Road to five lanes (this project has been constructed).
W-16	Day Road	Widen Day Road to three lanes from Grahams Ferry Road to Boones Ferry Road (this project has been constructed).
C-7	Kinsman Road Extension	Construct two-lane extension of Kinsman Road from RxR tracks to Ridder Road (this project has not been constructed).
C-24	Kinsman Road Extension	Construct two-lane extension of Kinsman Road from Ridder Road to Day Road (this project has not been constructed).
S-1	Grahams Ferry Road/Day Road Intersection	Install traffic signal (this traffic signal has been constructed).
S-6	Boones Ferry Road/Day Road Intersection	Install traffic signal and northbound through lane (this project has been constructed).

All of the public street intersections within the City of Wilsonville are required to meet a level of service “D” standard.

Bicycle and Pedestrian Master Plan, City of Wilsonville, March 2006 (Draft).

The City of Wilsonville Bicycle and Pedestrian Master Plan was recently updated and provides information regarding bicycle and pedestrian needs and identified improvements within the Coffee Creek study area and are summarized in the following table.

The following bicycle and pedestrian projects were identified within the project area.

Number	Location	Description (Priority)
C14	Commerce Circle (west of 95 th)	Commerce Circle serves north Wilsonville as a transit route, and major portions of the roadway lacks sidewalks on one or both sides. (11+ years)
C35	Area 42 Trail (Kinsman to Day Road)	This trail was outlined in the Preliminary Urban Reserve Plan Area 42 and North Wilsonville Industrial Area Proposed Concept Plan providing a connection to the BPA powerline easement. Provides an off-street connection through the industrial lands. (6-10 years)
C36	BPA Powerline Trail (Day Road to Tonquin Trail)	This trail connects bicyclists and pedestrians along Day Rd with the Tonquin Trail. Provides Tonquin trail users access to the northern industrial area of Wilsonville. (6-10 years)
C37	Cahalin Road (Kinsman Road to Tonquin Trail)	Provides a safe connection through the northern industrial area of Wilsonville. May provide additional connection to the Tonquin Trail. (6-10 years)
C38	Clutter Road (Garden Acres Road to Grahams Ferry Road)	Provides a safe connection through the northern industrial area of Wilsonville. (6-10 years)
C39	Grahams Ferry Road (Day Road to Tooze Road)	A major north south access road into Wilsonville that currently has no provisions for bicyclists or pedestrians. Providing dedicated facilities provides additional choices for bicycle commuters. (1-5 years)

Transit Master Plan, City of Wilsonville, Draft May 2006.

The draft Transit Master Plan provides strategies for reducing the demand on roads and parking as well as improved transit service. The draft plan proposes a future transit route (Route #203) that would provide service to the Coffee Creek project area via Day Road including a stop at the Coffee Creek Correctional Facility. This revised route was intended to serve the future annexation of industrial lands.

Transportation System Plan (TSP), Washington County, October 2002

The Washington County 2020 Transportation System Plan is one of the several elements that comprise the Washington County Comprehensive Plan. The TSP contains the accumulation of recommended system and service improvements and programs that will be needed to serve long-term growth to 2020 and addresses transportation and safety issues related to motor vehicles, transit, pedestrian, bicycle, freight and other modes of transportation. The major work elements of the TSP are policies and strategies, data collection, existing travel conditions and future needs, travel mode alternatives, cost estimates and preparation of draft transportation plan.

The following table provides the Washington County motor vehicle performance measures for the study area roadways.

<i>Roadway</i>	<i>Classification</i>	<i>Target Performance Measures</i>		<i>Acceptable performance Measures</i>	
		<i>First Hour</i>	<i>Second Hour</i>	<i>First Hour</i>	<i>Second Hour</i>
SW Boones Ferry Road	Arterial	D	D	E	D
SW Grahams Ferry Road	Arterial – North of Day St. Collector – South of Day St.	D	D	E	D
SW Day St	Arterial	D	D	E	D

Washington County 2020 TSP, October 29, 2002 (Table 5) LOS D defined as demand to capacity ratio of 0.81 to 0.9, LOS E 0.91 to 0.99.

The table below shows the capacity enhancement projects that were listed in the Washington County 2020 TSP technical appendix within the project area.

<i>Number</i>	<i>Location</i>	<i>Description</i>
131	Grahams Ferry Rd	Widen Grahams Ferry Road to three lanes from Tonquin to Clutter Rd and provide sidewalks
132	Day St	Widen Day St. to three lanes from Grahams Ferry Road to Boones Ferry Road and provide sidewalks
133	Clutter/Ridder Rd	Widen Clutter/Ridder to three lanes from Grahams Ferry Road to Boones Ferry Road and provide sidewalks
138	Tonquin Rd	Widen and Realign Tonquin Rd from Grahams Ferry to Oregon St and provide sidewalks

Washington County 2020 TSP, Technical Appendix B-2, C-4 May 3, 2002

Appendix B
Revised Draft Goals and Policies

Coffee Creek Master/Concept Plan

Summary of Draft Goals, Objectives and Criteria

revised August 23, 2006

Goal 1	Consistency with Local, Regional and State Plans
Objectives	<p><i>Compatibility with Metro 2040 Framework Plan, and Statewide Land Use Goals</i></p> <p><i>A Limit location of other employment types on industrial lands consistent with Metro ordinance, and RSIA/Industrial land use designations</i></p> <p><i>B Support clustering of industries</i></p> <p><i>C Provide for retention and/or aggregation of large industrial sites</i></p>
Criteria	<p><i>Limit new retail space to less than 3000 (RSIA) to 5000 (Industrial) per user and less than 20,000 total.</i></p> <p><i>2 Number of potential "large contiguous industrial sites" over 20 acres in size</i></p> <p><i>3 At least 40% of land area to be developed with industrial or ancillary uses. Input from Metro, ODOT and DLCD regarding level of support for each alternative</i></p> <p><i>4</i></p>
Goal 2	Transportation
Objectives	<p><i>A Encourage location of other employment types on non-industrial lands</i></p> <p><i>B Site industries to take advantage of existing transportation networks</i></p> <p><i>Compatibility with the City's TSP, County TSP, and Oregon Transportation Plans</i></p> <p><i>C Provide for adequate transit services, providing connection to Washington County's Commuter Rail station</i></p> <p><i>D Provide for bicycle and pedestrian access consistent with the Wilsonville Bike/Pedestrian Plan</i></p> <p><i>E Coordination with the I-5/99W Connector alignment</i></p>
Criteria	<p><i>Limit size of non-industrial uses to not reduce off peak performance on Main</i></p> <p><i>1 Routes shown on Metro's Freight Network Map.</i></p> <p><i>2 Planning area is located near regionally significant transportation facilities</i></p> <p><i>3 Kinsman Road extension from Ridder Road to Day Road</i></p> <p><i>4 Improvements to intersection of 95th Ave., Elligsen Road and Boones Ferry Road</i></p> <p><i>5 Improvements to Ridder Road, including intersection with Graham's Ferry Road</i></p> <p><i>6 Improvements to Graham's Ferry Road from Day Road to RR underpass</i></p> <p><i>7 RR underpass improvements</i></p> <p><i>8 Connections to proposed SMART Route 203 bus shops/shelters at appropriate locations</i></p> <p><i>9 Include bike/ped improvements on Kinsman, Ridder, Graham's Ferry Roads and on internal street network</i></p>

<p>Goal 3</p> <p>Objectives</p> <p>Criteria</p>	<p>Public Facilities</p> <p><i>A Plan for orderly, economic provision of public facilities and services</i> <i>Ensure adequate provision of urban services, or that improvements are scheduled through CIP and made within 2 yrs.</i></p> <p><i>B Identify capital costs for provision of public services for cost allocation</i> <i>Use payback agreements, development agreements and other financing techniques. Detention and water quality paid by developers.</i></p> <p><i>C Work with PGE and BPA with regard to easements and other issues and concerns</i></p> <p>Water: distribution lines consistent with City's Water System Management Plan</p> <p>1 Plan</p> <p>Sanitary Sewer: consistent with Wastewater Plan, particularly projects CIP-UD-1 and CIP-UD-3.</p> <p>2 Storm Drainage: consistent with Storm water Master Plan. Detention and water quality to be provided by developers.</p> <p>3 Consistent with council direction in Resolution No. 1992 regarding relocation of CLC-8</p> <p>4 Does not negatively impact drainage patterns in the Commerce Circle area (CLC-13).</p> <p>5 Consistent with direction of CLC-9 regarding location of 2 regional detention ponds upstream of the Railroad</p> <p>6 Obtain letters of support from PGE and BPA</p> <p>7 Relative fiscal impact of each alternative</p> <p>8</p>
<p>Goal 4</p> <p>Objectives</p> <p>Criteria</p>	<p>Citizen/Stakeholder Participation</p> <p><i>A Involve property owners, adjacent communities and counties, business and industrial stakeholders, citizens, affected agencies</i></p> <p>Subjective interpretation of Public meeting record, and citizen feedback via exit surveys</p> <p>1 Consideration of the overall relative marketability of each alternative (from property owner's perspective)</p> <p>2</p>
<p>Goal 5</p> <p>Objectives</p> <p>Criteria</p>	<p>Maintain High Quality Industrial Development</p> <p><i>A Require adherence to City's performance standards for all industrial operations</i></p> <p><i>B Encourage energy efficient "green" infrastructure and buildings within overall planning area</i></p> <p><i>C Protect valuable resource lands (SROZ areas)</i></p> <p><i>D Provide for parks and recreation opportunities consistent with City's Parks and Recreation Plan</i></p> <p>1 Subjective consideration of environmental design based on input from TAC</p> <p>2 Consistency with Parks and Recreation Plan; relative support from City Parks Committee</p>

Coffee Creek Master Plan Appendix

Section D. Plan Alternatives Evaluation

M e m o r a n d u m



17355 SW Boones Ferry Rd.

Lake Oswego, OR 97035

Phone (503)635-3618

Fax (503) 635-5395

To: Sandi Young, AICP and Chris Neamtzu, City of Wilsonville;; Marah Danielson, ODOT Region 1
From: Todd Chase, Otak
Copies: File
Date: February 19, 2007
Subject: Task 5.3 Revised Draft Ranking of Alternatives Matrix
Project #: 13612

Introduction

This memorandum describes revised draft ranking of evaluation findings and recommended next steps for the advancement of planning alternatives for the Coffee Creek Industrial Area TGM project. At this point, we have applied the revised draft evaluation criteria to the two alternatives (based on Planning Advisory Committee {PAC} input on August 18, 2006, October 20, 2006 and February 16, 2007), and have taken into account public input (based on a Public Open House on September 28, 2006).

Preliminary Evaluation and Next Steps

The draft planning goals, objectives, and evaluation criteria were discussed and revised based on PAC input in August. Otak applied general findings to the draft criteria that were presented to the public at the Open House in September. The results from the preliminary evaluation were presented to the PAC in October, and again in February 2007. During the February PAC meeting, the members discussed how each criterion can be used to make informed decisions regarding the advantages and disadvantages of the alternatives, then identified an overall recommendation for each Goal.

The overall recommendation from the PAC is to prepare a draft Plan that is a “hybrid” combination of Alternatives 1 and 2 as a Preferred Alternative. Recommendations from the PAC include:

- Alt. 1 road network, with exceptions for the Clutter Road realignment and Commerce Circle connection shown in Alt. 2.
- Design overlay along entire length of Day Road.
- Support for the Mixed Employment PUD concept north of Day Road as shown with Alt. 2. However, it is likely that both alternatives North of Day Road should be taken to Metro Council for comment prior to the City of Wilsonville endorsing or adopting a preferred version north of Day.

The draft recommendations will be presented to the Public and the City Planning Commission and City Council for additional input during April and May.

Coffee Creek Industrial Area Plan		Summary of Goals, Objectives and Criteria, and Evaluation of Alternatives		Concept Plan		Draft Outcome	
prepared February 19, 2007							
Goal	Objective	Relative Measure	Master Plan South of Day	Master Plan North of Day	Preliminary Findings	Draft Outcome	Draft Outcome
			ALT 1	ALT 2		South of Day	North of Day
Goal 1	Consistency with Local, Regional and State Plans						
	<i>Compatibility with Metro 2040 Framework Plan, and Statewide Land Use Goals</i>						
	<i>Limit location of other employment types on industrial lands consistent with Metro ordinance, and RSIA/Industrial land use designations</i>						
	<i>Support clustering of industries</i>						
	<i>Provide for retention and/or aggregation of large industrial sites</i>						
Criteria	1 Limit new retail space to less than 3000 (RSIA) to 5000 (Industrial) per user and less than 20,000 total.	yes or no	yes	yes	Code applies to both alternatives equally	Tie	Edge for Alt. 1
	2 Number of potential "large contiguous industrial sites" over 20 acres in size	# of parcels	6	6	Alternative 1 provides the most flexibility for larger 20+ acre users	Edge for Alt. 1	Edge for Alt. 1
	3 At least 40% of land area to be developed with industrial or ancillary uses.	yes or no	yes	yes	Alt. 2 provides more mixed use North of Day	Tie	Edge for Alt. 2
	4 Input from Metro, ODOT and DLCD regarding level of support for each alternative	Ranking (1=best)	1	--		Edge for Alt. 1	Edge for Alt. 1
	Overall TAC Recommendation					Alt. 1	Alt. 1
Goal 2	Transportation						
	<i>Encourage location of other employment types on non-industrial lands</i>						
	<i>Site industries to take advantage of existing transportation networks</i>						
	<i>Compatibility with the City's TSP, County TSP, and Oregon Transportation Plans</i>						
	<i>Provide for adequate transit services, providing connection to Washington County's Commuter Rail station</i>						
	<i>Provide for bicycle and pedestrian access consistent with the Wilsonville Bike/Pedestrian Plan</i>						
	<i>Coordination with the I-5/99W Connector alignment</i>						
	Limit size of non-industrial uses to not reduce off peak performance on Main Routes shown on Metro's Freight Network Map.	Ranking (1=best)	1	1	Alt. 2 provides more mixed use North of Day	Edge for Alt. 1	Edge for Alt. 1
Criteria	1 Planning area is located near regionally significant transportation facilities	yes or no	yes	yes	Policy applies to both alternatives equally	Tie	Tie
	2 Kinsman Road extension from Ridder Road to Day Road	yes or no	yes	yes	Policy applies to both alternatives equally	Tie	Tie
	3 Improvements to intersection of 95th Ave., Elligsen Road and Boones Ferry Road	yes or no	yes	yes	Awaiting traffic analysis of connection with Commerce Circle & Mixed Use Develop	Tie	Edge for Alt. 2

Coffee Creek Industrial Area Plan									
Summary of Goals, Objectives and Criteria, and Evaluation of Alternatives									
prepared February 19, 2007									
	Relative Measure	Master Plan South of Day		Concept Plan North of Day		Preliminary Findings	Draft Outcome	Draft Outcome	Draft Outcome
		ALT 1	ALT 2	ALT 1	ALT 2				
5	Improvements to Ridder Road, including intersection with Graham's Ferry Road		1	--	--	Alt. 2 includes realignment with improved site distance	Edge for Alt. 2		Tie
6	Improvements to Graham's Ferry Road from Day Road to RR underpass	yes	yes	--	--	Policy applies to both alternatives equally	Tie		Tie
7	RR underpass improvements	yes	yes	--	--	Policy applies to both alternatives equally	Edge for Alt. 2		Tie
8	Connections to proposed SMART Route 203 bus shops/shelters at appropriate locations	yes	yes	yes	yes	Policy applies to both alternatives equally	Tie		Tie
9	Include bike/ped improvements on Kinsman, Ridder, Graham's Ferry Roads and on internal street network	yes	yes	yes	yes	Policy applies to both alternatives equally	Edge for Alt. 2		Tie
Overall TAC Recommendation									
Goal 3	Public Facilities								Tie
Objectives	<i>Plan for orderly, economic provision of public facilities and services</i>								
A	<i>Ensure adequate provision of urban services, or that improvements are scheduled through CIP and made within 2 yrs.</i>								
B	<i>Identify capital costs for provision of public services for cost allocation</i>								
C	<i>Use payback agreements, development agreements and other financing techniques. Detention and water quality paid by developers.</i>								
D	<i>Work with PGE and BPA with regard to easements and other issues and concerns</i>								
E	<i>Water: distribution lines consistent with City's Water System Management Plan</i>								
Criteria	1 Sanitary Sewer: consistent with Wastewater Plan, particularly projects CIP-JD-1 and CIP-JD-3.	yes	yes	yes	yes	additional modeling needed	Tie		Tie
2	Storm Drainage: consistent with Storm water Master Plan. Detention and water quality to be provided by developers.	yes	yes	yes	yes	additional modeling needed	Tie		Tie
3	Consistent with council direction in Resolution No. 1992 regarding CLC-8 (North Basalt Creek tributary)	1		--	--	Kinsman Road provides best Green Street opportunity with Alt. 1 alignment	Edge for Alt. 1		Tie
4	Does not negatively impact drainage patterns in the Commerce Circle area (CLC-13).	2		yes	yes	additional modeling needed	Tie		Tie
5	Consistent with direction of CLC-9 regarding location of regional detention ponds upstream of the Railroad	1		--	--	Commerce Circle connection would go in Wetland in Alt.2	Edge for Alt. 1		Tie
6	Obtain letters of support from PGE and BPA regarding their preference for an alternative, if any	yes	yes	yes	yes	additional modeling needed	Tie		Tie
7		--	--	--	--	pending	?		?

Coffee Creek Industrial Area Plan									
Summary of Goals, Objectives and Criteria, and Evaluation of Alternatives									
prepared February 19, 2007									
	Relative Measure	Master Plan South of Day		Concept Plan North of Day		Preliminary Findings	Draft Outcome	Draft Outcome	Draft Outcome
		ALT 1	ALT 2	ALT 1	ALT 2				
8	Relative fiscal impact of each alternative	--	--	--	--	Tie south of Day, Alt. 1 is favorable north of Day.	Tie	South of Day	North of Day
Overall TAC Recommendation									
Goal 4	Citizen/Stakeholder Participation								
	<i>Involve property owners, adjacent communities and counties, business and industrial stakeholders, citizens, affected agencies</i>								
Objectives	A								
Criteria	1		1		1	Citizens liked the idea of design standards along Day Road, but were concerned about mixed use in Alt. 2	Edge for Alt. 2	Edge for Alt. 1	Edge for Alt. 1
	2		--		1	Fewer restrictions with Alt. 1	Edge for Alt. 1 (with Design Overlay)	Edge for Alt. 2	Edge for Alt. 2
Overall TAC Recommendation									
Goal 5	Maintain High Quality Industrial Development								
Objectives	A								
	B								
	C								
	D								
Criteria	1		1		--	Alt. 2 would have additional design standards along Day Rd.	Alt. 1 (w/ Design Overlay)	Alt. 1 (w/ Design Overlay)	Alt. 2
	2	yes or no	yes	yes	yes	Both Alts are consistent with Parks Plan	Tie	Tie	Tie
Overall TAC Recommendation									
Overall TAC Recommendation									
Alt. 1 (w/ Design Overlay)									
Alt. 2									

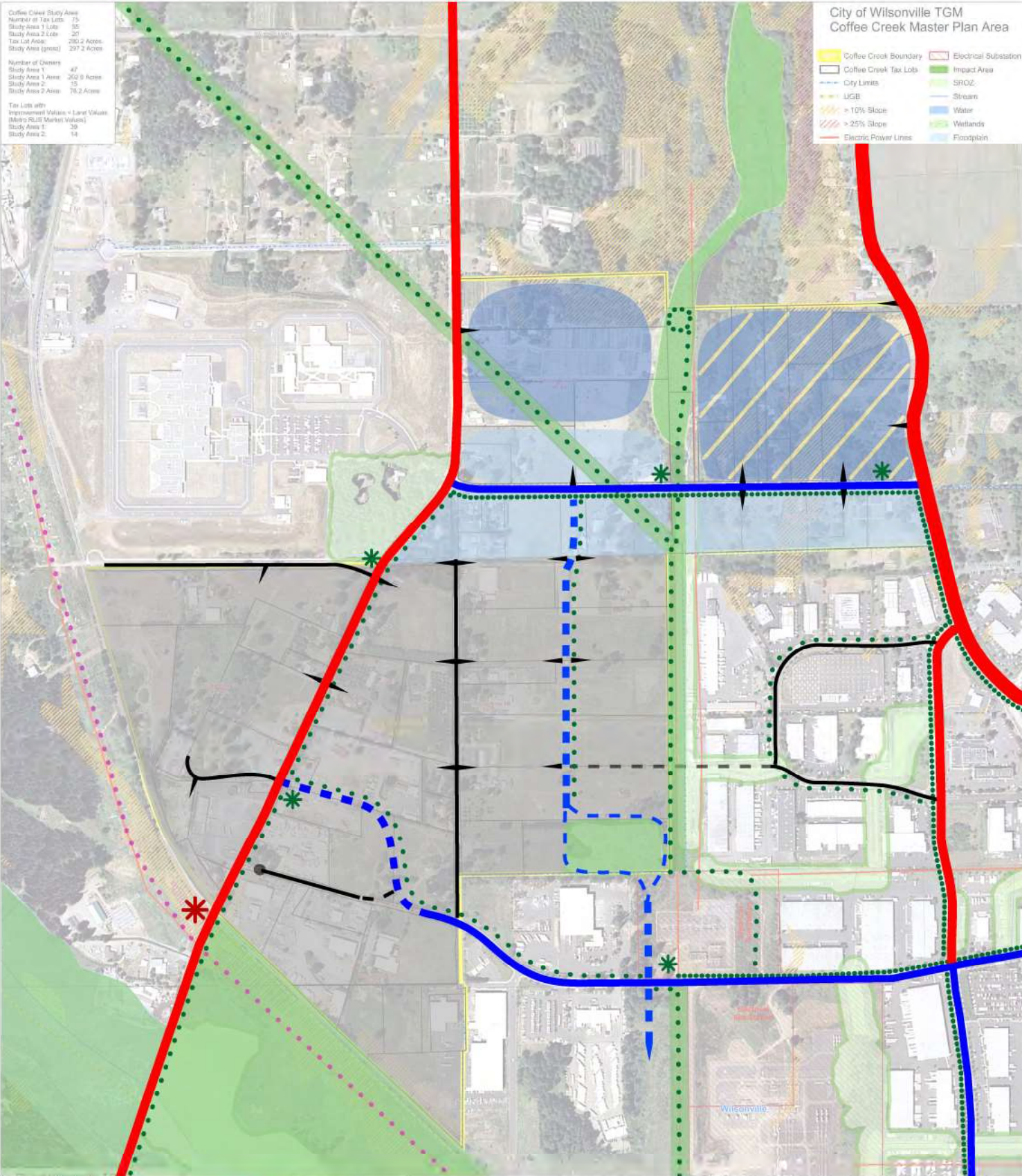
Coffee Creek Study Area
 Number of Tax Lots: 75
 Study Area 1 Lots: 35
 Study Area 2 Lots: 20
 Tax Lot Area: 380.2 Acres
 Study Area (gross): 297.2 Acres

 Number of Owners:
 Study Area 1: 47
 Study Area 1 Area: 252.0 Acres
 Study Area 2: 15
 Study Area 2 Area: 78.2 Acres

 Tax Lots with
 Improvement Values & Land Values
 (Based on 2005 Market Values)
 Study Area 1: 39
 Study Area 2: 14

City of Wilsonville TGM
 Coffee Creek Master Plan Area

- Coffee Creek Boundary
- Coffee Creek Tax Lots
- City Limits
- UGB
- > 10% Slope
- > 25% Slope
- Electric Power Lines
- Electrical Substation
- Impact Area
- SROZ
- Stream
- Water
- Wetlands
- Floodplain



<ul style="list-style-type: none"> Ex. Arterial Ex. Collector Ex. Local Street Proposed Arterial Proposed Collector Proposed Local Street Possible Access 	<ul style="list-style-type: none"> Proposed Regional Trail Proposed Community Walkway and Bikeway Existing Community Walkway and Bikeway Pocket Park / Wayside¹ Gateway / Wayside * RR Xing / Improvement <p><small>¹ Locations determined at development review</small></p>	<ul style="list-style-type: none"> Regionally Significant Light Industrial Light Industrial Light Industrial with Design Overlay Employment / Mixed Use SROZ, Wetlands and Power Line Corridor
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ALTERNATIVE 2
 INDUSTRIAL / MIXED EMPLOYMENT

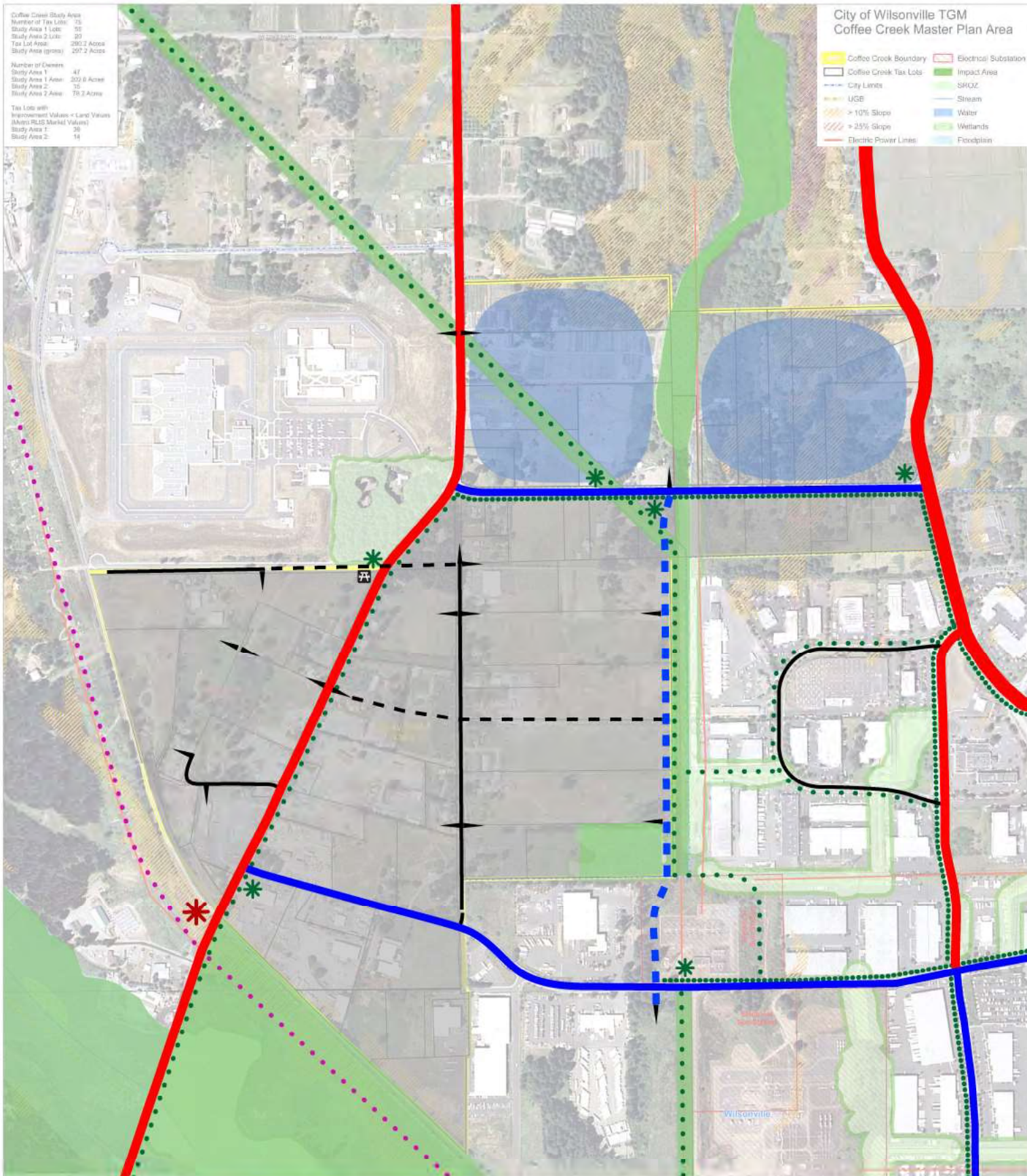
Coffee Creek Study Area
 Number of Tax Lots: 75
 Study Area 1 Lots: 55
 Study Area 2 Lots: 20
 Tax Lot Area: 285.2 Acres
 Study Area (gross): 297.2 Acres

Number of Owners:
 Study Area 1: 47
 Study Area 1 Area: 202.6 Acres
 Study Area 2: 28
 Study Area 2 Area: 78.2 Acres

Tax Lots with Improvement Values < Land Values (Metro RLIS Market Values)
 Study Area 1: 36
 Study Area 2: 14

City of Wilsonville TGM
 Coffee Creek Master Plan Area

- Coffee Creek Boundary
- Coffee Creek Tax Lots
- City Limits
- UGB
- > 10% Slope
- > 25% Slope
- Electric Power Lines
- Electrical Substation
- Impact Area
- SROZ
- Stream
- Water
- Wetlands
- Floodplain

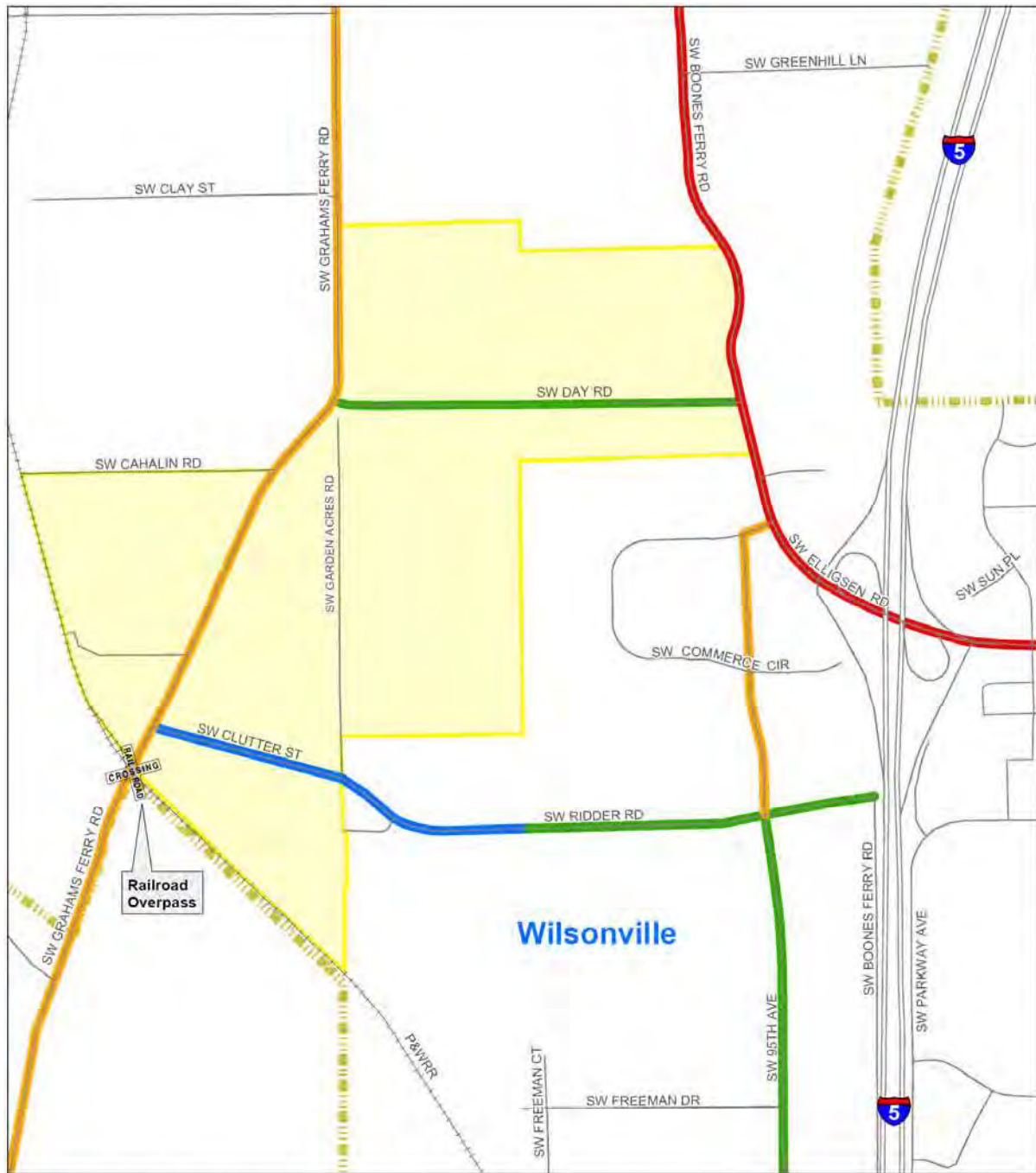


<ul style="list-style-type: none"> Ex. Arterial Ex. Collector Ex. Local Street Proposed Arterial Proposed Collector Proposed Local Street Potential Access Proposed Regional Trail Proposed Community Walkway and Bikeway Existing Community Walkway and Bikeway Pocket Park / Wayside Gateway / Wayside * RR Xing / Improvement 	<ul style="list-style-type: none"> Regionally Significant Light Industrial Industrial Industrial with Design Overlay Employment / Mixed Use SROZ, Wetlands and Power Line Corridor 	<div style="background-color: black; color: white; padding: 5px; text-align: center; font-weight: bold; font-size: 18px;">ALTERNATIVE 1</div> <div style="text-align: center; font-weight: bold; font-size: 14px;">INDUSTRIAL</div> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div>
--	--	---

¹ Locations determined at development review

Coffee Creek Master Plan Appendix

Section E. Existing Conditions Maps



City of Wilsonville TGM
Coffee Creek Master Plan Area

Existing Road Improvements and Railroads

	Major Arterial		Railroad
	Minor Arterial		Coffee Creek Boundary
	Major Collector		UGB
	Minor Collector		
	Interstate		
	Local Street		

500 0 500 1,000
Feet
1 inch equals 1,000 feet

Base data on this map was derived from the Motor RLS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

Production Date: February 20, 2007

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City of Wilsonville TGM
Coffee Creek Master Plan Area

Existing Pedestrian, Bike, and Transit Facilities

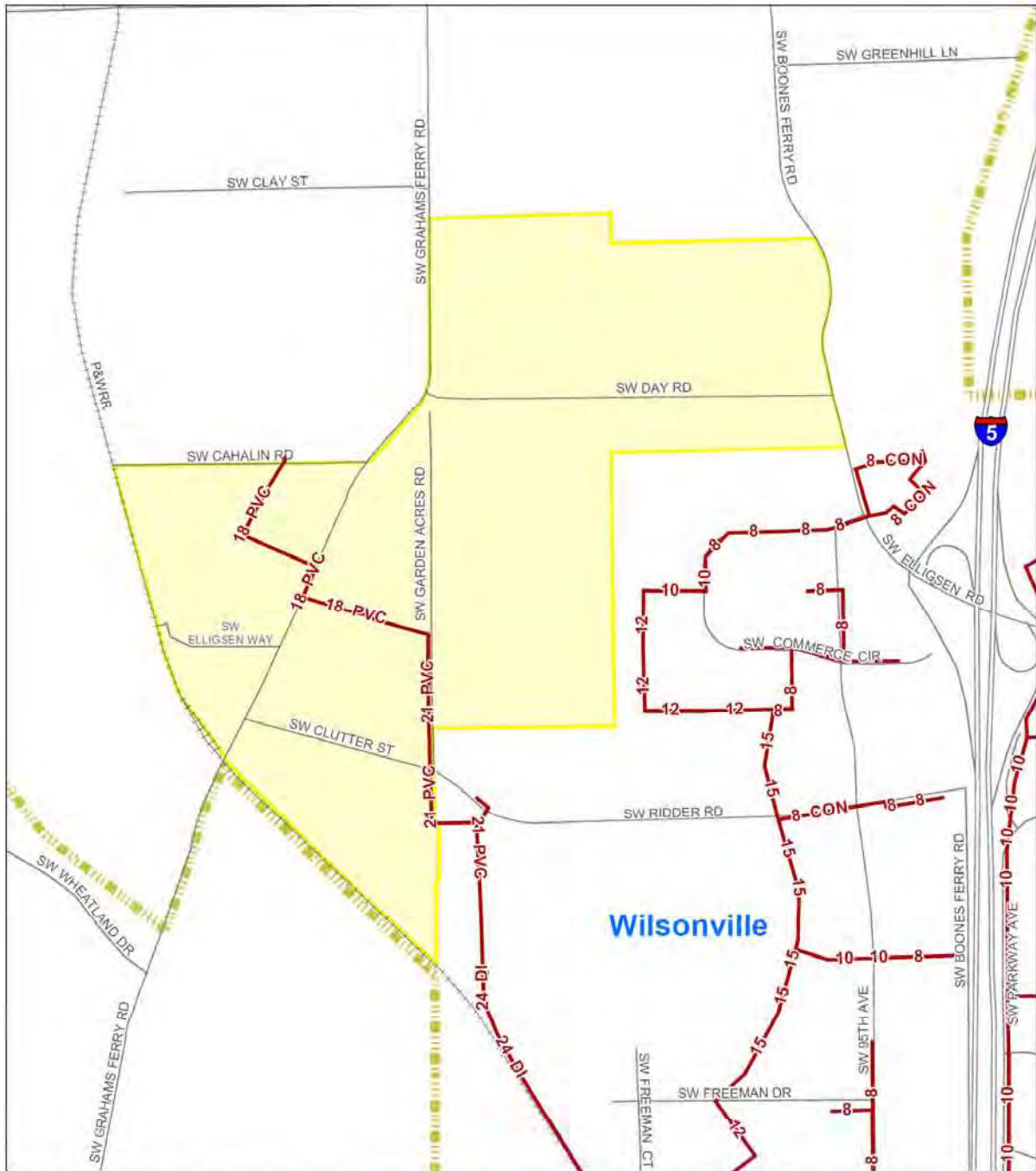
Existing Bus Route	Coffee Creek Boundary
Existing Bus Stop	UGB
Existing Sidewalk	
Existing Bike Lane	
High Traffic Through-Street	

N

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Feet
1 inch equals 1,000 feet

Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and occasions. No warranty is made with this map.

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City of Wilsonville TGM
Coffee Creek Master Plan Area

Existing Sanitary Sewer Facilities

- Existing Sewer Line
- Coffee Creek Boundary
- - - UGB

Note: Sewer line diameters (in inches) and compositions are shown. The compositions of the sewer lines are as follows:

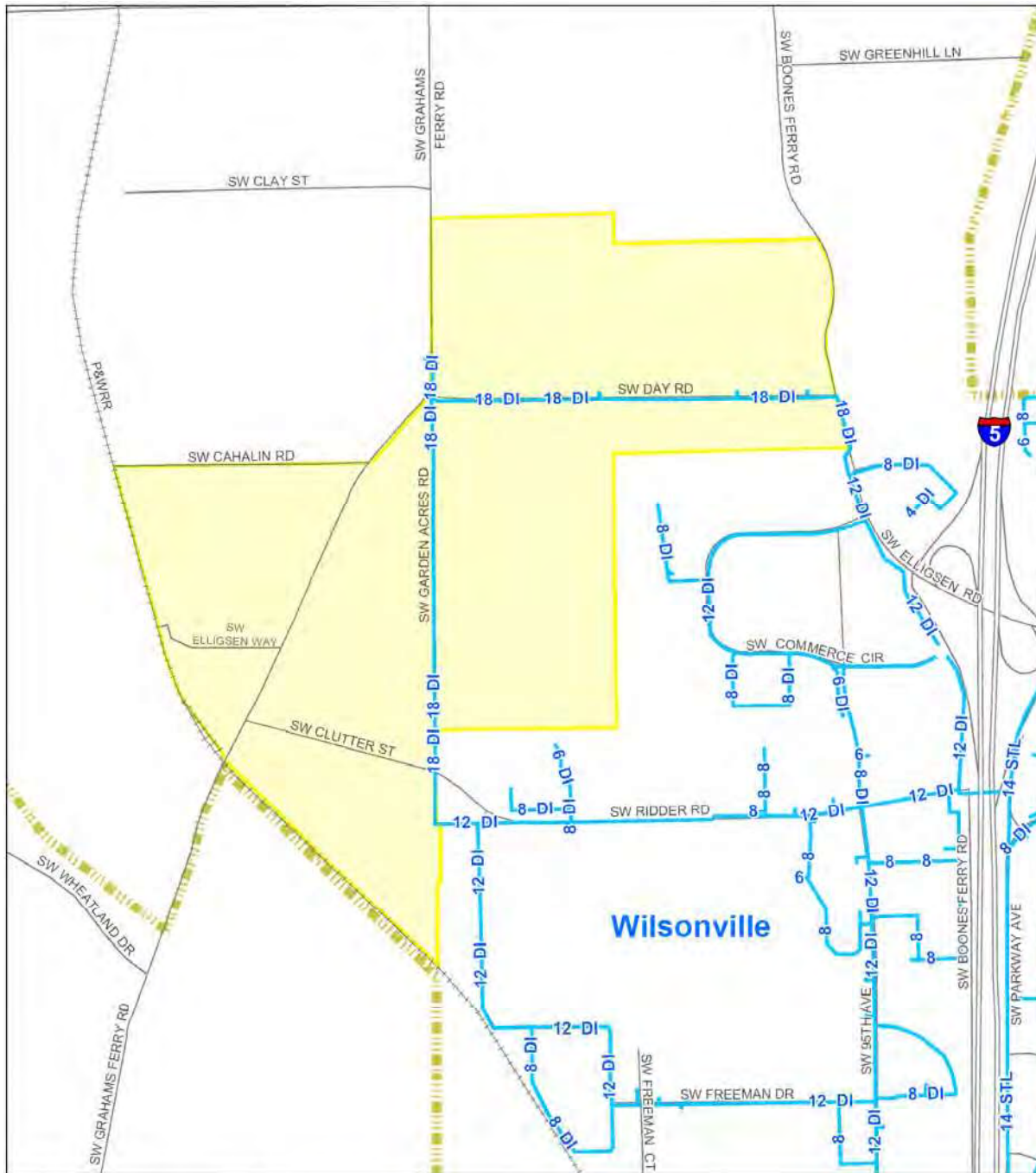
- CON: Concrete
- DI: Ductile Iron
- PVC: Polyvinyl Chloride


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Feet
1 inch equals 1,000 feet

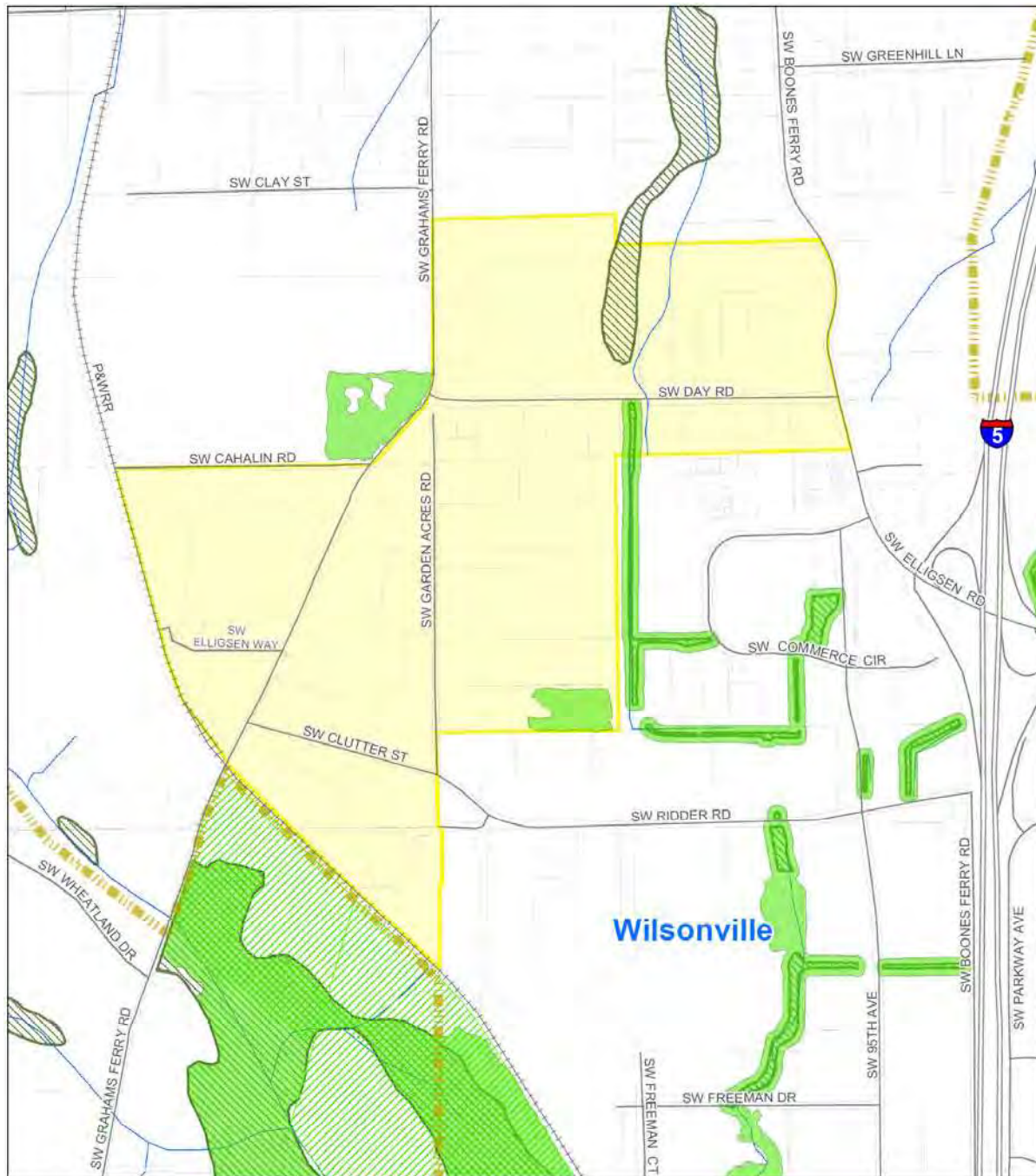
Base data on this map was derived from the IWRG RLS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

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<p>City of Wilsonville TGM Coffee Creek Master Plan Area</p>	<p>Existing Water Line</p>	<p>N 500 0 500 1,000 Feet 1 inch equals 1,000 feet</p>
<p>Existing Water Facilities</p>	<p>Coffee Creek Boundary</p> <p>UGB</p>	
	<p>Note: Water line diameters (in inches) and compositions are shown. The compositions of the water lines are as follows: DI: Ductile Iron STL: Steel</p>	<p><small>Map data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.</small></p> <p><small>Production Date: February 20, 2007</small></p>

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City of Wilsonville TGM
Coffee Creek Master Plan Area

Existing Natural Areas



	SROZ
	Title 3 Wetland
	Park
	Stream
	Coffee Creek Boundary
	Taxlot
	UGB

N



500 0 500 1,000

Feet

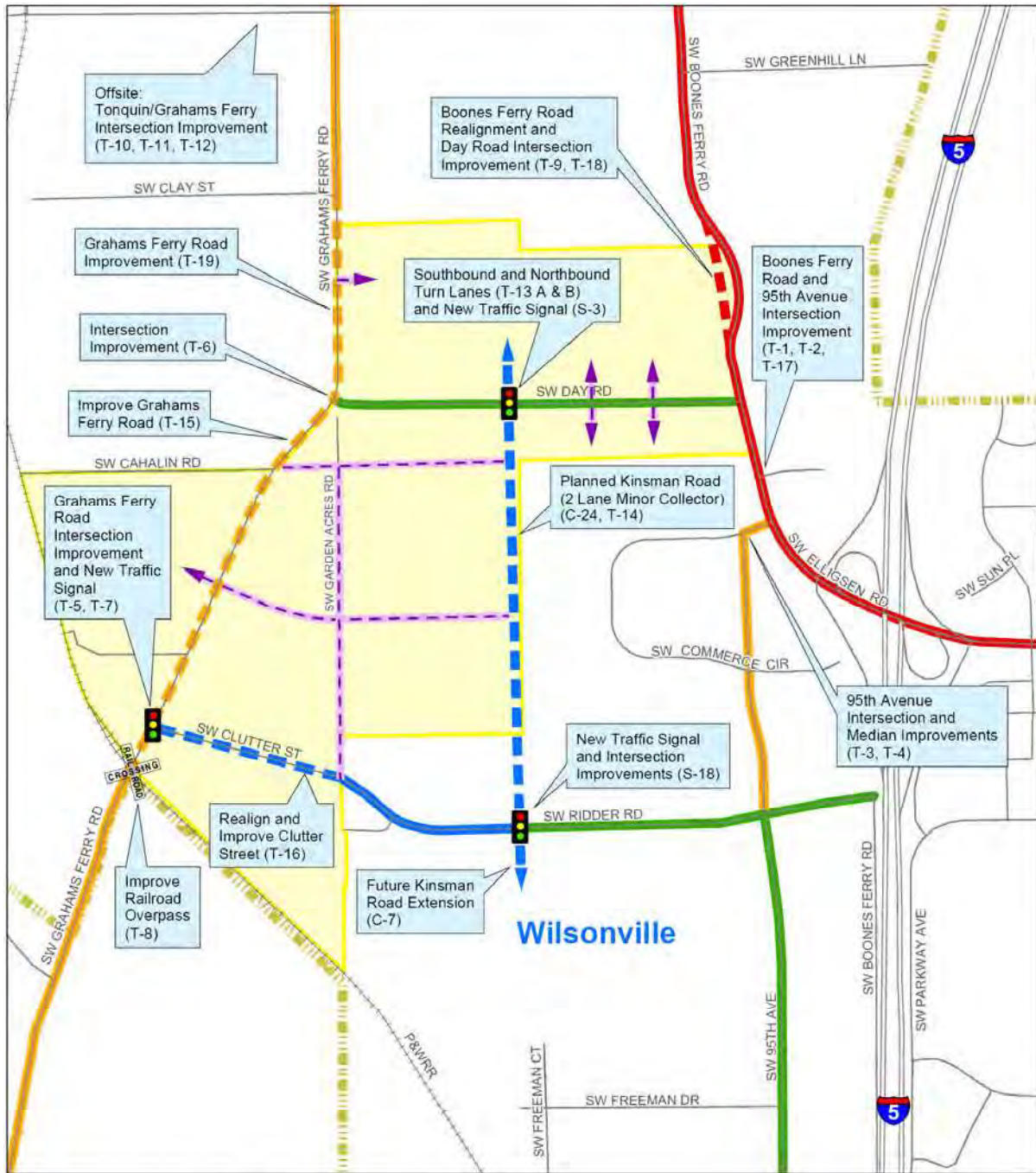
1 inch equals 1,000 feet

Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

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Coffee Creek Master Plan Appendix

Section F. Future Conditions Maps



*City of Wilsonville TGM
Coffee Creek Master Plan Area*

Planned Road Improvements and Railroads

	Planned Signal		Major Arterial
	Planned Road		Minor Arterial
	Railroad		Major Collector
	Coffee Creek Boundary		Minor Collector
	UGB	<i>Note: Dashed Line = Planned Improvement</i>	
	Interstate		
	Local Street		

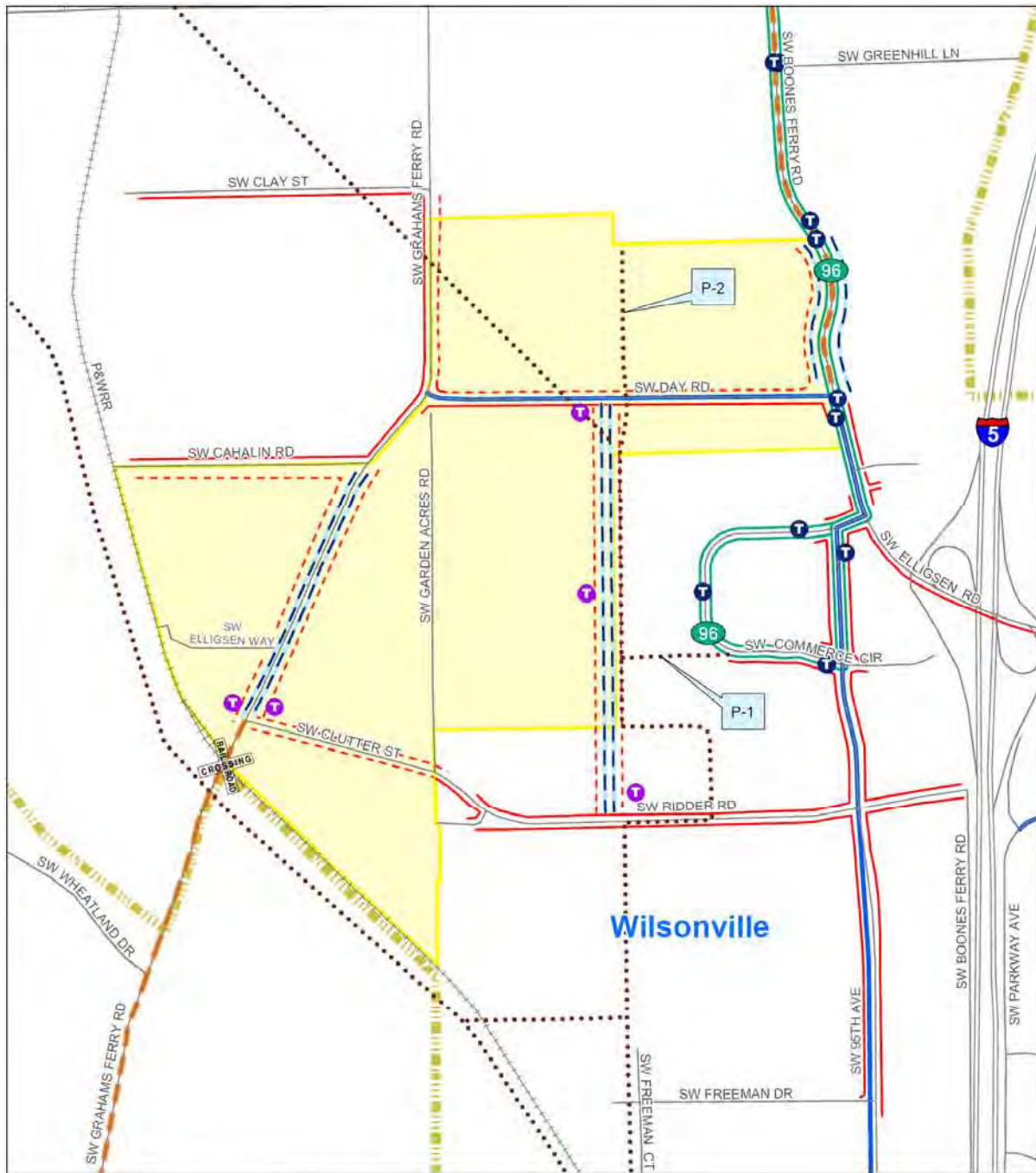
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1 inch equals 1,000 feet

Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

Production Date: February 20, 2007

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City of Wilsonville TGM
Coffee Creek Master Plan Area

Planned Pedestrian, Bike, and Transit Facilities

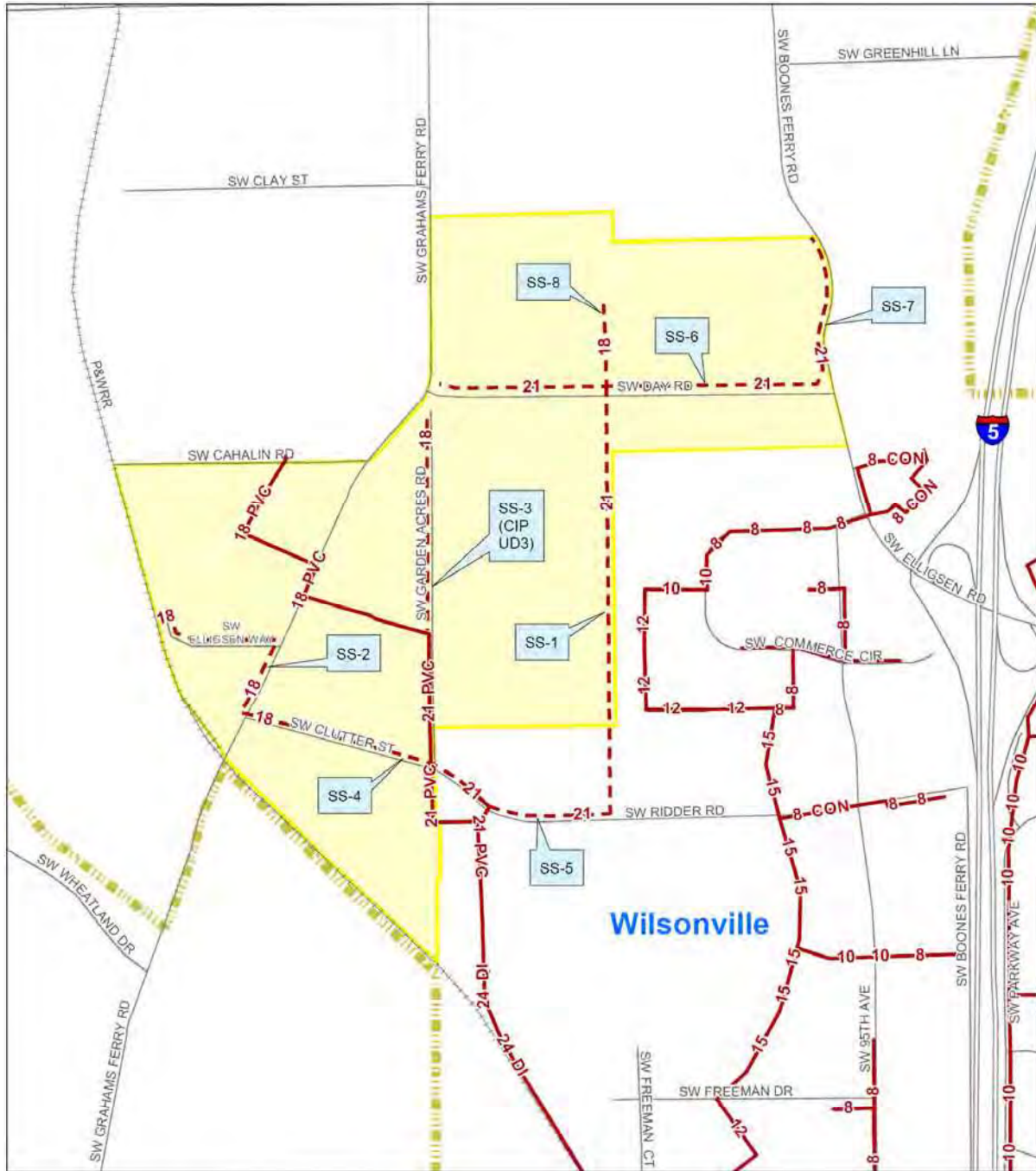
<ul style="list-style-type: none"> - - - Planned Pathway - - - Planned Sidewalk - - - Planned Bike Lane T Planned Bus Stop T Existing Bus Route T Existing Bus Stop - - - Existing Sidewalk 	<ul style="list-style-type: none"> - - - Existing Bike Lane - - - High Traffic Through-Street Coffee Creek Boundary UGB
--	--

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Feet
1 inch equals 1,000 feet

Base data on this map was derived from the Metrix RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

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City of Wilsonville TGM
Coffee Creek Master Plan Area

Planned Sanitary Sewer Facilities

--- Planned Sewer Line Coffee Creek Boundary
— Existing Sewer Line UGB

Note: Sewer line diameters (in inches) and compositions are shown. Planned sewer lines are preliminary estimates for long-range planning only. The compositions of the sewer lines are as follows:

CON: Concrete
 DI: Ductile Iron
 PVC: Polyvinyl Chloride

N

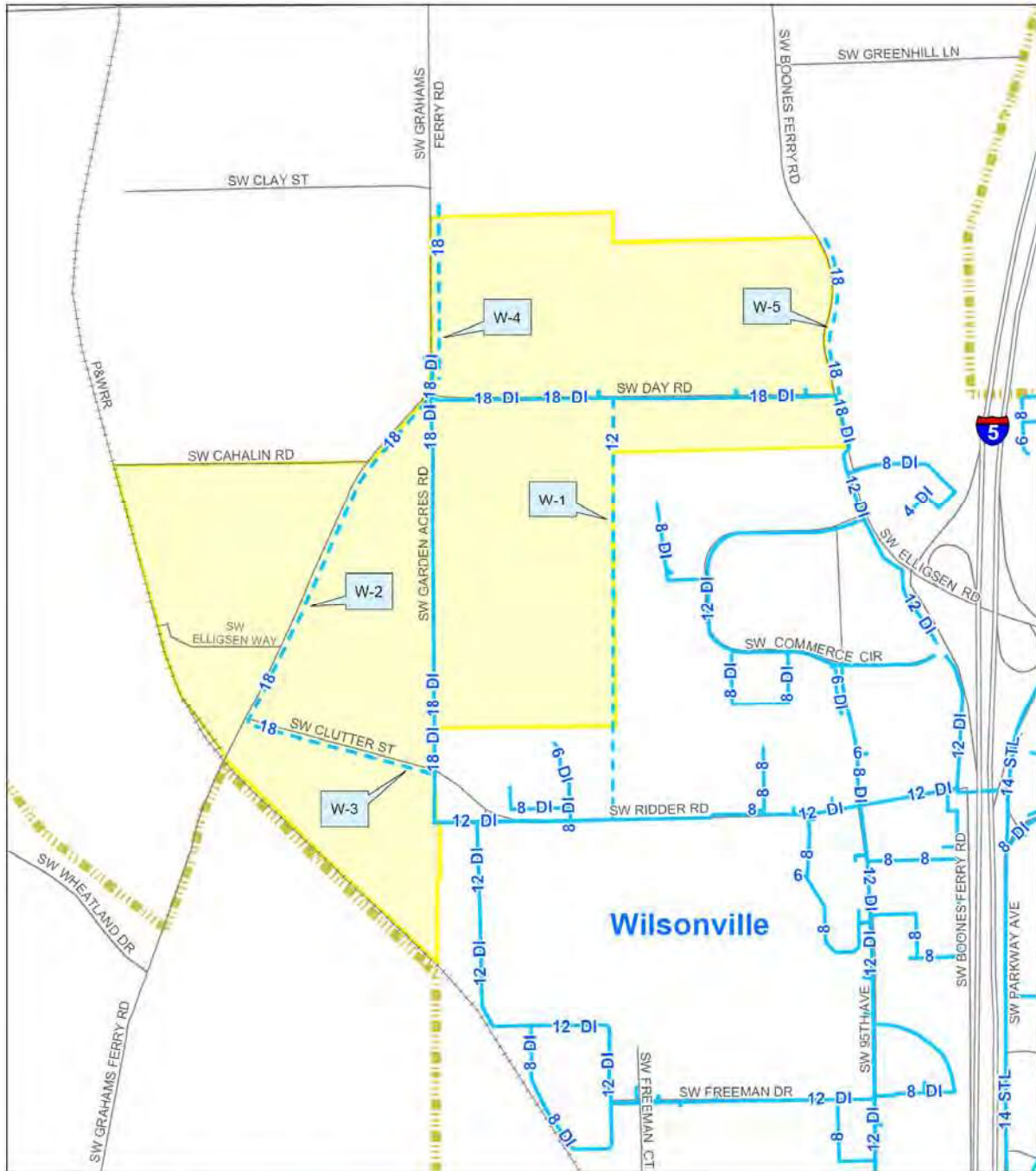
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

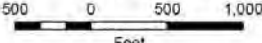
Feet

1 inch equals 1,000 feet

Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

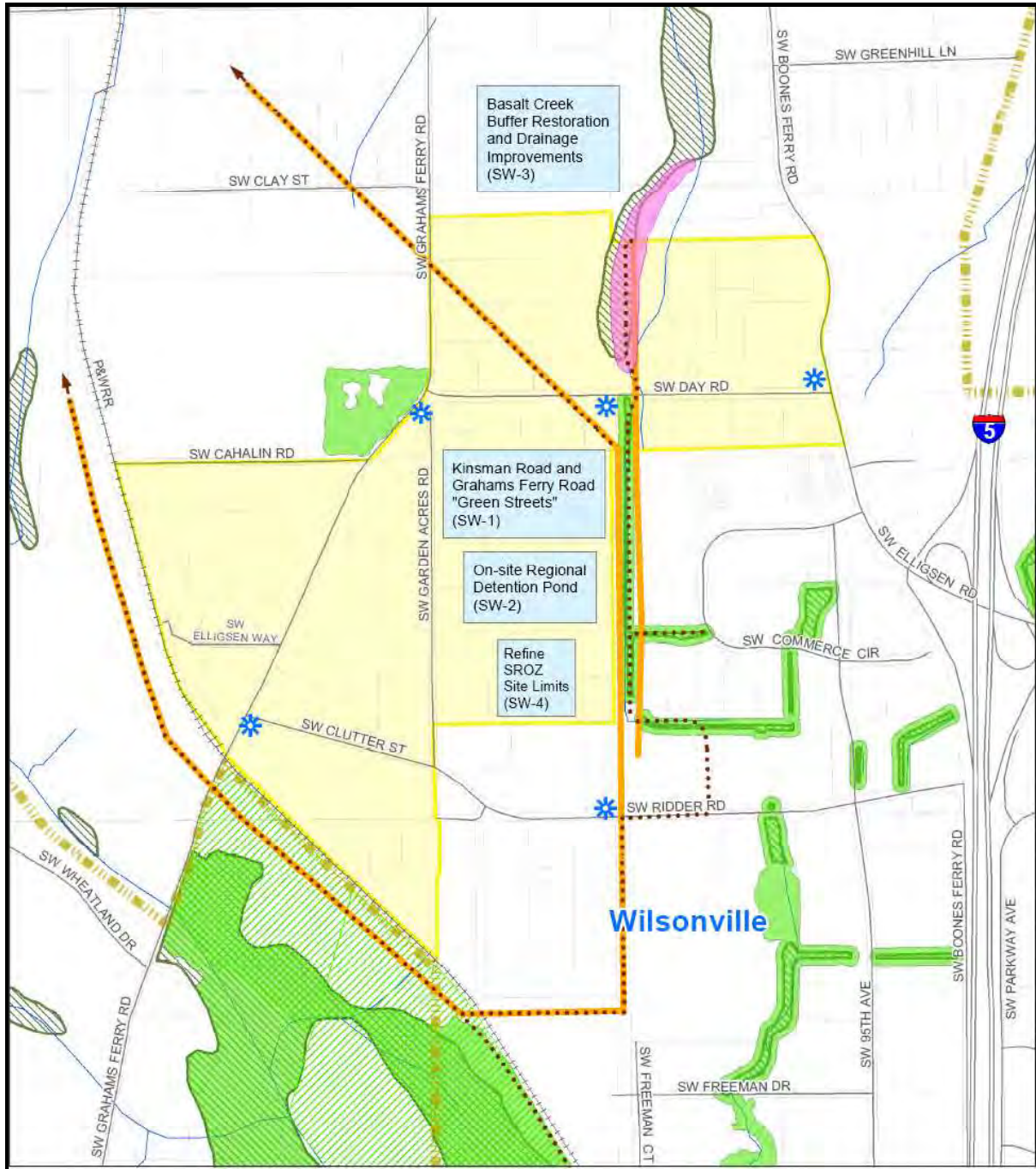
L:\project\13000\13012\GIS\Maps\Map3_SanitarySewer_A.mxd Production Date: February 20, 2007



<p>City of Wilsonville TGM Coffee Creek Master Plan Area</p> <p>Planned Water Facilities</p> 	<ul style="list-style-type: none"> --- Planned Water Line — Existing Water Line Coffee Creek Boundary UGB <p>Note: Water line diameters (in inches) and compositions are shown. Planned water lines are preliminary estimates for long-range planning only. The compositions of the water lines are as follows:</p> <p>DI: Ductile Iron STL: Steel</p>	<div style="text-align: center;">   <p>1 inch equals 1,000 feet</p> </div> <p style="font-size: small;">Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.</p>
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Production Date: February 20, 2007



**City of Wilsonville TGM
Coffee Creek Master Plan Area**

Planned Natural Areas

otak

..... Planned Pathway	— Stream
— Powerline Corridor	☐ Coffee Creek Boundary
* Wayside	☐ Taxlot
Enhanced Natural Area	▨ UGB
SROZ	
Title 3 Wetland	
Park	

N

500 0 500 1,000
Feet
1 inch equals 1,000 feet

Base data on this map was derived from the Metro RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

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CITY COUNCIL WORKSESSION INFORMATION ITEM

Coffee Creek Industrial Area Technical Assistance Infrastructure Grant

Meeting Date: June 6, 2011
Report Date: May 24, 2011
Source of Item: Planning Division

Contact: Chris Neamtzu, Planning Director
Telephone Number: 503-570-1574
E-Mail: neamtzu@ci.wilsonville.or.us

THERE IS NO RECOMMENDATION, THIS IS AN INFORMATION ITEM.

BACKGROUND

In 2010, the City's Community Development Department received a \$48K technical assistance grant from the State Department of Land Conservation and Development (DLCD) to conduct a detailed infrastructure study building upon the findings contained in the Coffee Creek Industrial Area Master Plan (2007) and the Statewide Planning Goal 9 Economic Opportunities Analysis (2008).

The goal of the study was to advance infrastructure design for all segments (sewer, water, storm, roads, parks and trails) to a 30% engineering level and to prepare a report that would analyze the financial tools that could assist in financing the infrastructure over time. The purpose of creating this information is to help the City and its private development partners evaluate critical segments of infrastructure, understand the associated costs and sequence of phasing in preparation for future development. This work will assist in beginning to prioritize the critical path projects that can then be considered as part of future CIP development.

The financial analysis was prepared by Todd Chase with the FCS Group. The FCS Group's work evaluates potential funding sources to assist in paying for the needed infrastructure to serve the area based on assumed levels of development. Included in the project deliverables is a detailed report that analyzes the pros and cons of a variety of financial tools that are at the City's disposal. Those tools include:

- ❖ Systems Development Charges (SDC's)
- ❖ Supplemental SDC's
- ❖ Urban Renewal Program/Tax Increment Financing
- ❖ Local Improvement District
- ❖ Zone of Benefit, or Reimbursement District
- ❖ Economic Improvement District
- ❖ Utility Rates and connection charges
- ❖ General Obligation Bonds and/or Revenue Bonds

The last task required under the grant contract will be the preparation of a marketing packet that can be used to promote and encourage business investment. An artist's rendering of the area at build-out has been created providing a vantage point that emphasizes other significant Wilsonville corporations, local retail amenities, OIT, WES and transportation connections to Interstate-5. The rendering depicts a development style that is indicative of that envisioned in the Day Road Design Overlay Zone with multiple-story corporate HQ's or R and D buildings fronting on Day Road, and large warehouse/distribution and manufacturing facilities spread throughout the remainder of the area. Staff will be working on the last deliverable over the next two weeks in preparation for final submittal to the State.

Staff is finding that the information created for the grant will be of value not only to City staff and elected officials, but for the private development community as well. Advancing this work has and will save efforts for future private developers. The report contains pipeline locations, road cross-sections/alignments, cost estimates and property dedication assumptions that are the foundation to understanding the complete costs of a private project and making it "pencil out". Providing this information up-front, in a user-friendly format is key to understanding the broad array of issues associated with land development.

The DLCD believes that this work could become a model for other communities who seek to move into new urban areas and demonstrates a creative approach to public-private partnerships. Staff has held recent meetings to brief private developers about the findings and analysis. The feedback received to date has been very positive. The materials are proving to be helpful as private parties prepare pro-formas for specific projects in the area.

ANALYSIS

No formal action is required on the project. Staff envisions these documents as tools for future planning of the area and will continue to share them with private developers and interested parties. The financial analysis is largely informational and should be referred to as part of the larger economic development policy discussion the City Council will be conducting in the future.

The Planning Commission conducted a worksession on the materials at their regular meeting in April. Several comments were made and incorporated into the final draft. The attached materials have been submitted to the State, and the first payment of \$30K has been received.

IMPACT ON CITY RESOURCES

N/A

POLICY ISSUES

None at this time.

ATTACHMENTS

- A. Artist's rendering of the Coffee Creek industrial area at build-out.
- B. 30% infrastructure design package and financial analysis prepared by FCS Group.

Attachment A



**Coffee Creek Industrial Area
Technical Assistance Grant Documents**

1. "Coffee Creek Planning Area Preliminary Engineering Summary – Infrastructure Development"
2. "Coffee Creek Industrial Area Infrastructure Analysis", Sheets C1 – C12
3. An FCS Group Memorandum, dated April 5, 2011, from Todd Chase, regarding Coffee Creek Funding and Marketing Plan, Task 7 findings.

**Coffee Creek Industrial Area
Technical Assistance Grant Documents**

- 1. “Coffee Creek Planning Area Preliminary Engineering Summary – Infrastructure Development”**

Coffee Creek Planning Area Preliminary Engineering Summary – Infrastructure Development

Differences between the 2007 Master Plan and this Preliminary Engineering Study

The infrastructure plan and preliminary layout of the Coffee Creek Planning Area (CCPA) remains generally as presented in the 2007 Master Plan, with a few exceptions as noted below:

1. Study Areas 2A and 2B from the Master Plan (parcels north of Day Road) were not included in the infrastructure development plan for this study.
2. The proposed local east-west street between Grahams Ferry Road and Kinsman Road was designated as “Java Road” and relocated one parcel (approximately 330 feet) south from the location shown in the Master Plan. This location was selected to correspond with the location of an existing 21” sewer interceptor (thereby placing the sewer line in easily accessible Right of Way), and also places the roadway along a parcel line, thereby minimizing the amount of Right of Way acquisition needed from any one parcel.
3. The cul-de-sac for the west end of Clutter Road, and realigned extension of Clutter Road to Grahams Ferry Road was deleted. Per the Master Plan, this realignment was driven by safety concerns with sight distance at the Grahams Ferry / Clutter intersection. The current engineering opinion is that sight distance issues can be resolved through proper design of the reconstruction of Clutter Road, Grahams Ferry Road, and the intersection, thereby making an expensive northward realignment of Clutter Road unnecessary.
4. Regional and Community Trails located outside the CCPA are not included in the current cost analysis. These include the trail connector to Commerce Circle, the trail extension south of Ridder Road, and the Regional Trail paralleling the railroad tracks. Trails and bikeways within the CCPA remain in the analysis. Except for the Commerce Circle connection, the appropriate length / distance of these regional trails to include in the current cost analysis is unknown.
5. Off-site water and sewer extensions or upsizing needed to service the CCPA were not addressed in the 2007 Master Plan. Water and sewer improvements needed to service the CCPA and areas north of the CCPA have now been evaluated as part of the preliminary engineering effort, and are now shown on the plans and included in the cost estimates.
6. Cost estimates included in the 2007 Master Plan categorized infrastructure costs for years 1-5, and for years 6-20. This Study categorizes costs for years 1-4, and years 5-20.

General Discussion of Infrastructure Needs

The ability to cost effectively provide street and utility infrastructure to properties within the Coffee Creek Planning Area (CCPA) is primarily dependent on topography and the proximity of the parcel to the major road network. The general intent of the infrastructure plan is to provide backbone sewer, water, and storm sewer along or adjacent to the road network, and construct new roads only as needed to facilitate access and general circulation within the CCRA. To comply with the requirements of the Technical Assistance Grant, Task 6, the infrastructure development plan and cost estimates were divided

into two phases representing early/initial development of the Planning Area within the first four years, and later, five to twenty year, full build-out requirements.

Initial first phase development of the CCPA is linked to and facilitated by the presence of existing large diameter water and sewer lines which are capable of servicing a limited number of parcels adjacent to Garden Acres Road and Clutter Road, with minimum initial investment. With more investment, additional first Phase parcels bordering Garden Acres Road and Clutter Road can also be developed. Later phase parcels include parcels bordering Day Road and bordering the proposed extension of Kinsman Road. These parcels will require construction of Kinsman Road and the associated water, sewer, and stormwater management infrastructure adjacent to Kinsman Road. Parcels west of Grahams Ferry Road and south of Clutter Road, and not adjacent to these roads, will be the most difficult to develop, primarily due to topographic and access considerations.

There are nine "landlocked" parcels without access to the major road network and utility backbone. For all of these parcels, individual (or community) sewage lift stations will be required, as well as new water line extensions and new road easements through other properties. Construction of this infrastructure by the City is not cost effective, therefore, for these parcels this study assumes road and utility infrastructure must be developed privately. Development of these parcels must also wait for construction of the backbone utility extensions in or adjacent to the major roads.

Utility Improvements

Water

Existing water distributions lines servicing the CCPA include an 18" main in Garden Acres Road which bisects the CCPA, an 18" main in Day Road on the north and a 12" distribution main in Ridder Road on the south. New water distribution infrastructure needed for the CCPA is limited to a 12" diameter loop along Clutter and Grahams Ferry Road, a 12" main running parallel to the Kinsman Road extension between Ridder Road and Day Road, and a 12" line in Java Road connecting the two distribution loops. Offsite improvements consisting of an 18" main in the future alignment of Kinsman Road south of Ridder Road are also contemplated, but are not needed solely for service to the CCPA.

Sanitary Sewer

An 18" /21" sewer interceptor known as the United Disposal Interceptor zig-zags through the western half of the CCPA, providing current service to the Correctional Facility located in the NW corner of the CCPA. New interceptors required to service the CCPA are all tributary to the 21" main and include small, 8-10" diameter lines for local service in Garden Acres Road and Grahams Ferry Road, and larger, 12" to 15" diameter lines in the Kinsman alignment, and in Day Road. The Kinsman Road / Day Road interceptors are designed to provide local service to CCPA properties as well as future service to the Basalt Creek Planning Area through connections and northward extensions at Grahams Ferry Road, Boones Ferry Road, and Kinsman Road. The 21" interceptor running through and south from the CCPA has adequate capacity to handle all anticipated future flows, until reaching the connection with the Edwards Trunk interceptor, just north of the railroad tracks. From this point south to Barber Road, the

United Disposal interceptor is undersized for future buildout conditions and will require eventual upsizing. For development of the CCPA, the critical restriction is the 14" diameter line under the railroad alignment. This line is both too small and too flat to accommodate significant development in the CCPA and should be considered a priority for replacement during early development of the CCPA.

Storm Sewer

Storm sewers and stormwater management features do not currently exist in the CCPA. Basalt Creek borders the CCPA to the east, the Coffee Creek wetlands to the south and southwest, and a 24" storm sewer line runs south from Ridder Road eventually discharging to the Coffee Creek wetlands. One of the planning criteria contained in the 2007 Coffee Creek Master Plan is a desire to minimize stormwater impacts from the CCPA through the use of innovative green street designs to handle runoff from paved surfaces. Consistent with this planning criteria, most street sections are designed with combination planter strips and bioswales located adjacent to the street and designed to filter and minimize runoff. New piping is limited to road crossings, connection to the existing 24" storm sewer at Ridder Road, and a new 30" diameter storm sewer running south from the Ridder Road / Grahams Ferry Road intersection. This 30" pipe will service most of the western half of the CCPA, discharging to the Coffee Creek wetlands east of Grahams Ferry Road.

A stormwater quality pond adjacent to Basalt Creek is proposed as a semi-regional facility to manage stormwater runoff from the northern and eastern portions of the CCPA, as well as provide a limited amount of additional flood storage capacity along Basalt Creek. However, this facility will not be capable of providing 100% of the detention volume required for abutting properties, and site specific detention facilities should be expected on newly developed sites.

Transportation Improvements

Streets

With the exception of Day Road, all existing streets in the CCPA will require widening and reconstruction to meet current City standards. Existing streets include Grahams Ferry Road – a designated Minor Arterial, Garden Acres Road, and Clutter Road. Two new streets are proposed. A north-south extension of Kinsman Road will connect Ridder Road and Day Road and provide primary access and circulation for the CCPA. A second new street, Java Road, provides local east-west connectivity from Kinsman Road to Grahams Ferry Road. Day Road will not require widening but will require reconstruction to a concrete pavement surface to handle the increased heavy truck traffic. Reconstruction of Garden Acres Road, and construction of Java Road can be assumed to benefit only properties within the CCPA. All other streets are subject to a significant percentage of off-site traffic, requiring a similar percentage of the costs for these improvements, or SDCs, allocated to off-site properties.

"Green Street" concepts have been incorporated into all street sections by converting the City standard planting strips between the curb and sidewalk into bioswales. Runoff, and associated underground stormwater infrastructure is therefore minimized. The "Collector Greenstreet" concept from Appendix B of the Master Plan, incorporating a landscaped median, was not adopted for proposed street sections.

Widening and construction of roads within the CCPA will require Right of Way acquisition from 42 separate properties. Table XX provides a summary of ROW area, and the percentage of the gross parcel size to be acquired from each affected tax lot. Additional area will also need to be acquired from certain tax parcels specifically for stormwater management facilities. In addition, there are two parcels where acquisition needs exceed 35% of the gross parcel size, and where acquisition of the entire parcel may be warranted.

Intersections

The Coffee Creek Master Plan evaluated a number of alternative development scenarios for the CCPA, and identified a broad list of intersection improvements for each alternative. For the purposes of this study and development of a capital improvement list for streets and intersections, only “Alternative 1 - South of Day Road” from the Master Plan is being considered. For this alternative, the Master Plan identified five intersection improvements to mitigate impacts from development in the CCPA. (See Tables 16, 17, and 18 of the Master Plan). Comparing this alternative to the No Build Alternative shows that four of the five intersections require mitigation improvements irrespective of development within the CCPA. As such, determination of System Development Charges for properties within the CCPA should allocate a portion of the cost of these improvements to properties outside the CCPA.

Parks, Trails and Open Space

The scope of park, trail and open space development incorporated into the preliminary engineering study is identical to the Master Plan, with the exception of off-site trails as mentioned previously. No attempt was made to prepare preliminary designs for open space amenities (e.g., waysides), however, costs for these feature are included in the project estimate. On-site trails are generally incorporated into the road sections as wider linear features rather than as stand-alone features.

Consolidated Infrastructure Phasing Plan

General Discussion

It is good planning, and a general policy of the City to sequence and combine the construction of underground (utility) and surface (street) infrastructure into a single project, to the extent achievable. Although requiring significant coordination and a larger up-front investment, larger combined projects are more cost effective for both a developer and the taxpayer and result in a higher quality product. It may be acceptable in certain circumstances to construct water and sewer lines without constructing a road, but it is never acceptable to construct a road without first constructing the required utilities beneath it.

Per the guidance provided by the TA Grant, Task 6, the phasing plan identifies improvements needed over 1-4 years, nominally designated as “Phase 1”, and improvements needed from 5-20 years out, nominally designated as “Phase 2”. The differentiation between Phase 1 and Phase 2 is governed by three criteria:

1. A comparison of site specific new infrastructure needs to build-out infrastructure needs.
2. The expected need to mitigate downstream or off-site impacts.
3. Right-of-Way and easement acquisition.

The phasing plan for build-out of the CCPA envisions and recommends restrictions be placed on the ability of any developer to complete only partial improvements that would require future modification or widening of a road, or upsizing and extension of underground utilities. At a minimum, streets and utilities must be constructed at the size required for build-out conditions, must be extended beyond the parcel boundary of the property / development in question in order to facilitate future expansion of the system, and must include ancillary infrastructure such as franchise utilities, trails, bus stops, and open space.

On-site infrastructure – infrastructure wholly contained within the CCPA, includes a combination of local facilities – needed only to service CCPA properties, and regional facilities that also provide service to properties outside the CCPA boundary. Depending on the size and infrastructure needs of a particular property, it is entirely feasible to develop parcels in Phase 1 without completing the remainder of infrastructure needed for the CCPA, or constructing the off-site or downstream improvements needed at full buildout. The extent of minimum improvements needed for any particular development, including off-site improvements, will need to be determined through the development review process.

The timing of off-site street and intersection improvements, or downstream water or sewer improvements will be dependent on the extent of the remaining system capacity (road, sewer, etc.) used up by early initial developments within the CCPA. Engineering analysis indicates that off-site improvements are not needed for development of Phase 1 properties, but will be needed prior to, or in conjunction with phase 2. Costs for all offsite improvements are therefore allocated to phase 2, although some offsite/downstream improvements can and likely will be constructed during Phase 1. Specifically, some of the off-site intersection improvements identified in the Master Plan as required under No-Build assumptions are currently budgeted in the Wilsonville 5 year capital plan, and it can be assumed they will be completed in the Phase 1 timeframe. However, if not constructed during the earlier phase, these improvements must be constructed prior to development of Phase 2 parcels.

There are no offsite/downstream improvements that are required solely because of development within the CCPA. Downstream water and sewer improvements are needed to service future development north of Day Road (within the Basalt Creek Planning Area) in addition to the CCPA. In addition, downstream sewer improvements to the United Disposal Interceptor under the Railroad tracks is a pre-existing capacity deficiency, which must be mitigated before significant development in the CCPA (and Basalt Creek) can occur.

Intersection improvements at Boones Ferry Road and 95th Avenue, Boones Ferry Road and Day Rd, and Grahams Ferry Road and Clutter Road are all listed in the Master Plan as required improvements under the No-Build scenario, i.e., whether the CCPA develops or not. A fourth intersection, Grahams Ferry Road and Tonquin Road, also requires improvement under the No-Build scenario, but is outside both the

Planning Area and the city limits. For the purposes of the phasing plan and cost allocation of improvements, the Grahams Ferry Road / Tonquin Road intersection was disregarded in evaluating required offsite intersection improvements associated with buildout of the CCPA. The other three intersections will experience quantifiable impacts from traffic generated in the CCPA, and a corresponding allocation of cost for that traffic. These intersections therefore remain included in the Phase 2 plan and cost allocation.

Phase 1

The Infrastructure Phasing Plan for the CCPA assumes initial development will occur in areas where the costs to a developer for combined infrastructure improvements can be minimized, while at the same time existing sewer, water, storm sewer, and transportation system capacities are maintained. Parcels in Phase 1 on Sheet C4, meet that criteria.

Parcels (or portions of parcels) in Phase 1A have abutting access to large diameter water and sewer, and require only reconstruction of the lower third of Garden Acres Road to provide adequate infrastructure for development purposes. Parcels in Phase 1B have abutting access to water or sewer, but require construction of small diameter sewer or water extensions in addition to limited road improvements. Most of the parcels in Phase 1B border Garden Acres Road north of the proposed Java Road. Parcels in Phase 1C are characterized by a need for a combination of road, sewer, and water improvements, but the extent of improvements are such that these improvements can be made independent of, or for shorter distances than need for full buildout of the CCPA. Phase 1C includes properties along Clutter Road and Java Road that can be serviced with partial extensions of the water, sewer, and road network.

Phase 2

All of the parcels in Phase 2 require major construction of sewer, water, storm, street, and intersection capacity improvements, both within the CCPA and off-site. If done in conjunction with a proposed development, infrastructure construction could be made a condition of approval, however, the extent of improvements required makes that unlikely. If done independent of development, e.g., constructed by the City, infrastructure capacity improvements must necessarily precede development. Ancillary improvements, such as the trail system, should also be completed before, or in conjunction with major development in Phase 2.

Development of Phase 2A requires completion of Kinsman Road from Ridder Road to Day Road, Java Road from Kinsman to Garden Acres, two signalized intersections, construction of water, sewer, trail, and stormwater management facilities in and adjacent to Kinsman Road and Ridder Road, construction of sewer in Day Road, and reconstruction of Day Road to a concrete section. Easements and/or ROW acquisition is required from 10 individual properties. The scope of improvements for Phase 2A and the need for these improvements to be completed concurrently make it unlikely that a single developer, or even a group of developers will have the resources to accomplish the construction.

Based on the availability of water, a completed road section, and proximity to Interstate 5, previous planning documents identified a desire for properties bordering Day Road to be developable during early

stages of the Coffee Creek build out. However, engineering analysis indicates Day Road properties cannot physically obtain sewer service until the sewer interceptor in the proposed Kinsman Road alignments is constructed. This will prevent early development of these parcels.

Development of Phase 2B requires completion of Grahams Ferry Road, two signalized intersections, and remaining water and sewer extensions in Clutter Road and Grahams Ferry Road. No municipal infrastructure is extended west of Grahams Ferry Road. Parcels bordering Grahams Ferry Road will obtain utility and street access at Grahams Ferry Road, but the limited number of properties, topography, and distance make it infeasible to provide municipal services for parcels further west. Topography makes gravity sewer service unachievable thereby requiring individual lift stations, and unless easements or Right of Way can be obtained extending northward from Elligsen Way to Cahalin Road, there is no ability to loop the water system as required for fire flow service, or provide street interconnections. Constructing and maintaining individual lift stations, or small diameter dead-end water service to private parcels is not cost effective for the City. Western parcels of Phase 2B can therefore be expected to be the last parcels to develop within the CCPA.

Phase 2C includes the majority of off-site intersection and safety improvements and downstream utility improvements. Off site improvements are not specifically shown on Sheet C4. The timing of utility improvements within the year 5 to year 20 timeframe of Phase 2 is predicated on the number, timing and location of major developments within the CCPA. Engineering analysis indicates approximately 50% of the CCPA can be developed before downstream sewer improvements are needed. Downstream water system improvements are needed only at full buildout, or with significant development within the Basalt Creek area. Intersection improvements were previously noted as needed regardless of CCPA development, and are therefore assumed to occur early in the development of Phase 2. Lastly, construction of the two safety improvements (reconstruction and widening of the Grahams Ferry Road railroad underpass, and realignment of Clutter Road) are assumed to coincide with the corresponding road improvement, although the underpass work could occur independent of other Grahams Ferry Road work.

Coffee Creek Planning Area - Preliminary Engineering
 Estimated Infrastructure Development Costs - 2010 dollars

Improvement Type	Total Build Out Cost	Phase 1 Cost**	Phase 2 Cost
on-site			
Streets	\$ 14,337,500.00	\$ 5,617,500.00	\$ 8,720,000.00
Intersections	\$ 2,625,000.00	\$ 600,000.00	\$ 2,025,000.00
Water	\$ 1,296,100.00	\$ 319,325.00	\$ 964,775.00
Sewer	\$ 1,102,500.00	\$ 707,500.00	\$ 395,000.00
Storm Sewer	\$ 2,003,700.00	\$ 622,700.00	\$ 1,381,000.00
Park/Trail/ Other	\$ 1,370,500.00	\$ 375,000.00	\$ 995,500.00
Total Onsite	\$ 22,735,300.00	\$ 8,242,025.00	\$ 14,481,275.00
off site			
Water	\$ 3,960,000.00		\$ 3,960,000.00
Sewer	\$ 960,000.00		\$ 960,000.00
Transportation			
Railroad Underpass - GFR	\$ 4,000,000.00		\$ 4,000,000.00
Other	\$ 2,016,000.00		\$ 2,016,000.00
Total Offsite	\$ 10,936,000.00		\$ 10,936,000.00
Grand Total	\$ 33,671,300.00	\$ 8,242,025.00	\$ 25,417,275.00

** - Phase 1 Costs are only those project costs accrued in Year 1 to Year 4 \$ 26,735,300.00

** - Phase 2 Costs are project costs accrued in Year 5 to Year 20

NOTES:

Three alternatives were considered for sewerage North of Day Road. A central interceptor in the Kinsman alignment, receiving flows from both GFR and BFR provides the highest capacity at the lowest cost.

The minimum infrastructure required for Phase 1 development includes water, sewer, storm drainage, and street construction along Garden Acres Road and Clutter Road. Estimated Total Cost: \$8.24M

Street/ ROW/ Green Street Sections vary slightly from standard classifications

No public Infrastructure extended west of Grahams Ferry Road

Cost Comparison to Master Plan: Streets & Intersections totals \$21.0M vs \$20.7M in Master Plan (App. B)
 Water totals \$1.30M vs \$1.14M in Master Plan (App. C)
 Sewer totals \$1.1M versus \$1.53M in Master Plan (App. C)
 Storm Sewer totals \$2.0M vs \$300K in Master Plan (App. C)
 Parks/Trails totals \$1.4M vs \$300K in Master Plan (App. C)

Total Estimated Buildout Cost = \$26.7M vs \$24.0M in Master Plan

Offsite sewer (\$960K), water (\$3.96M), and transportation (\$2.01M) costs **WERE NOT** included in Master Plan

Railroad Underpass (\$4M) **WAS** included in Master Plan

Coffee Creek Planning Area: Preliminary Engineering Summary - Transportation Projects								
NOTE: Street layout follows Alternative 1 (industrial use) of 2007 Master Plan , NOT configuration shown as Draft Recommended Master Plan (Alt 2 - mixed industrial/commercial)								
Street Improvements within Coffee Creek Planning Area	TSP Street Classification	TSP Proposed Configuration	TSP Project #'s	Status	Proposed Revised Street Classification	Proposed Revised Configuration	Phase 1 Project for Near Term Coffee Creek Development	NOTES
Day Road	Major Collector	3 lane, bike, SW	W-16	COMPLETE	same	same	no	Rebuild to Concrete
Grahams Ferry Road	Minor Arterial	n/a	n/a	not built	same	3 lane w/ bike lanes, sidewalks, bioswales	no	
Garden Acres Road	Local	n/a	n/a	not built	Local	2 lane w/ bikelanes, sidewalks, bioswales	yes	Dead End at Day
Kinsman Extension	Minor Collector	2 lane w/ bike lanes & sidewalks	C-24	not built	same	2 lane w/ bikelanes, 10' conc. trail one side, bioswale other side	no	
Clutter (Garden Acres west to GFR)	Minor Collector	2 lane w/ bike lanes & sidewalks	T-16	not built	major collector	3 lane w/ bike lanes, sidewalks, bioswales	yes	
Java Road (GFR to Gard. Ac.)	local	n/a		not built	local	2 lane, no bike, SW	yes	
Java Road (Gard. Ac. to Kinsman)	local	n/a		not built	local	2 lane, no bike, SW	no	
Intersection Improvements within Coffee Creek Planning Area	Signal Req'd?	Widening for Turn Lanes?	TSP Project #'s	Status	Req'd under No-Build Assumption?	Required for Coffee Creek Buildout	Phase 1 Project for Near Term Coffee Creek Development	NOTES
GFR / Day Road	exst	yes	T-14, T-15B	not built	no	no	no	
GFR / Java Road	no	no		not built	no	yes	no	
GFR / Clutter Road	yes	yes	T-5, T-6, T-7	not built	yes	yes	yes	
GFR / Railroad Crossing	no	no	T-8	not built	yes	no	no	
Garden Acres / Day	no	no		not built	no	no	no	No outlet
Garden Acres / Java	no	no		not built	no	yes	yes	
Garden Acres / Clutter	no	yes		not built	no	yes	yes	
Kinsman / Day	yes	yes	S-36	not built	no	yes	no	
Kinsman / Java	No	yes		not built	no	yes	no	
Kinsman / Ridder	yes	yes	C-24, S-18	not built	no	yes	no	
BFR / Day	exst	yes		not built	yes	yes	no	
Other Related Offsite Improvements	Scope of Improvement	TSP Project #'s	Status	Req'd under No-Build Assumption?	Required for Coffee Creek Buildout	Phase 1 Project for Near Term Coffee Creek Development	NOTES	
Ridder (Kinsman east to 95th)	Sidewalk on S. side	n/a	not built	no	no	no		
Ridder (Gard. Acr.east to Kinsman)	Sidewalk on N. side	n/a	not built	no	no	no		
BFR (Day to I-5)	Widening	T-17	COMPLETE	yes	no	no	No cost to Coffee Crk	
BFR / 95th	Turn Lanes	T-1, T-2, T-3, T-4	partial	yes	yes	no	No cost to Coffee Crk	

Coffee Creek Planning Area
Transportation Projects and Estimated Costs

02/03/2011

Streets	Scope of Improvements	Full Coffee Creek Buildout				Phase 1 Projects			Phase 2 Projects		
		Quantity	Units	Unit Cost	Total Cost	Quantity	Units	Total Cost	Quantity	Units	Total Cost
Grahams Ferry Road	Full reconstruction to 3 lane minor arterial - asphalt	3300	lin ft	\$ 1,300.00	\$ 4,290,000.00				3300	lin ft	\$ 4,290,000.00
Garden Acres Road Java to Clutter	Full reconstruction to 2 lane minor collector - concrete	1000	lin ft	\$ 1,100.00	\$ 1,100,000.00	1000	lin ft	\$ 1,100,000.00			
Garden Acres Road Day to Java	Full reconstruction to 2 lane minor collector - concrete	1600	lin ft	\$ 1,100.00	\$ 1,760,000.00	1600	lin ft	\$ 1,760,000.00			
Kinsman Extension	New construction to 2 lane minor collector - concrete	3100	lin ft	\$ 1,100.00	\$ 3,410,000.00				3100	lin ft	\$ 3,410,000.00
Clutter (Garden Acres west to GFR)	Full Reconstruction to 3 lane Major Collector - asphalt	1500	lin ft	\$ 1,300.00	\$ 1,950,000.00	1500	lin ft	\$ 1,950,000.00			
Java Road (GFR to Garden Acres)	New Construction to 2 lane local street - concrete	950	lin ft	\$ 850.00	\$ 807,500.00	950	lin ft	\$ 807,500.00			
Java Road (Gard Acr to Kinsman)	New Construction to 2 lane local street - concrete	1200	lin ft	\$ 850.00	\$ 1,020,000.00				1200	lin ft	\$ 1,020,000.00
				subtotal	\$ 14,337,500.00			\$ 5,617,500.00			\$ 8,720,000.00
Intersections	Scope of Improvements	Quantity	Units	Unit Cost	Total Cost	Quantity	Units	Total Cost	Quantity	Units	Total Cost
GFR / Day Road	turn lanes	1	ls	\$ 300,000	\$ 300,000.00				1	ls	\$ 300,000.00
GFR / Java	turn lanes	1	ls	\$ 300,000	\$ 300,000.00				1	ls	\$ 300,000.00
GFR / Clutter Road	Signalization and turn lanes	1	ls	\$ 575,000	\$ 575,000.00	turn lanes		\$ 300,000.00	signal		\$ 275,000.00
Garden Acres / Day	none - leave as closed access				\$ -						
Garden Acres / Java	part of road construction										
Garden Acres / Clutter	turn lanes	1	ls	\$ 300,000	\$ 300,000.00	turn lanes		\$ 300,000.00			
Kinsman / Day	signalization and turn lanes	1	ls	\$ 575,000	\$ 575,000.00				ALL		\$ 575,000.00
Kinsman / new local street	part of road construction										
Kinsman / Ridder	signalization and turn lanes	1	ls	\$ 575,000	\$ 575,000.00				All		\$ 575,000.00
				subtotal	\$ 2,625,000.00			\$ 600,000.00			\$ 2,025,000.00
Total On-Site Transportation Improvements					\$ 16,962,500.00			\$ 6,217,500.00			\$ 10,745,000.00
Offsite Transportation Improvements											
Ridder (Kinsman east to 95th)	Sidewalk on South Side	2000	lin ft	\$ 40	\$ 80,000.00				2000	lin ft	\$ 80,000.00
Ridder (Kinsman west to Garden Acres)	Sidewalk north side	400	lin ft	\$ 40	\$ 16,000.00				400	lin ft	\$ 16,000.00
BFR / Day Road	Turn Lanes	1	ls	\$ 300,000	\$ 300,000.00				1	ls	\$ 300,000.00
GFR / Railroad Crossing	New Underpass	1	ls	\$ 4,000,000	\$ 4,000,000.00				1	ls	\$ 4,000,000.00
Day Road	Rebuild to Concrete Surface	2700	lin ft	\$ 600	\$ 1,620,000.00				2700	lin ft	\$ 1,620,000.00
Total Offsite Improvements					\$ 6,016,000.00			\$ -			\$ 6,016,000.00
TOTAL CCPA TRANSPORTATION IMPROVEMENTS					\$ 22,978,500.00	Phase 1 TOTAL		\$ 6,217,500.00	Phase 2 TOTAL		\$ 16,761,000.00

Coffee Creek Planning Area
Utility Projects and Cost Estimates

Sewer Improvements

Location	Scope of Improvements	Full Coffee Creek Buildout				Phase 1 (year 1-4) Projects			Phase 2 Projects (year 5-20)		
		Quantity	Units	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost
Day Road West	12" PVC	1000	lf	\$ 90.00	\$ 90,000.00				All	\$ 90.00	\$ 90,000.00
Day Road East	12" PVC	1700	lf	\$ 90.00	\$ 153,000.00				All	\$ 90.00	\$ 153,000.00
GFR	8" PVC	600	lf	\$ 75.00	\$ 45,000.00		\$ 75.00		All	\$ 75.00	\$ 45,000.00
Garden Acres	8" PVC	1300	lf	\$ 75.00	\$ 97,500.00	All	\$ 75.00	\$ 97,500.00			
Clutter	8" PVC	1400	lf	\$ 75.00	\$ 105,000.00	All	\$ 75.00	\$ 105,000.00			
Ridder	15" PVC	850	lf	\$ 120.00	\$ 102,000.00	All	\$ 120.00	\$ 102,000.00		\$ 120.00	
Kinsman	15" PVC	3100	lf	\$ 120.00	\$ 372,000.00	All	\$ 120.00	\$ 372,000.00		\$ 120.00	
ALL	Manholes -10' - 20' Deep	7		\$ 4,500.00	\$ 31,500.00	2	\$ 4,500.00	\$ 9,000.00	5	\$ 4,500.00	\$ 22,500.00
ALL	Manholes - less than 10' deep	21		\$ 2,500.00	\$ 52,500.00	5	\$ 2,500.00	\$ 12,500.00	16	\$ 2,500.00	\$ 40,000.00
ALL	Manholes - over 20' deep	4		\$ 9,500.00	\$ 38,000.00	1	\$ 9,500.00	\$ 9,500.00	3	\$ 9,500.00	\$ 28,500.00
Ridder	Asphalt Repair	400	SY	\$ 40.00	\$ 16,000.00				400	\$ 40.00	\$ 16,000.00
					\$ 1,102,500.00			\$ 707,500.00			\$ 395,000.00
OFF SITE Sewer Improvements w/ Manholes, etc		4800	LF	\$ 200.00	\$ 960,000.00				ALL		\$ 960,000.00

Water Improvements

Location	Scope of Improvements	Full Coffee Creek Buildout				Phase 1 (year 1-4) Projects			Phase 2 Projects (year 5-20)		
		Quantity	Units	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost
at hydrants	8" PVC pipe	300	lf	\$ 75.00	\$ 22,500.00	75	\$ 75.00	\$ 5,625.00	225	\$ 75.00	\$ 16,875.00
at hydrants	8" Valves	20	ea	\$ 1,200.00	\$ 24,000.00	5	\$ 1,200.00	\$ 6,000.00	15	\$ 1,200.00	\$ 18,000.00
at hydrants	8" Fittings	40	ea	\$ 600.00	\$ 24,000.00	10	\$ 600.00	\$ 6,000.00	30	\$ 600.00	\$ 18,000.00
Clutter, GFR, Kinsman, Java	12" DI pipe	9500	lf	\$ 110.00	\$ 1,045,000.00	2400	\$ 110.00	\$ 264,000.00	7100	\$ 110.00	\$ 781,000.00
Clutter, GFR, Kinsman, Java	12" Valves	32	ea	\$ 2,100.00	\$ 67,200.00	5	\$ 2,100.00	\$ 10,500.00	27	\$ 2,100.00	\$ 56,700.00
Clutter, GFR, Kinsman, Java	12" fittings	52	ea	\$ 800.00	\$ 41,600.00	8	\$ 800.00	\$ 6,400.00	44	\$ 800.00	\$ 35,200.00
Garden Acres @ Java	18" Valve	2	ea	\$ 5,000.00	\$ 10,000.00	2	\$ 5,000.00	\$ 10,000.00	0	\$ 5,000.00	\$ -
Garden Acres @ Java	18" Cross	1	ea	\$ 1,800.00	\$ 1,800.00	1	\$ 1,800.00	\$ 1,800.00	0	\$ 1,800.00	\$ -
Clutter, GFR, Kinsman, Java	hydrant w/ valve box	20	ea	\$ 3,000.00	\$ 60,000.00	3	\$ 3,000.00	\$ 9,000.00	13	\$ 3,000.00	\$ 39,000.00
					\$ 1,296,100.00			\$ 319,325.00			\$ 964,775.00
OFF SITE Water Improvements: 18" DI pipe w/ valves etc.		7920	lf	\$ 500.00	\$ 3,960,000.00				ALL		\$ 3,960,000.00

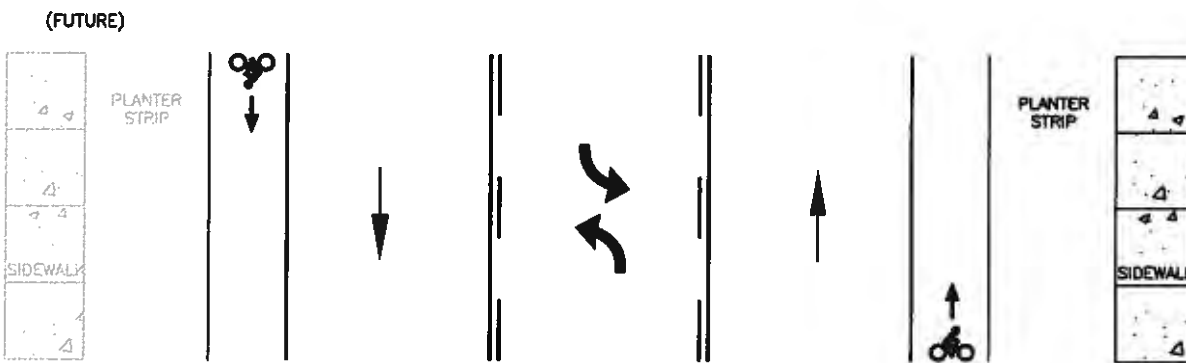
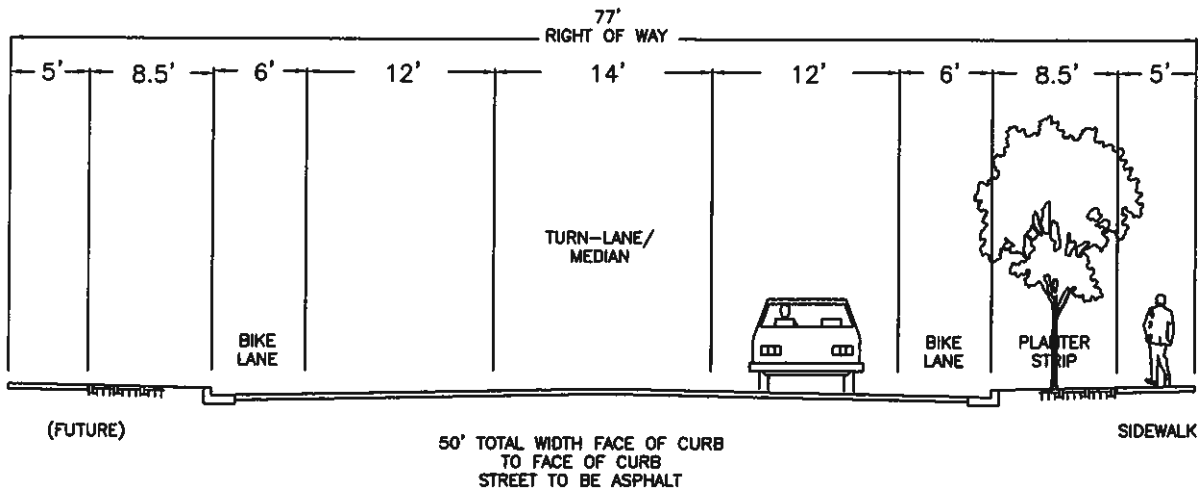
Storm Sewer Improvements

Location	Scope of Improvements	Full Coffee Creek Buildout				Phase 1 (year 1-4) Projects			Phase 2 Projects (year 5-20)		
		Quantity	Units	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost
Lower GFR	30" RCP	300	lf	\$ 140.00	\$ 42,000.00				300 feet	\$ 140.00	\$ 42,000.00
Lower GFR	30" RCP, Bored	200	lf	\$ 900.00	\$ 180,000.00				200 feet	\$ 900.00	\$ 180,000.00
Ridder/Clutter @ GA	24" RCP	400	lf	\$ 110.00	\$ 44,000.00	400 feet	\$ 110.00	\$ 44,000.00			
Clutter/Garden Acres	18" RCP	300	lf	\$ 90.00	\$ 27,000.00	300 feet	\$ 90.00	\$ 27,000.00			
Kinsman, GA, GFR	18" CMP	740	lf	\$ 75.00	\$ 55,500.00	120	\$ 75.00	\$ 9,000.00	620	\$ 75.00	\$ 46,500.00
Clutter, lower Kinsman	12" RCP	1400	lf	\$ 75.00	\$ 105,000.00	240	\$ 75.00	\$ 18,000.00	1160	\$ 75.00	\$ 87,000.00
Clutter, lower Kinsman	Catch Basin and grate	12	ea	\$ 2,000.00	\$ 24,000.00	3	\$ 2,000.00	\$ 6,000.00	9	\$ 2,000.00	\$ 18,000.00
Garden Acres, GFR	FES	8	ea	\$ 400.00	\$ 3,200.00	3	\$ 400.00	\$ 1,200.00	5	\$ 400.00	\$ 2,000.00
GA, GFR, Kinsman	Constructed swale	16,000	lf	\$ 65.00	\$ 1,040,000.00	7800	\$ 65.00	\$ 507,000.00	8200	\$ 65.00	\$ 533,000.00
lower GFR	5' dia Manhole	3	ea	\$ 4,000.00	\$ 12,000.00			\$ -	3	\$ 4,000.00	\$ 12,000.00
Clutter/Ridder, Kinsman	4' dia Manhole	10	ea	\$ 2,100.00	\$ 21,000.00	5	\$ 2,100.00	\$ 10,500.00	5	\$ 2,100.00	\$ 10,500.00
Kinsman, GA, GFR	WQ / Detention Pond	6	acres	\$ 75,000.00	\$ 450,000.00	ALL					\$ 450,000.00
					Total \$ 2,003,700.00			\$ 622,700.00			\$ 1,381,000.00

Park and Trail Improvements

Location	Scope of Improvements	Full Coffee Creek Buildout				Phase 1 (year 1-4) Projects			Phase 2 Projects (year 5-20)		
		Quantity	Units	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost	Scope of Improvements	Unit Cost	Total Cost
Various	Waysides	4	ea	\$ 300,000.00	\$ 1,200,000.00	1	\$ 300,000.00	\$ 300,000.00	3	\$ 300,000.00	\$ 900,000.00
GFR and Kinsman	Transit Bus Stop	5	ea	\$ 25,000.00	\$ 125,000.00	3	\$ 25,000.00	\$ 75,000.00	2	\$ 25,000.00	\$ 50,000.00
Kinsman to Commence Cir.	Bike Path Connector	700	lf	\$ 65.00	\$ 45,500.00		\$ 65.00	\$ -	700	\$ 65.00	\$ 45,500.00
GFR	10' paved trail	3000	lf	included w/ road cost					ALL	\$ 65.00	
Kinsman	10' paved trail	3100	lf	included w/ road cost					ALL	\$ 65.00	
					\$ 1,370,500.00			\$ 375,000.00			\$ 995,500.00

EXISTING DAY ROAD
VIEW LOOKING EAST



NOTES:

1. REMOVE ASPHALT AND RECONDITION AND RECOMPACT SUBGRADE AND BASE. RECONSTRUCT STREET SECTION WITH 8" CONCRETE ON 12" AGGREGATE BASE COURSE.
- 2 NORTH SIDE PLANTER STRIP AND SIDEWALK ARE FUTURE CONSTRUCTION AND NOT PART OF THIS PROJECT.

Section A - Day Rd - Major Collector

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DRAWN BY: SJ

SCALE: N.T.S.

FILE NAME:

APPROVED BY: EM

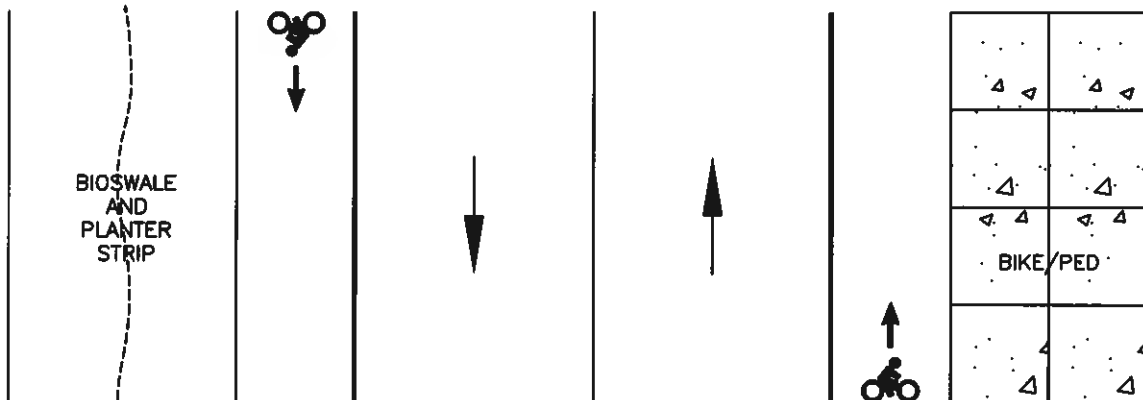
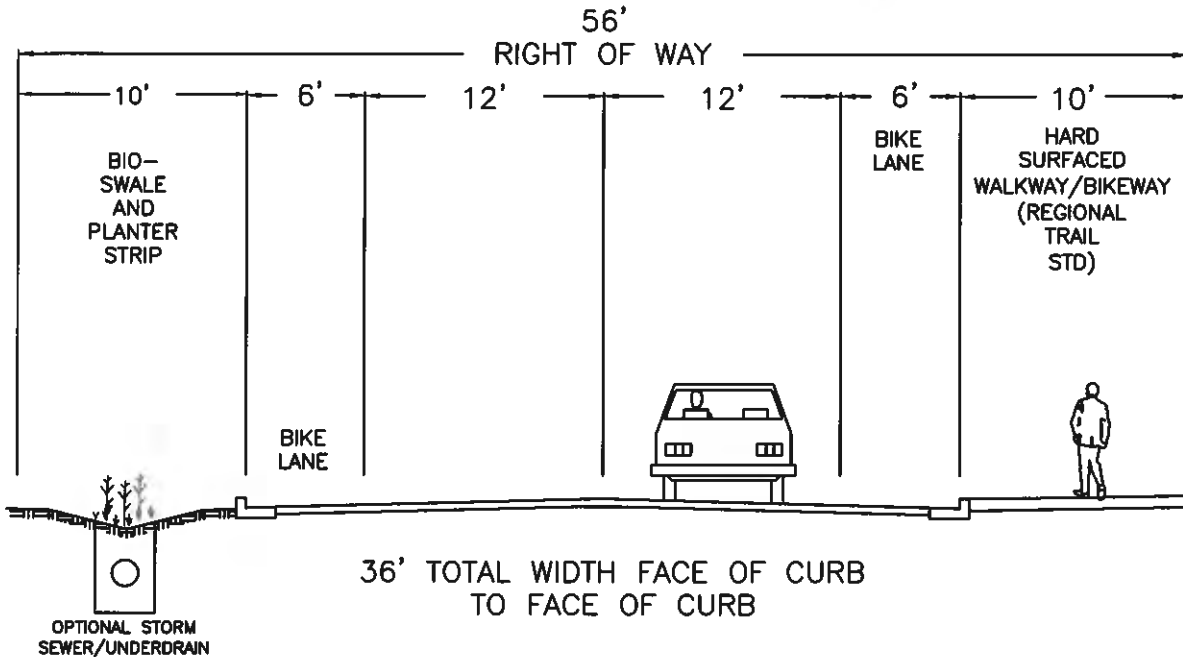
DATE: 1/24/11

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

KINSMAN RD EXTENSION
VIEW LOOKING NORTH



NOTES:

1. STREET TO BE APPROXIMATELY 8" CONCRETE ON 12" AGGREGATE BASE COURSE.
2. A 10' BIOSWALE AND PLANTER STRIP IS REQUIRED ON THE WEST SIDE OF KINSMAN. SEE PLANS AND DETAILS FOR LOCATION OF OPTIONAL STORM SEWER/UNDERDRAIN.
3. WIDTH OF CURB IS INCLUDED IN SIDEWALK OR PLANTER STRIP WIDTH.
4. COMBINATION WALKWAY/BIKEWAY TO REGIONAL TRAIL STANDARDS IS REQUIRED ON EAST SIDE OF KINSMAN. SEE SPECIFICATIONS FOR CONSTRUCTION DETAILS.
5. STREET LIGHTS AND STREET TREES SHALL BE LOCATED WITHIN PLANTER STRIP AS REQUIRED.
6. STRIPING AND SIGNAGE AS REQUIRED.
7. NO ON-STREET PARKING IS ALLOWED. TRANSIT STOP LOCATIONS TO BE DETERMINED BY TRANSIT DIRECTOR.

Section B - Kinsman Rd
Minor Collector Template With Bioswale

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

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DRAWN BY: SJ

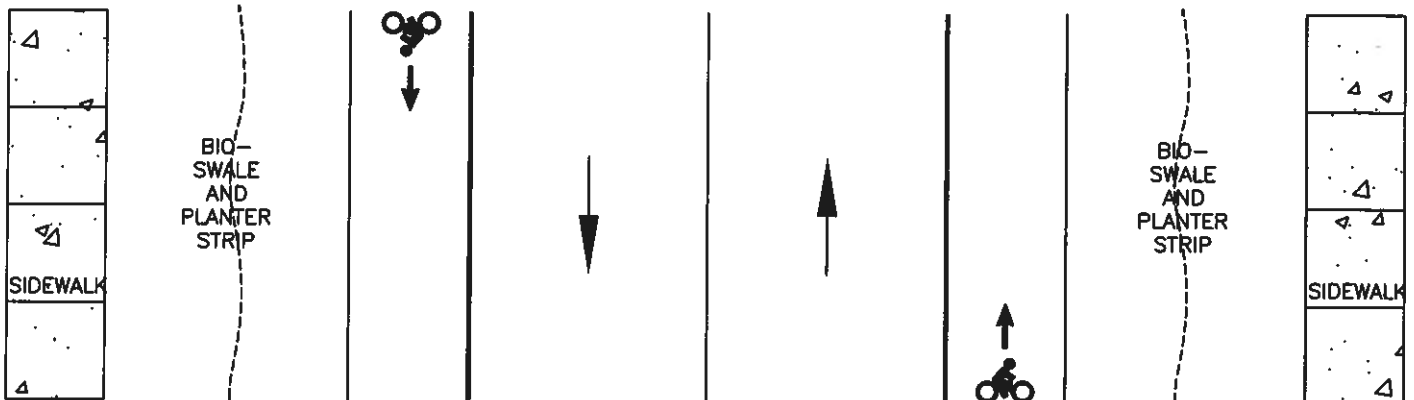
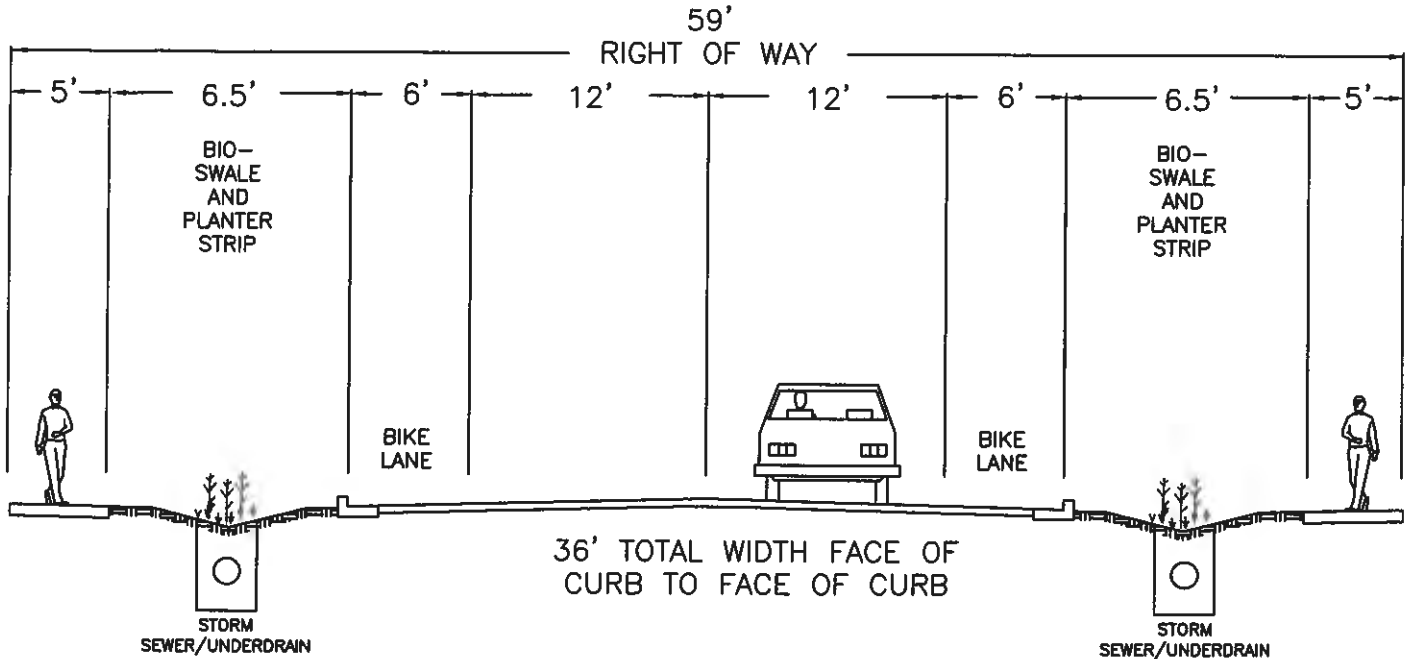
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FILE NAME:

APPROVED BY: EM

DATE: 1/24/11

GARDEN ACRES RD
VIEW LOOKING NORTH



NOTES:

1. STREET TO BE APPROXIMATELY 7" CONCRETE ON 8" AGGREGATE BASE COURSE.
2. A 6 1/2' BIOSWALE AND 5' SIDEWALK REQUIRED ON BOTH SIDES. SEE PLANS AND DETAILS FOR LOCATION OF OPTIONAL STORMSEWER/UNDERDRAIN.
3. WIDTH OF CURB IS INCLUDED IN SIDEWALK OR PLANTER STRIP WIDTH.
4. STREET LIGHTS AND STREET TREES SHALL BE LOCATED WITHIN PLANTER STRIP AS REQUIRED.
5. STRIPING AND SIGNAGE AS REQUIRED
6. NO ON-STREET PARKING IS ALLOWED. TRANSIT STOP LOCATIONS TO BE DETERMINED BY TRANSIT DIRECTOR.
7. SECTION NORTH OF NEW JAVA ROAD MAY BE CONSTRUCTED AS A LOCAL STREET SECTION - SEE SECTION F.

Section C - Garden Acres Rd
Minor Collector Template with Bioswale

CITY OF
WILSONVILLE



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DRAWN BY: SJ

SCALE: N.T.S.

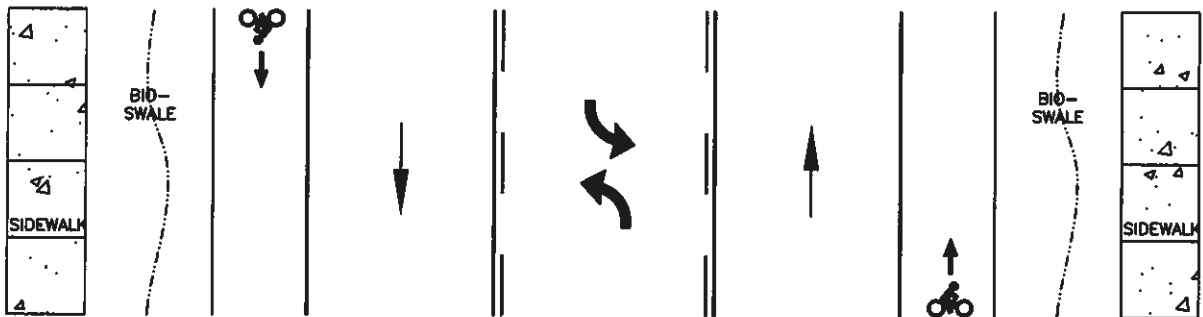
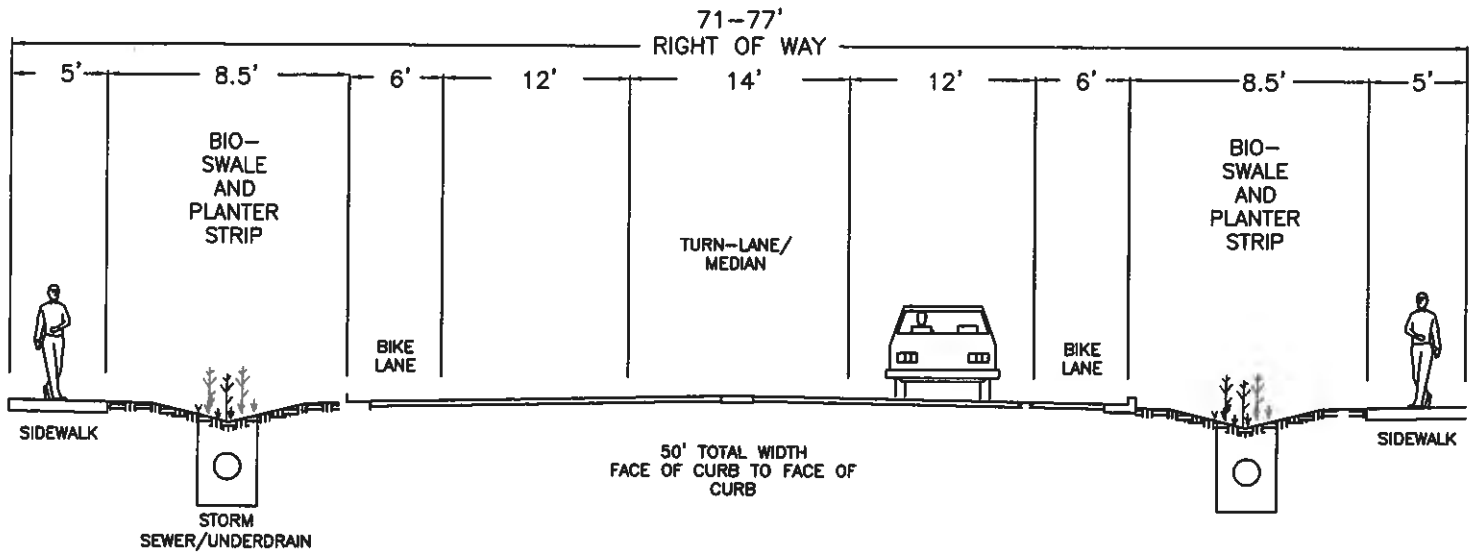
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APPROVED BY: EM

DATE: 1/24/11

PUBLIC WORKS STANDARDS

GRAHAMS FERRY RD
VIEW LOOKING NORTH



NOTES:

1. STREET TO BE APPROXIMATELY 6" ASPHALT ON 15" AGGREGATE BASE COURSE.
2. WIDTH OF CURB IS INCLUDED IN SIDEWALK OR BIOSWALE WIDTH.
3. STREET LIGHTS SHALL BE LOCATED WITHIN PLANTER STRIP/BIOSWALE AS REQUIRED. SEE PLANS AND DETAILS FOR LOCATION OF OPTIONAL STORMSEWER/UNDERDRAIN.
4. STRIPING AND SIGNAGE AS REQUIRED.
5. ON-STREET PARKING IS NOT ALLOWED. TRANSIT STOP LOCATIONS TO BE DETERMINED BY TRANSIT DIRECTOR.
6. MEDIAN SHALL BE LANDSCAPED WHEN NOT NEEDED AS A LEFT-TURN LANE.
7. SEE SPECIAL SETBACK REQUIREMENTS FOR MINOR ARTERIAL STREET SECTIONS.
8. MAXIMUM DISTANCE BETWEEN MANHOLES SHALL BE 1600 FEET WITH THREE FLOW THRU INLETS EVENLY SPACED BETWEEN EACH MANHOLE.

Section D – Grahams Ferry Rd
Minor Arterial Template with Bioswale

CITY OF
WILSONVILLE



DRAWING NUMBER:

DRAWN BY: SJ

SCALE: N.T.S.

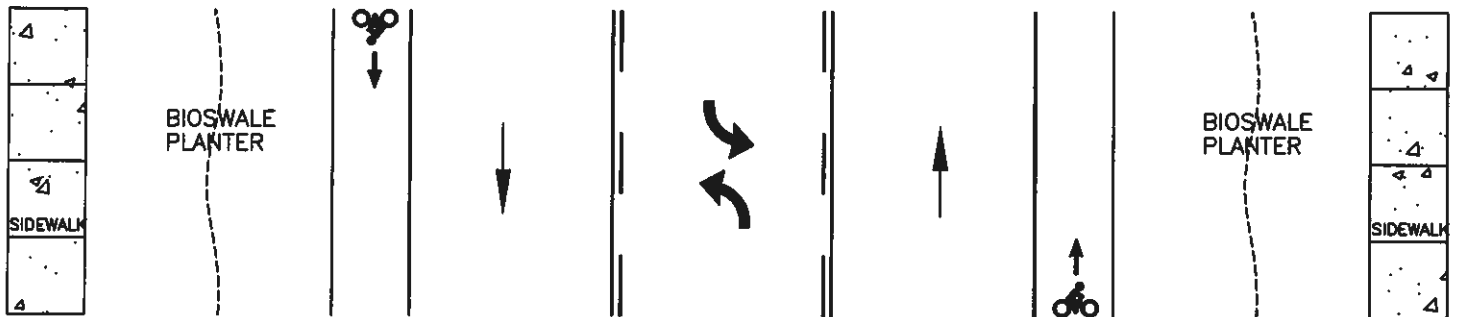
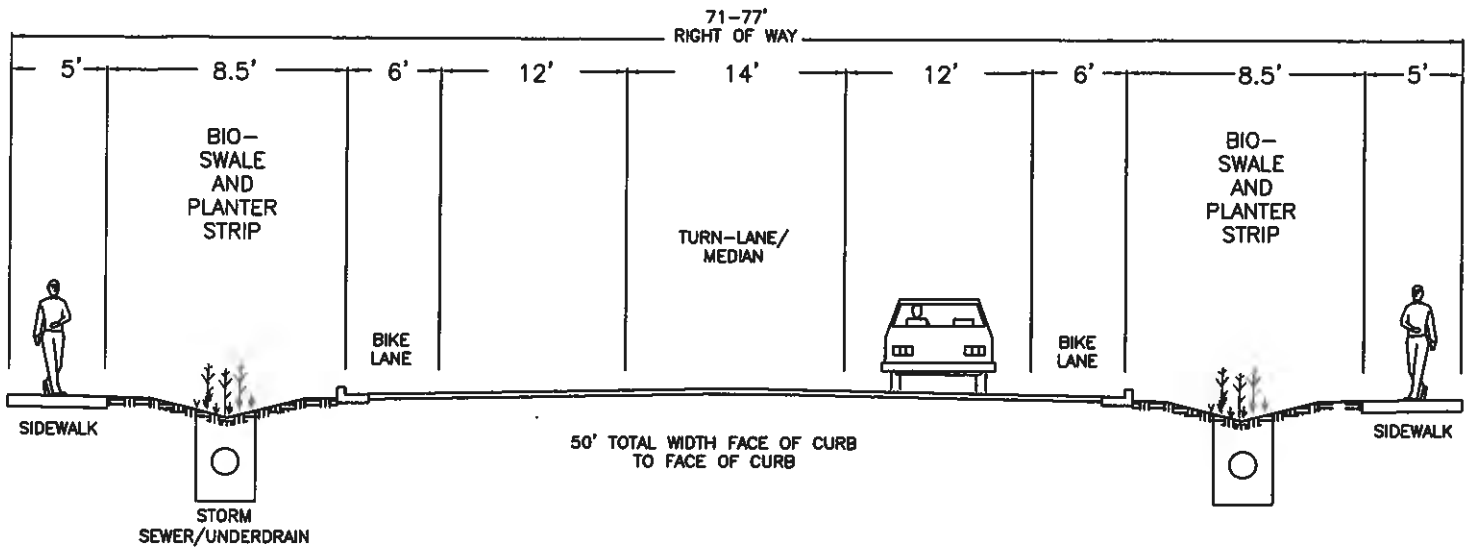
FILE NAME:

APPROVED BY: EM

DATE: 1/24/11

PUBLIC WORKS STANDARDS

CLUTTER RD
VIEW LOOKING EAST



NOTES:

1. STREET TO BE APPROXIMATELY 6" ASPHALT ON 15" AGGREGATE BASE COURSE.
2. A 8 1/2' PLANTER STRIP/BIOSWALE IS REQUIRED ON BOTH SIDES. SEE PLANS AND DETAILS FOR LOCATIONS OF OPTIONAL STORM SEWER/UNDERDRAIN. STREET TREES SHALL BE IN 4' TREE WELLS ONLY AND ADJACENT TO CURB
3. WIDTH OF CURB IS INCLUDED IN SIDEWALK OR PLANTER STRIP WIDTH.
4. STREET LIGHTS SHALL BE LOCATED WITHIN PLANTER STRIP/BIOSWALE AS REQUIRED.
5. STRIPING AND SIGNAGE AS REQUIRED.
6. ON STREET PARKING IS NOT ALLOWED. TRANSIT STOP LOCATIONS TO BE DETERMINED BY TRANSIT DIRECTOR.
7. MEDIAN SHALL BE LANDSCAPED WHEN NOT NEEDED AS A LEFT-TURN LANE.
8. MAXIMUM DISTANCE BETWEEN STORM MANHOLES SHALL BE 1600 FEET WITH THREE FLOW THRU INLETS EVENLY SPACED BETWEEN EACH MANHOLE.

Section E - Clutter Rd
Major Collector With Bioswale

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

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DRAWN BY: SJ

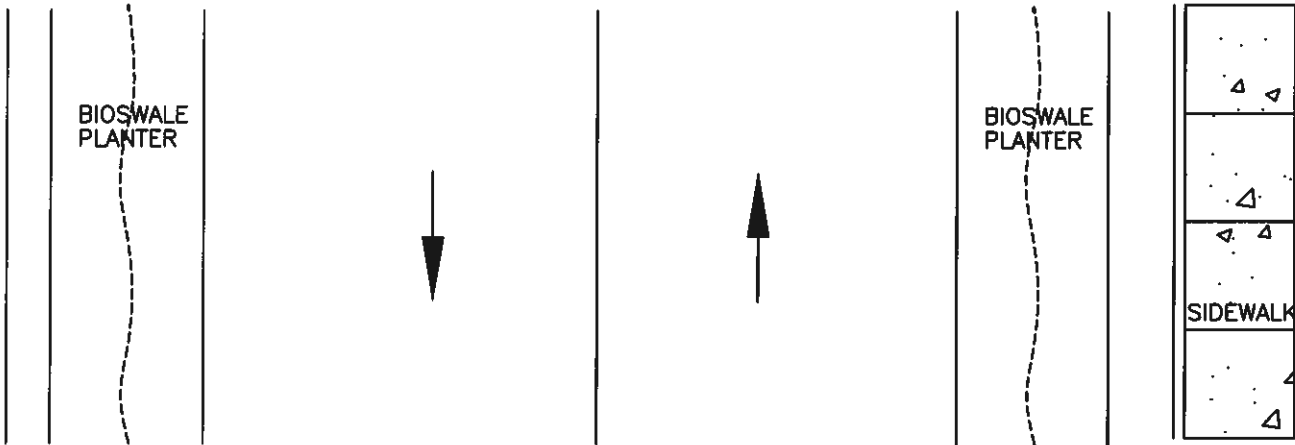
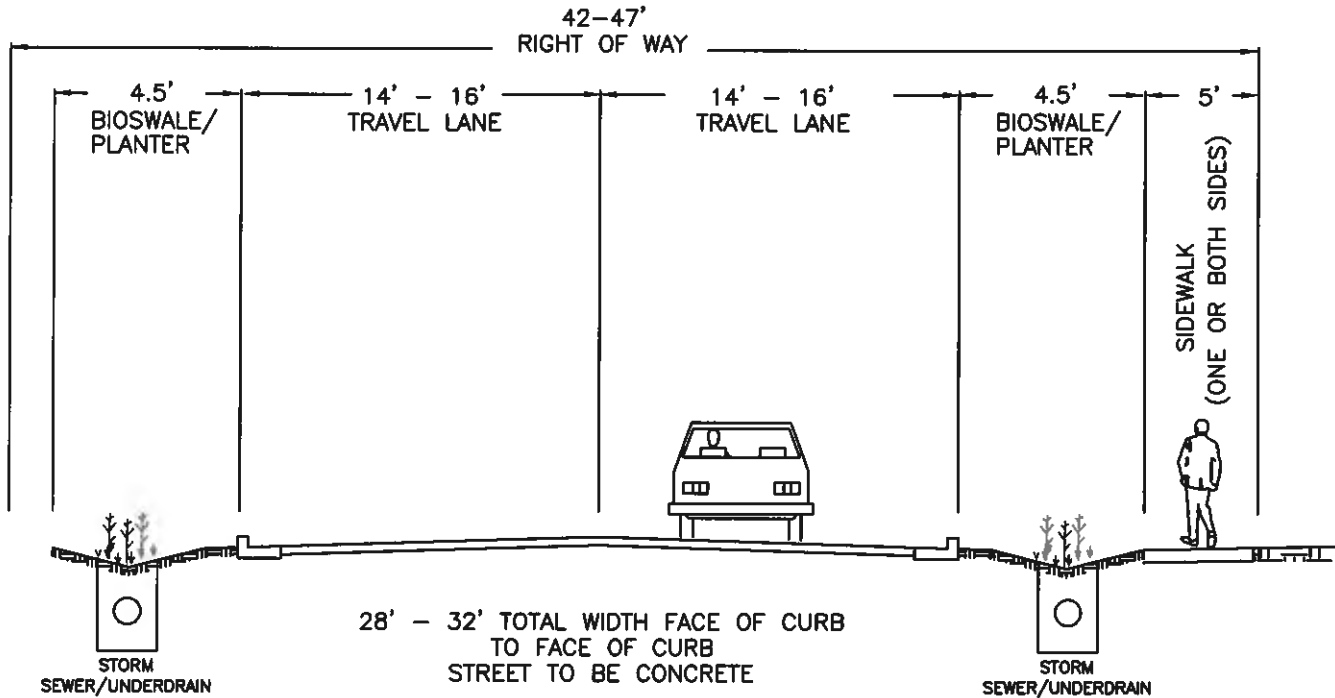
SCALE: N.T.S.

FILE NAME:

APPROVED BY: EM

DATE: 1/24/11

JAVA ROAD
VIEW LOOKING EAST

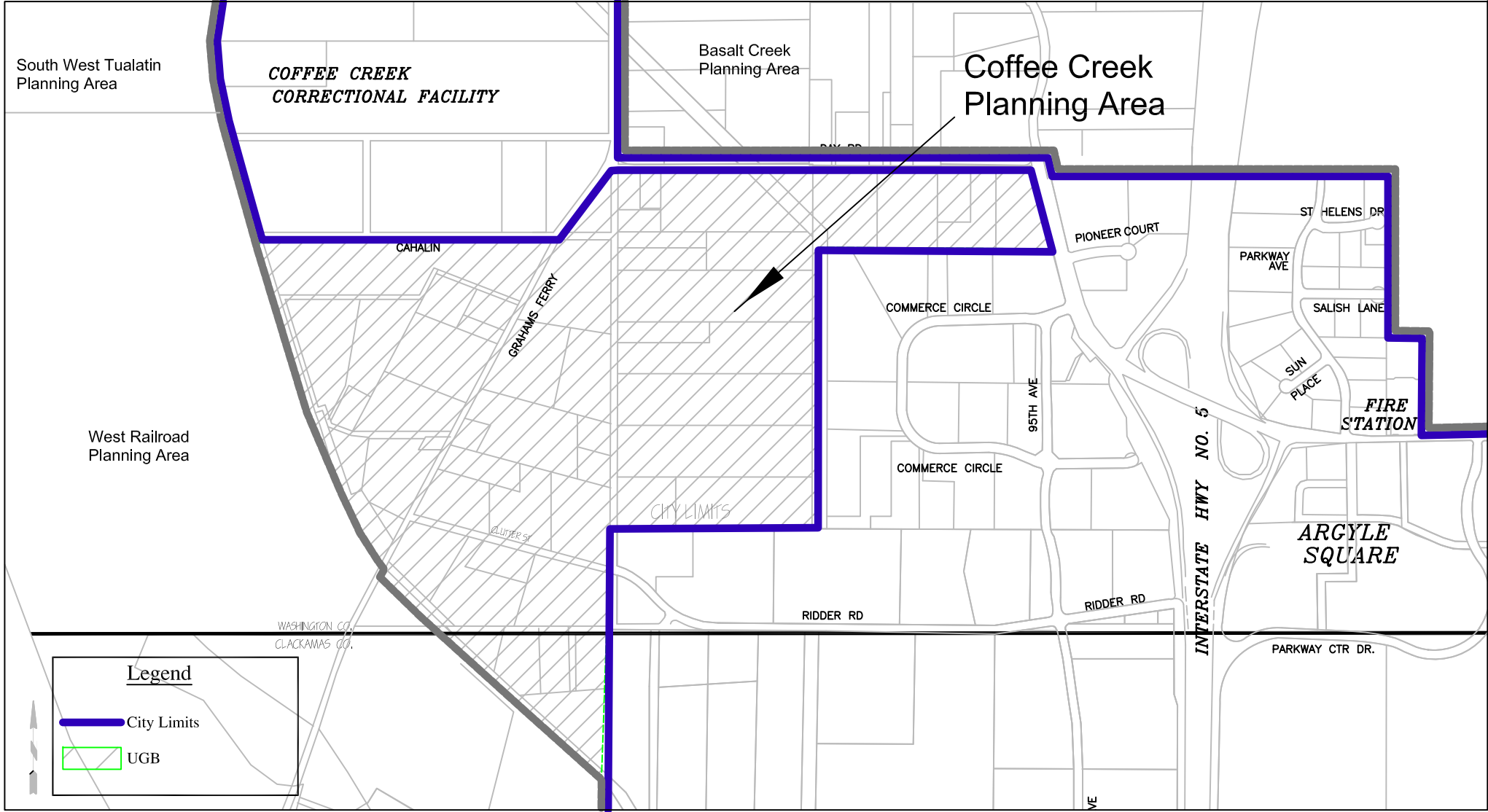


- NOTES:
1. STREET TO BE APPROXIMATELY 7" CONCRETE ON 8" AGGREGATE BASE COURSE.
 2. CURB WIDTH (1/2') IS INCLUDED IN PLANTER/BIOSWALE WIDTH.
 3. SIDEWALK IS REQUIRED ON ONE SIDE ONLY.
 4. STRIPING AND SIGNAGE AS REQUIRED.
 5. ON STREET PARKING ON SIDEWALK SIDE IS OPTIONAL CONSISTENT WITH EMERGENCY REQUIREMENTS.
 6. THIS CROSS-SECTION IS A SPECIAL APPLICATION ONLY. IT MAY ONLY BE USED WITH PRIOR APPROVAL FROM THE CITY PLANNING DEPARTMENT AND CITY ENGINEER.
 7. 2:1 MAXIMUM SIDE SLOPE ON PLANTER/BIOSWALE. SEE PLANS AND DETAILS FOR LOCATION OF OPTIONAL STORM SEWER UNDERDRAIN.

Section F - Java Road Local Non Residential Street with Bioswale			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER:	DRAWN BY: SJ	SCALE: N.T.S.	
FILE NAME:	APPROVED BY: EM	DATE: 2/3/11	

2. "Coffee Creek Industrial Area Infrastructure Analysis", Sheets C1 – C12

Coffee Creek Grant Project



Legend

- City Limits
- UGB

Sheet Index

C1	Cover Sheet
C2	Preliminary Composite Utility Plan
C3	Preliminary Street and Intersection Plan
C4	Preliminary Phasing Plan
C5	Profile- Grahams Ferry Rd
C6	Profile- Garden Acres Rd
C7	Profile- Ridder/Clutter Rd
C8	Profile- Day Rd
C9	Profile- Kinsman Rd
C10	Profile- Java Rd
C11	Street Sections
C12	Preliminary Intersection Details

Revisions
Drawn by: SJ

Coffee Creek Industrial Area Infrastructure Analysis

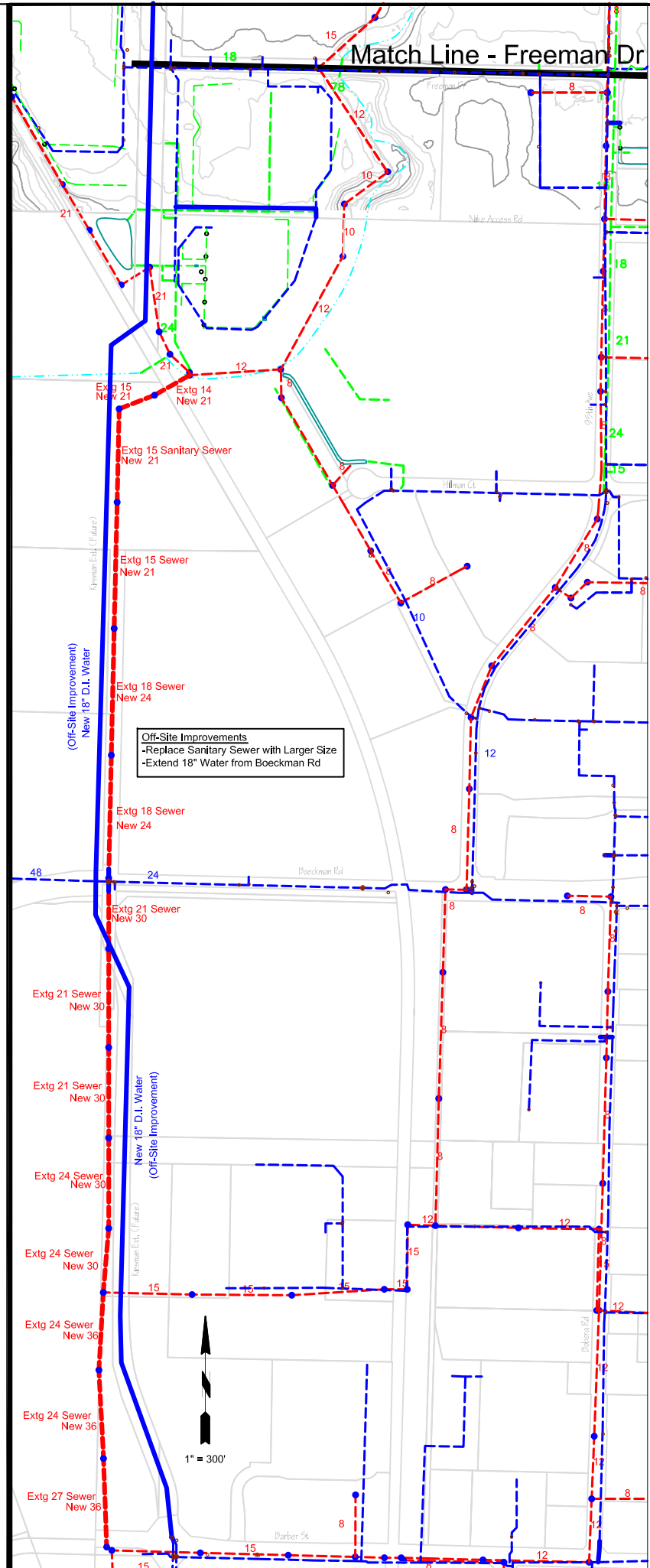
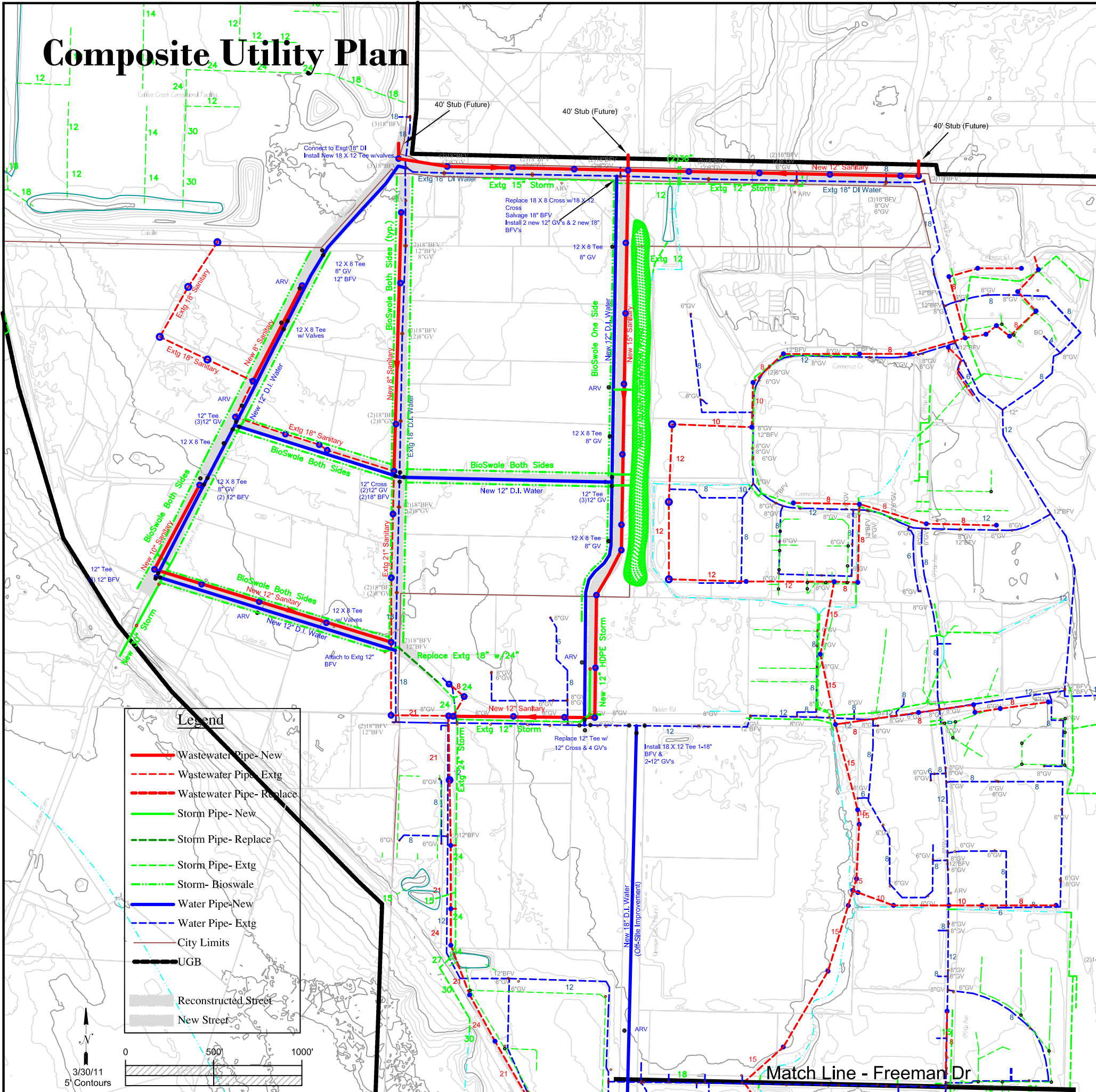
Cover Sheet

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
N.T.S.
Job Number: 4175
Asbuilt Number:

Sheet
C1
Sheet 1 of 12

Composite Utility Plan



Legend

- Wastewater Pipe- New
- - - Wastewater Pipe- Extg
- · - · - Wastewater Pipe- Replace
- Storm Pipe- New
- - - Storm Pipe- Replace
- · - · - Storm Pipe- Extg
- · - · - Storm- Bioswale
- Water Pipe- New
- - - Water Pipe- Extg
- City Limits
- UGB
- Reconstructed Street
- New Street

3/30/11
5' Contours

0 500 1000'

Revisions
Drawn by: SJ

Coffee Creek Industrial Area Infrastructure Analysis

Preliminary Composite Utility Plan

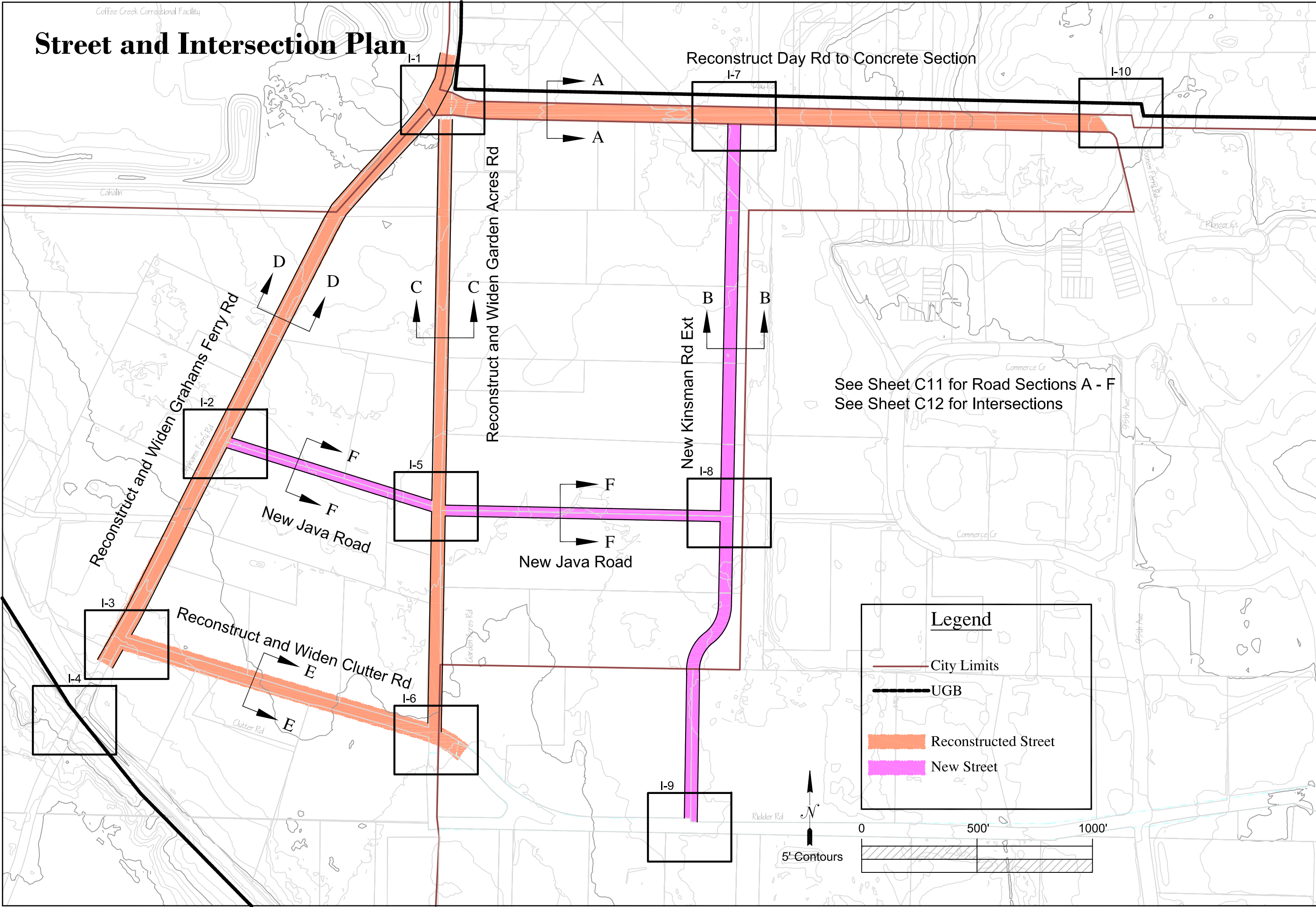
City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
1" = 300'
Job Number: 4175
Asbuilt Number

Sheet
C2
Sheet 2 of 12

Street and Intersection Plan

Revisions
Drawn by SJ



Reconstruct Day Rd to Concrete Section

I-10

I-7

I-1

I-2

I-5

I-8

I-3

Reconstruct and Widen Clutter Rd

I-6

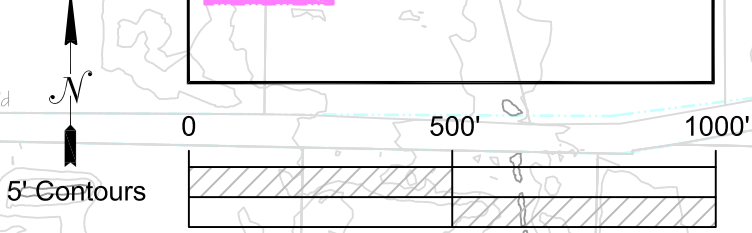
I-9

Ridder Rd

See Sheet C11 for Road Sections A - F
See Sheet C12 for Intersections

Legend

- City Limits
- UGB
- Reconstructed Street
- New Street



Coffee Creek Industrial Area Infrastructure Analysis

Preliminary Street And Intersection Plan

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
N.T.S.
Job Number: 4175
Asbuilt Number:

Sheet
C3
Sheet 3 of 12

Preliminary Phasing Plan

Reconstruct Day Rd to Concrete Section

(2)36"

Revisions
Drawn By SJ

Coffee Creek
Industrial Area
Infrastructure Analysis

Preliminary
Phasing Plan

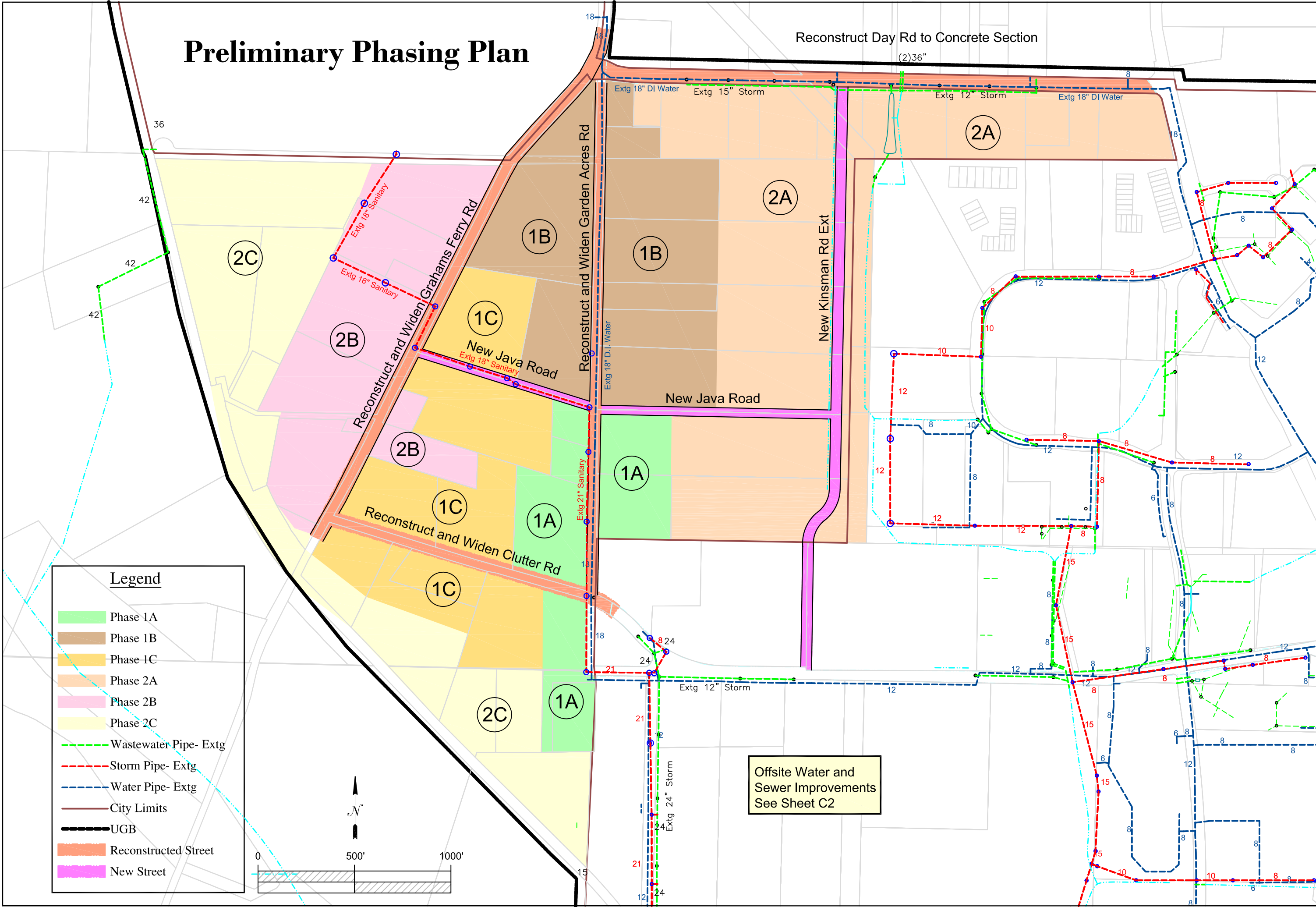
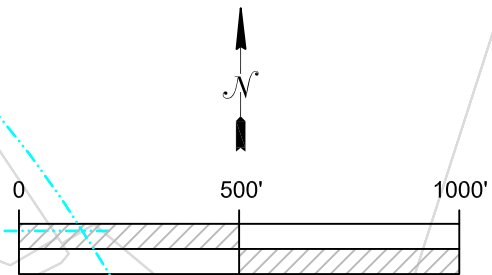
City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
N.T.S.
Job Number: 4175
Asbuilt Number:

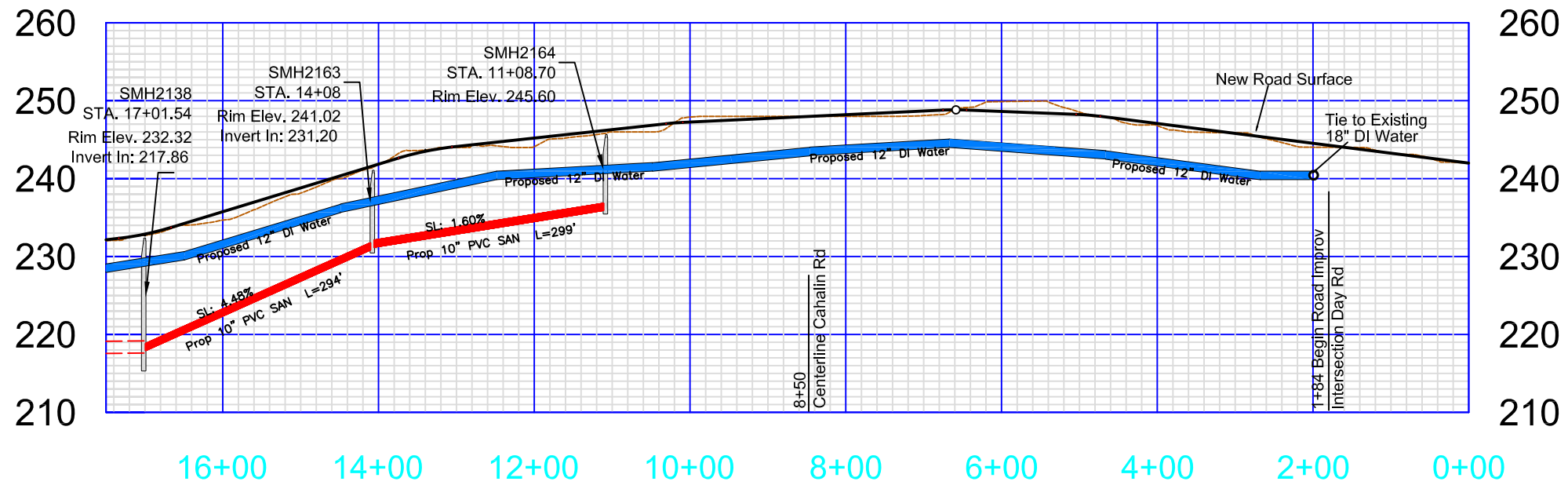
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C4
Sheet 4 of 12

Legend

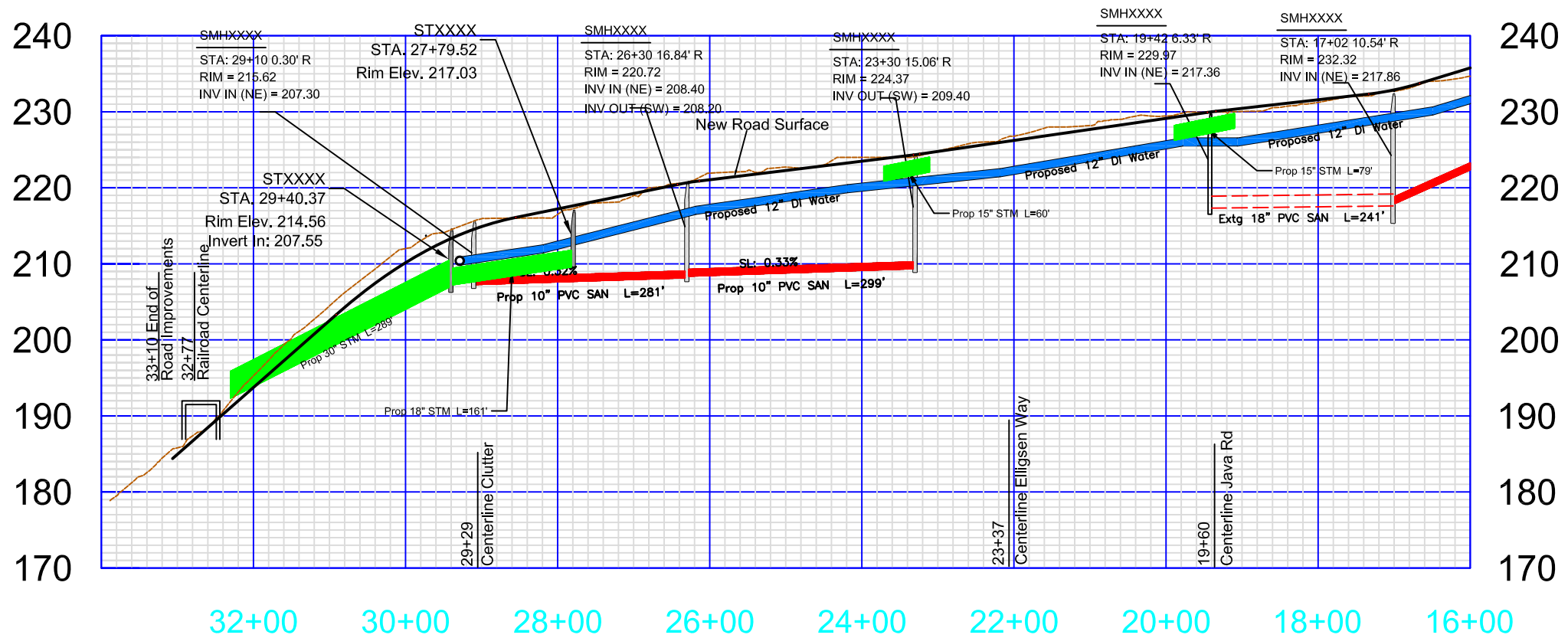
- Phase 1A
- Phase 1B
- Phase 1C
- Phase 2A
- Phase 2B
- Phase 2C
- Wastewater Pipe- Extg
- Storm Pipe- Extg
- Water Pipe- Extg
- City Limits
- UGB
- Reconstructed Street
- New Street



Grahams Ferry Rd 0+00 to 16+50



Grahams Ferry Rd 16+50 to 34+00



Revisions
Drawn by: SJ

Coffee Creek Industrial Area Infrastructure Analysis

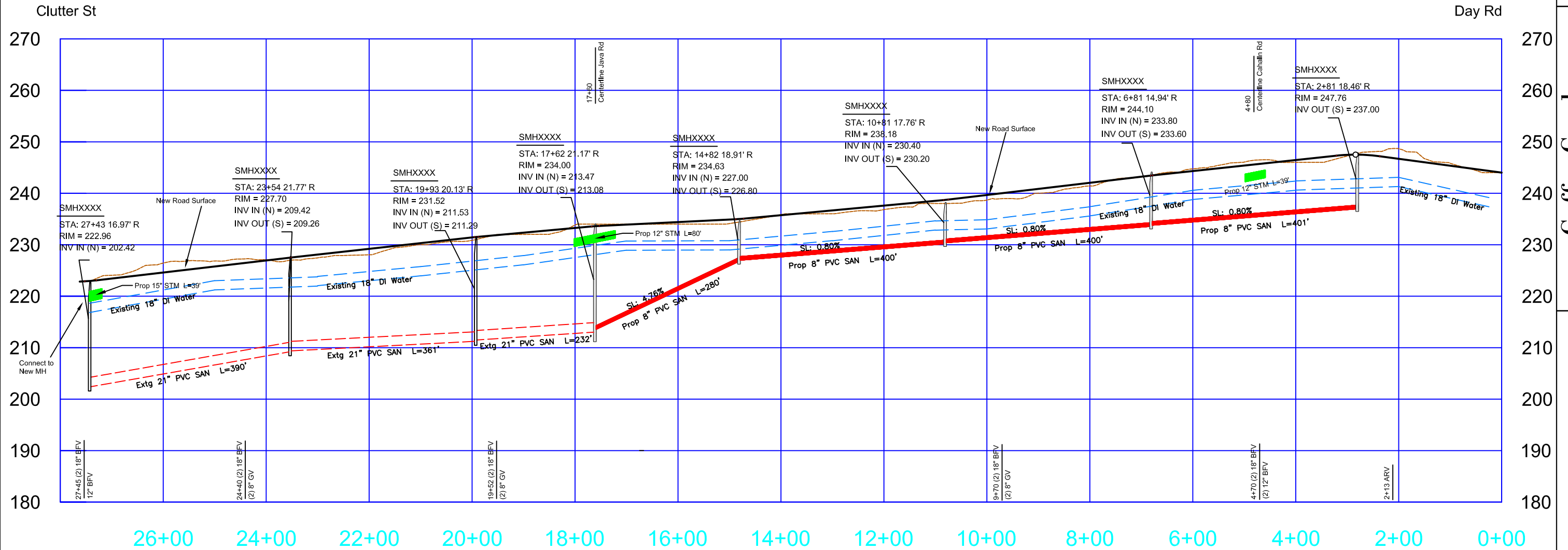
Profile Grahams Ferry Rd

City of Wilsonville
 29799 SW Town Center
 Loop East
 503-682-4960

April 5, 2011
 1" = 200'
 4175
 Asbuilt Number

Sheet
C5
 Sheet 5 of 12

Garden Acres



Revisions
Drawn by: SJ

Coffee Creek Industrial Area Infrastructure Analysis

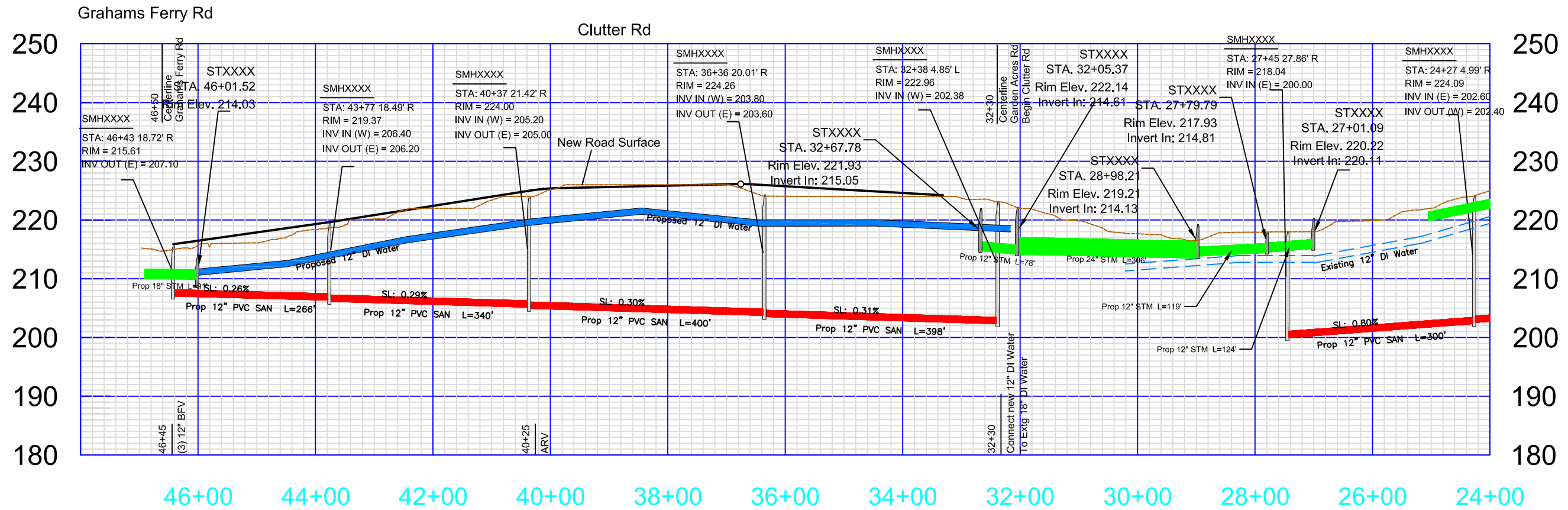
Profile Garden Acres Rd

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

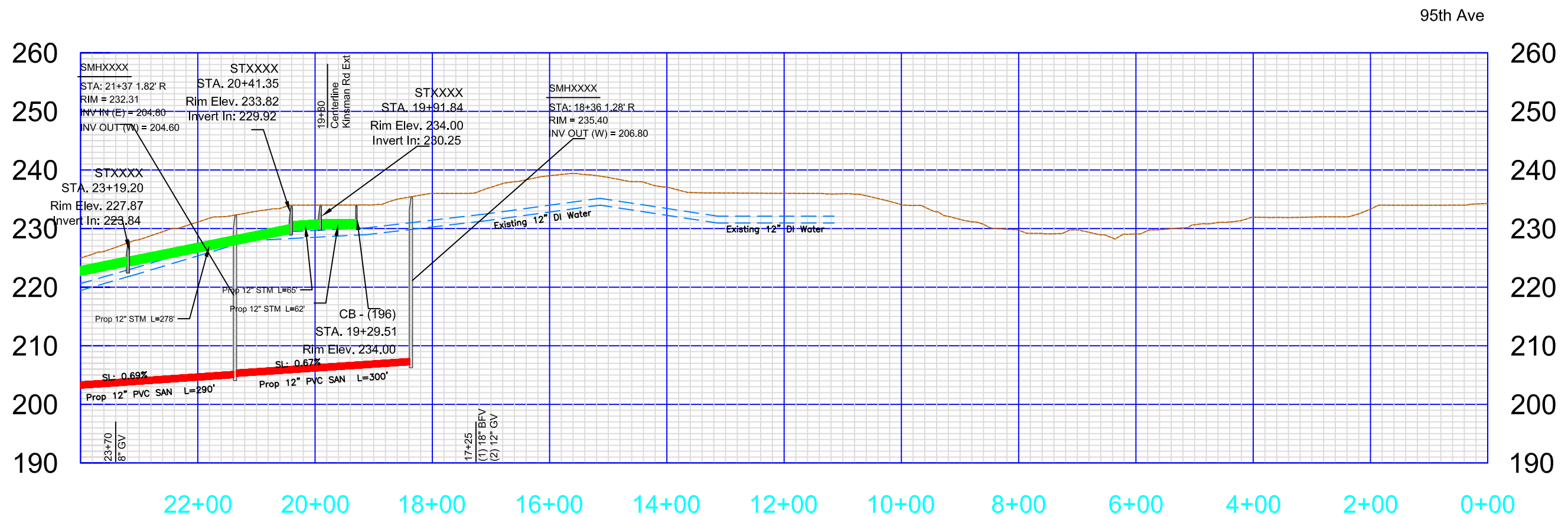
April 5, 2011
1" = 200'
4175
Asbuilt Number

Sheet
C6
Sheet 6 of 12

Ridder Rd Station 24+00 to Station 46+00



Ridder Rd Station 0+00 to Station 24+00



Revisions

Drawn by: SJ

Coffee Creek
Industrial Area
Infrastructure Analysis

Profile
Ridder/Clutter Rd

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

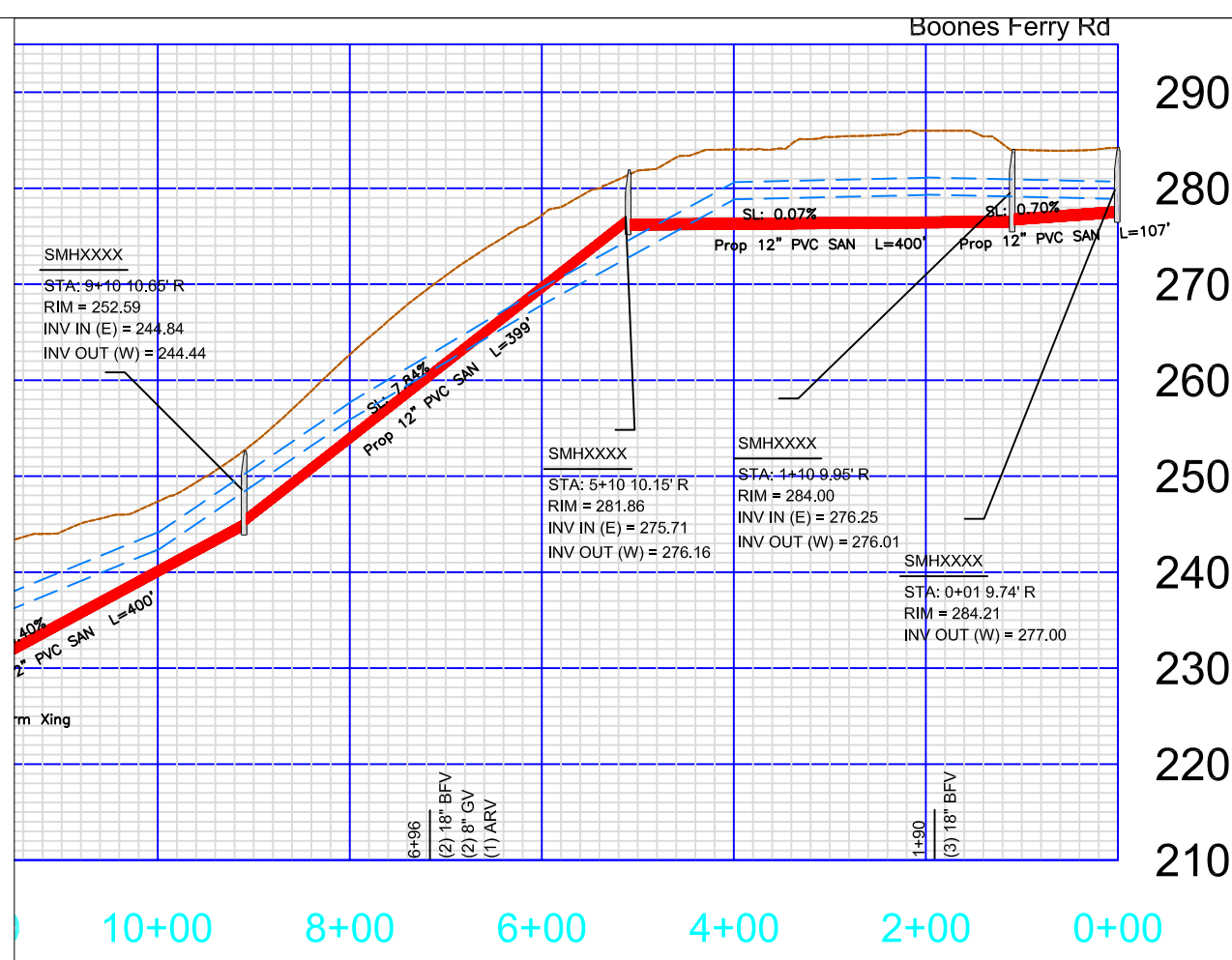
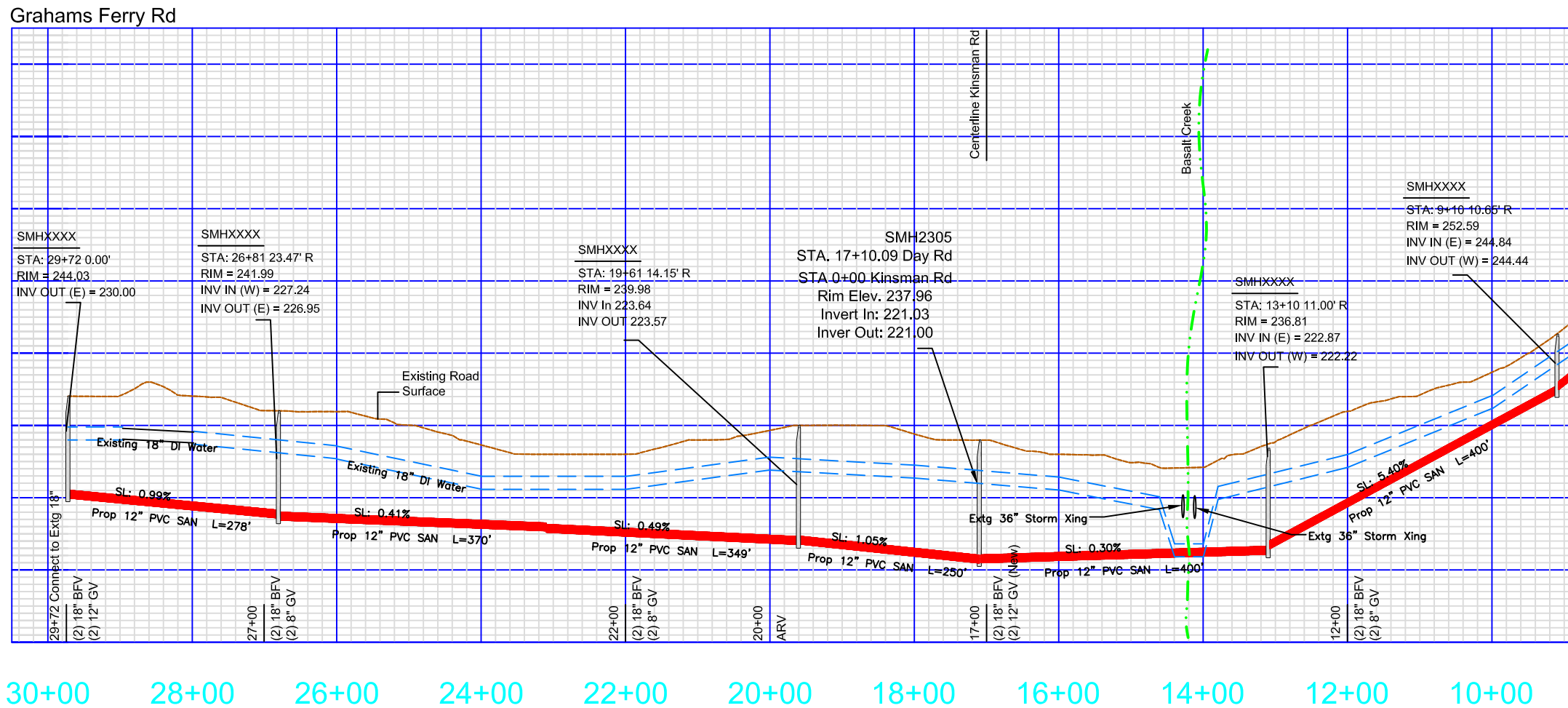
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Sheet 7 of 12

Day Rd



Revisions

Drawn by: SJ

Coffee Creek Industrial Area Infrastructure Analysis

Profile Day Rd

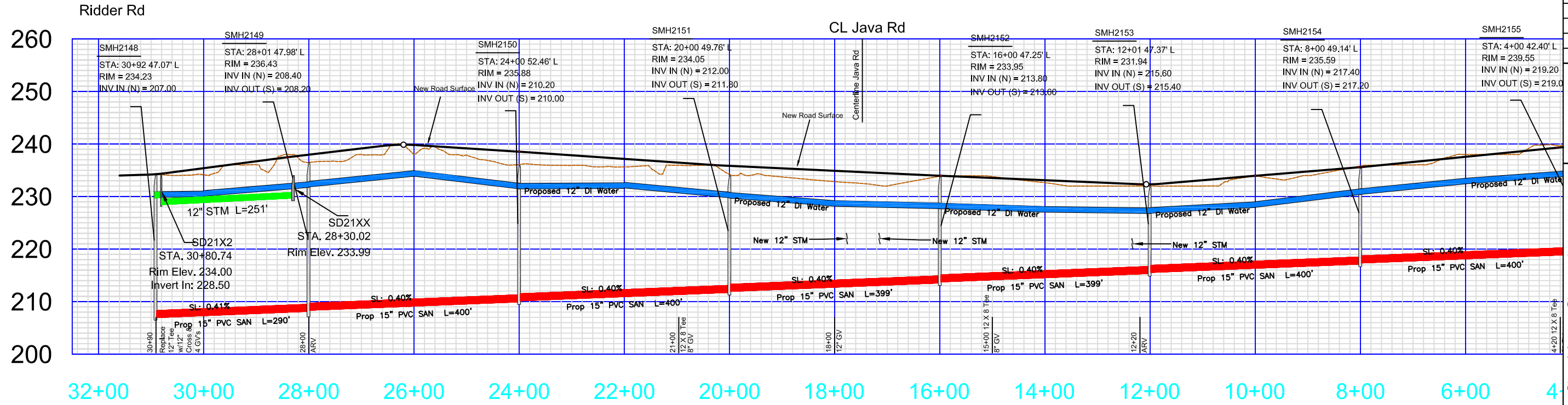
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29799 SW Town Center
Loop East
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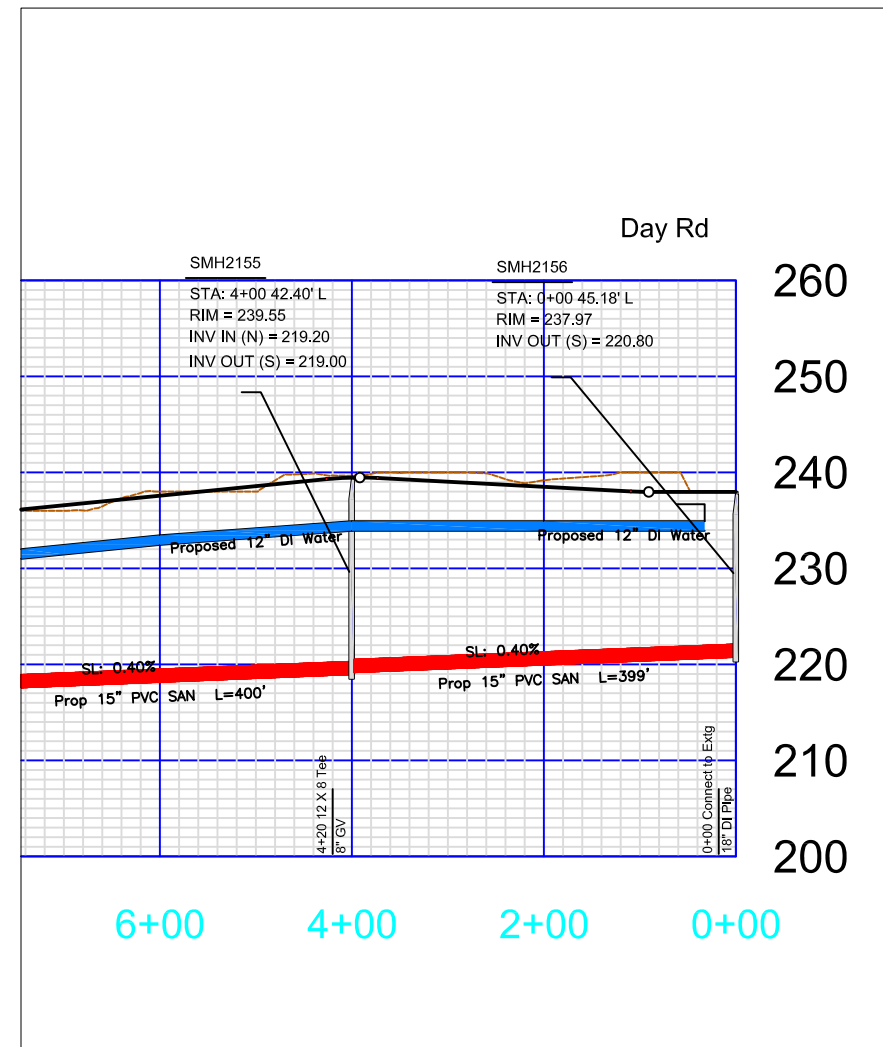
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Sheet 8 of 12

Kinsman Road Ext- Proposed

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Drawn by: SJ



**Coffee Creek
Industrial Area
Infrastructure Analysis**



**Profile
Kinsman Rd Ext**

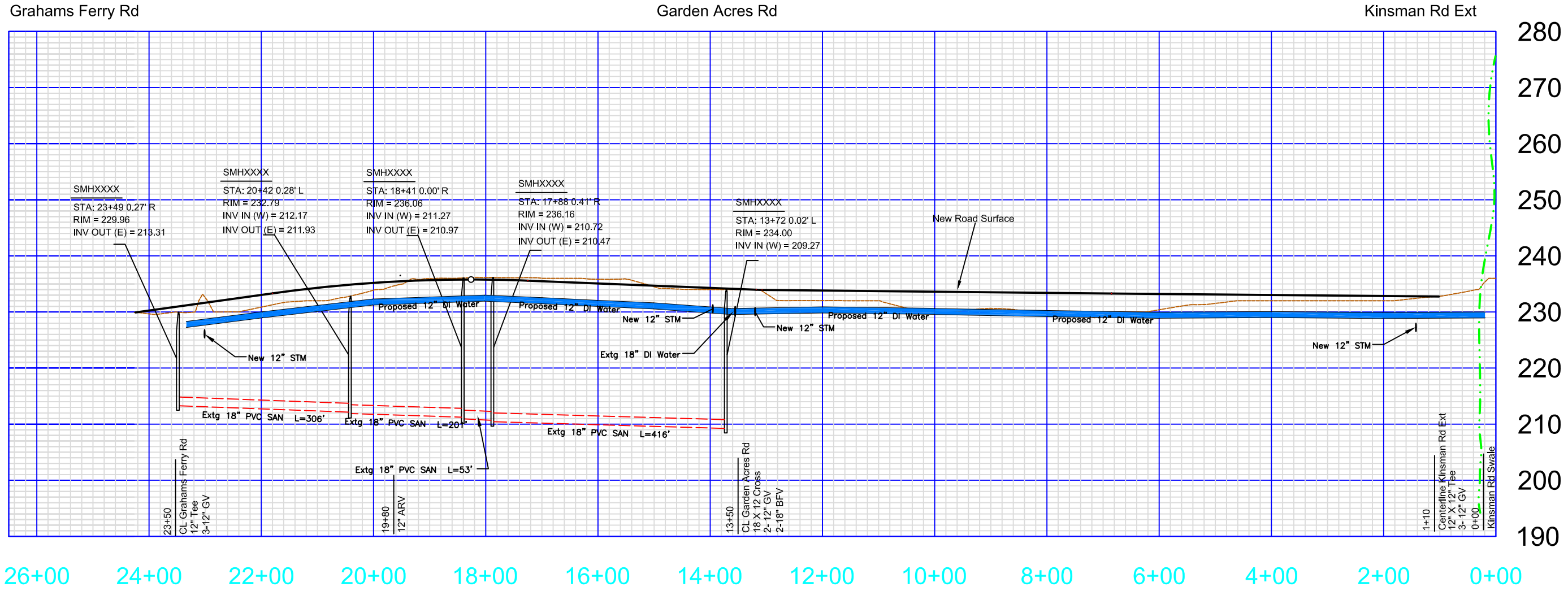
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Loop East
503-682-4960

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Sheet 9 of 12

Revisions
Drawn by: SJ

Java Rd



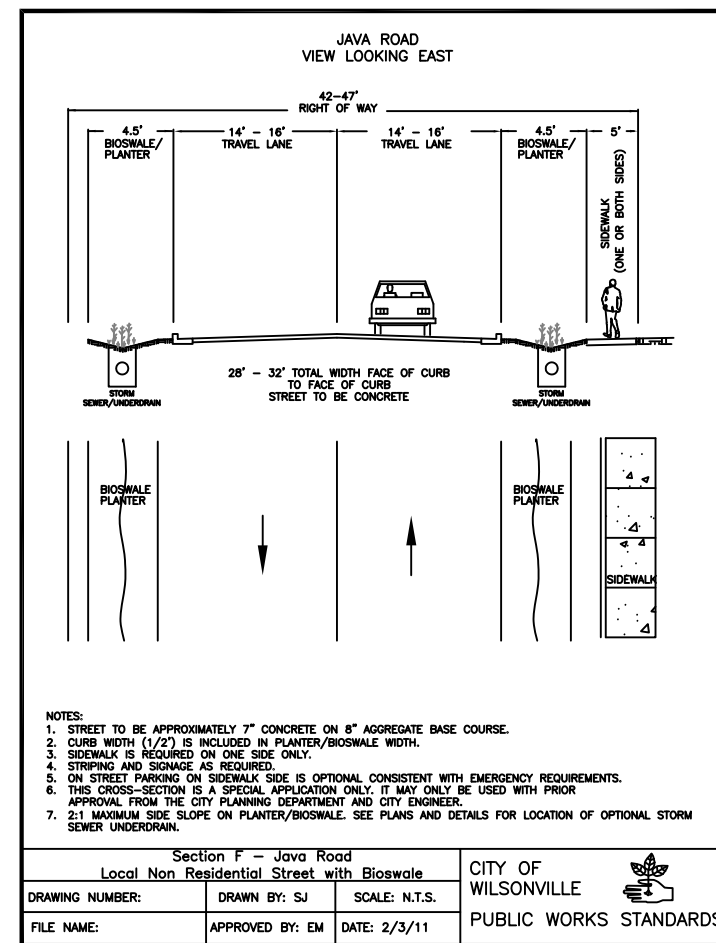
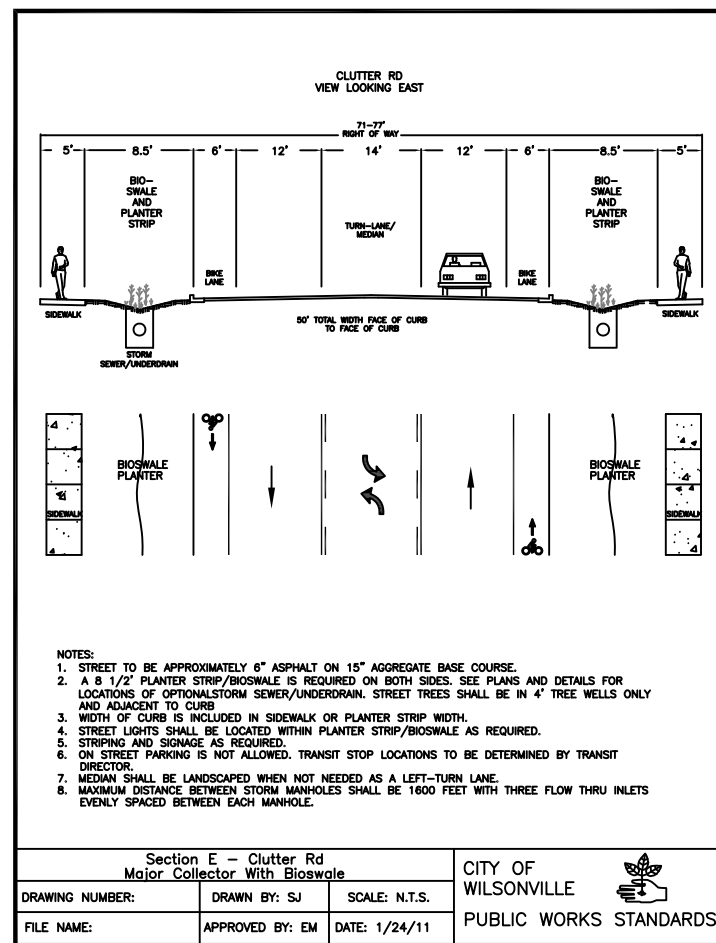
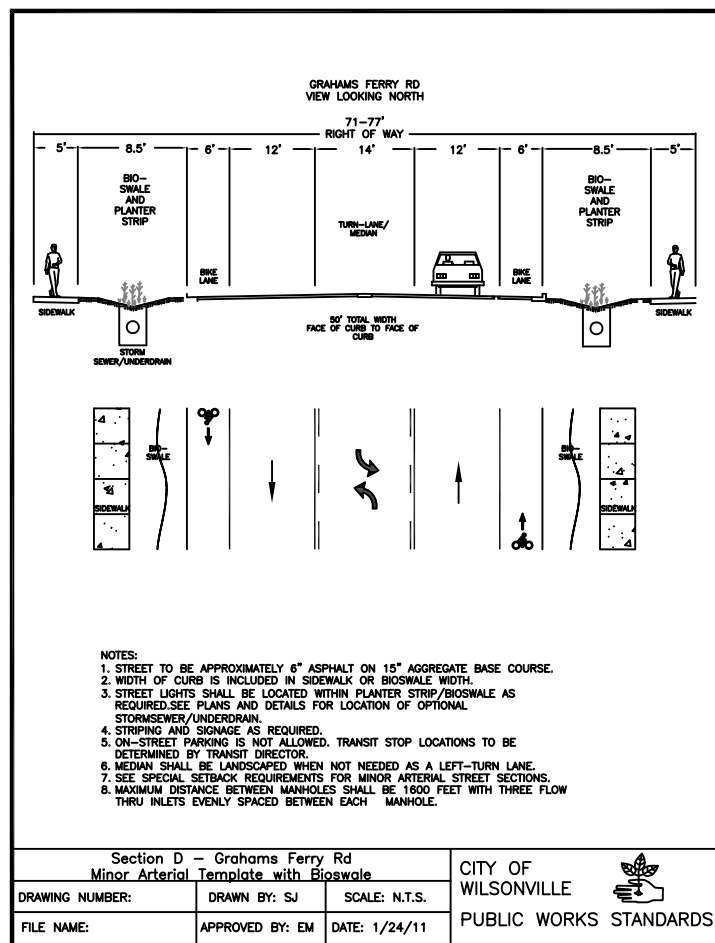
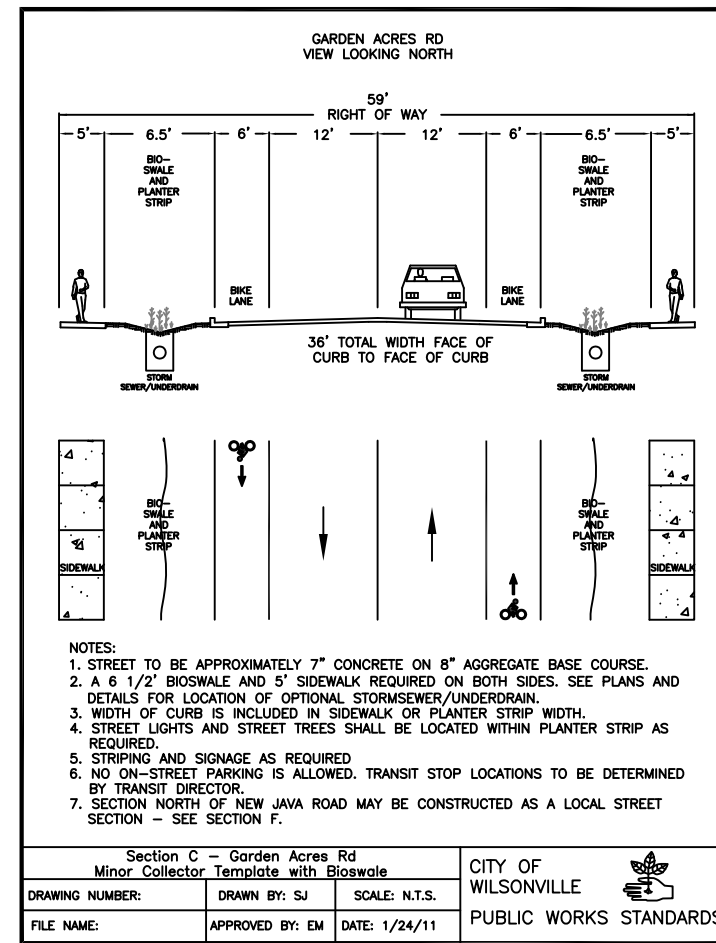
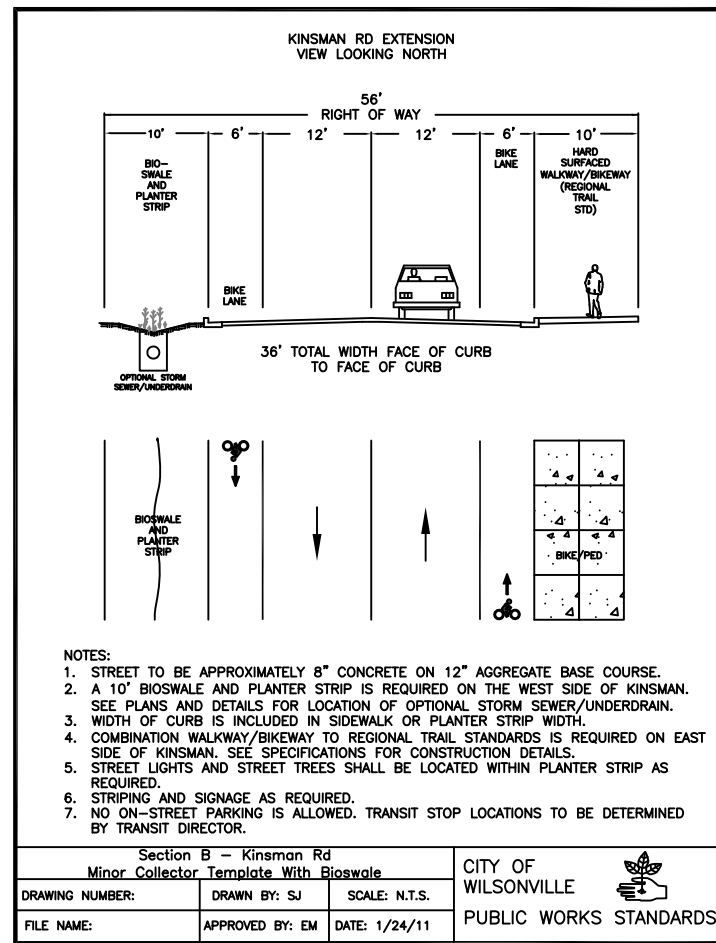
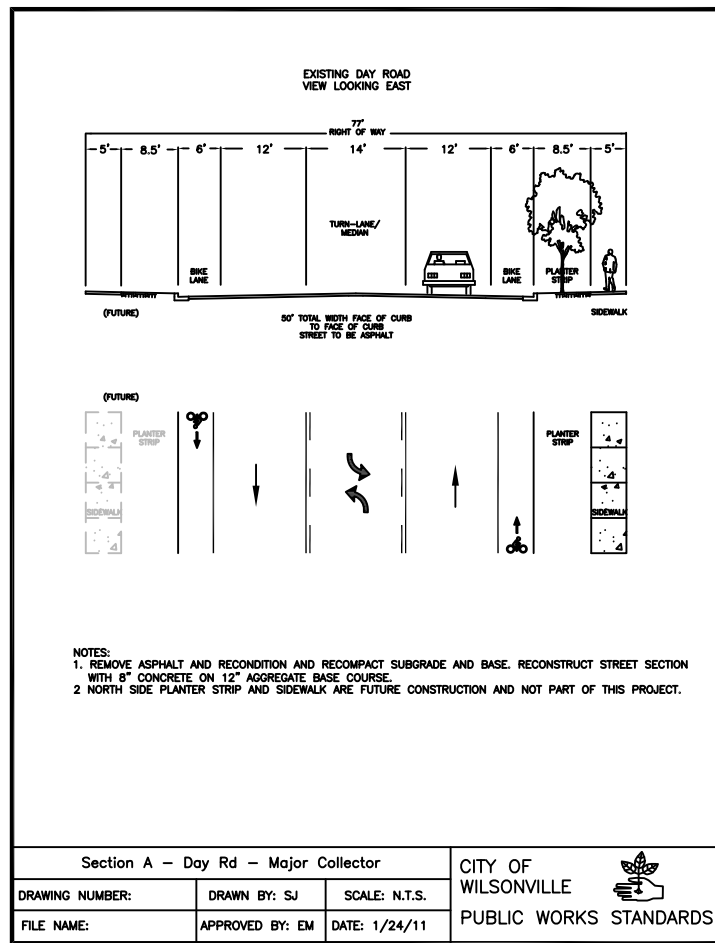
Coffee Creek Industrial Area Infrastructure Analysis

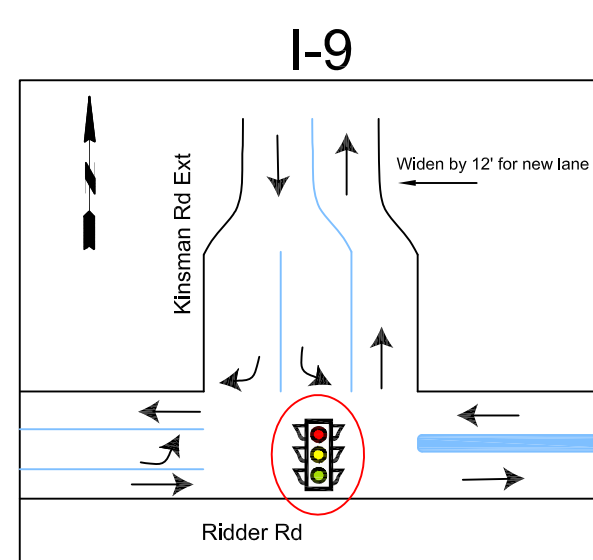
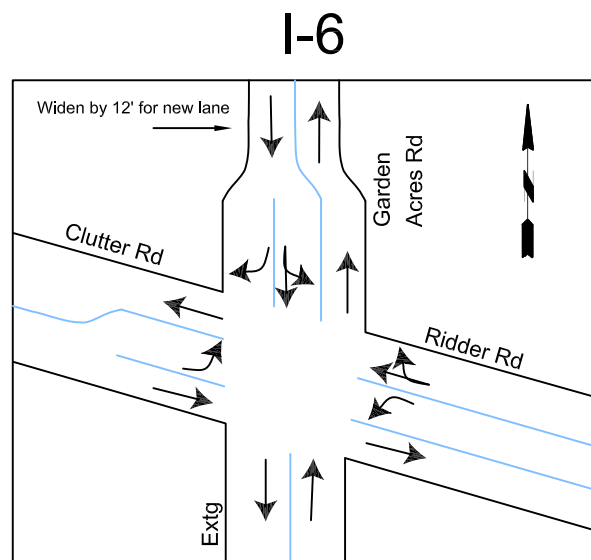
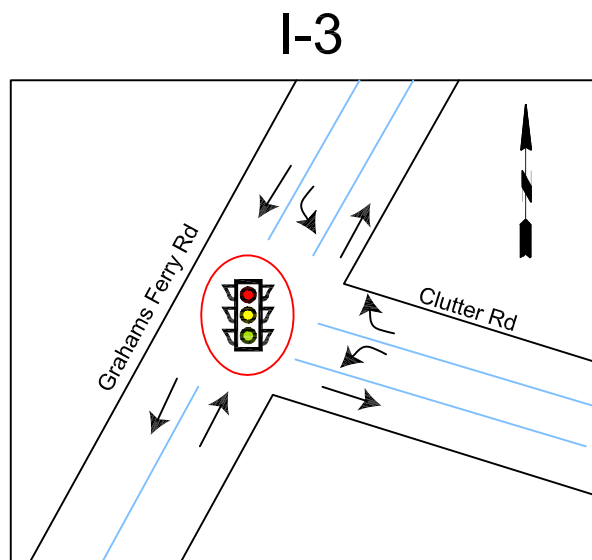
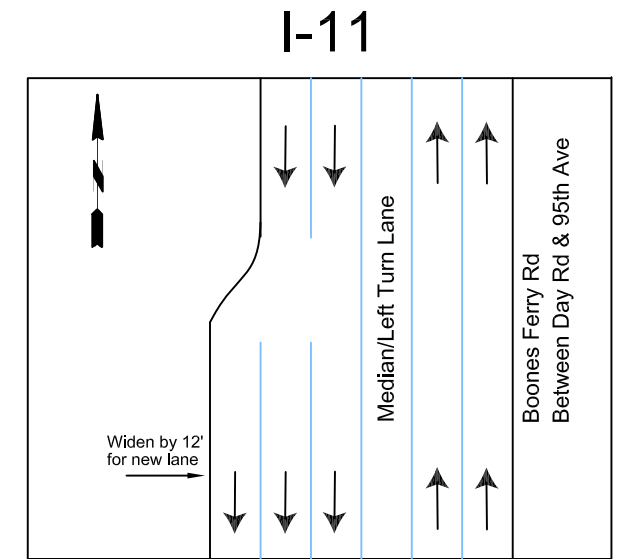
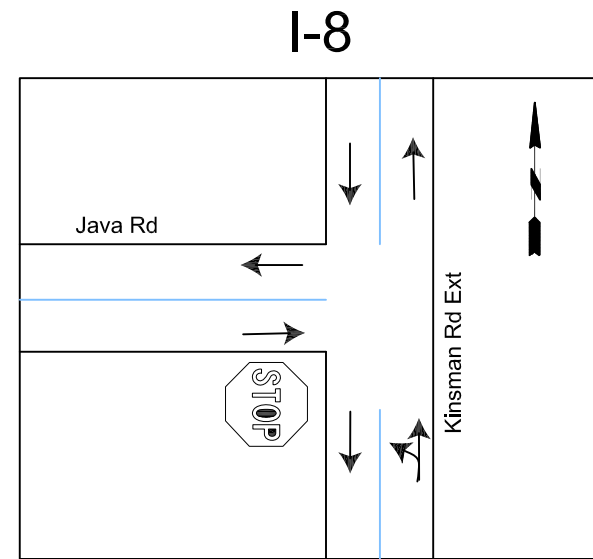
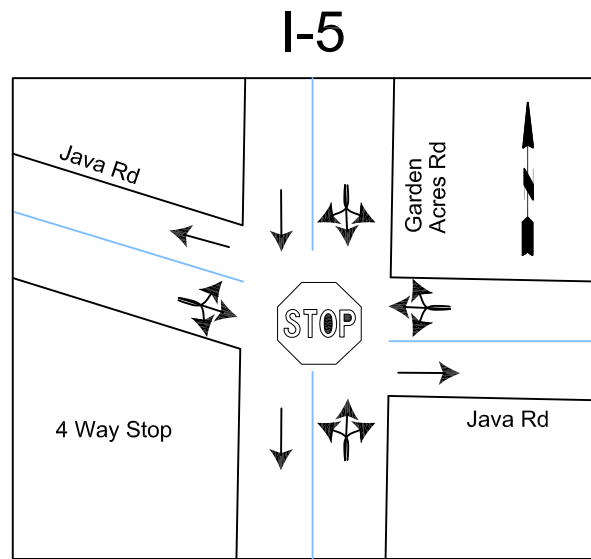
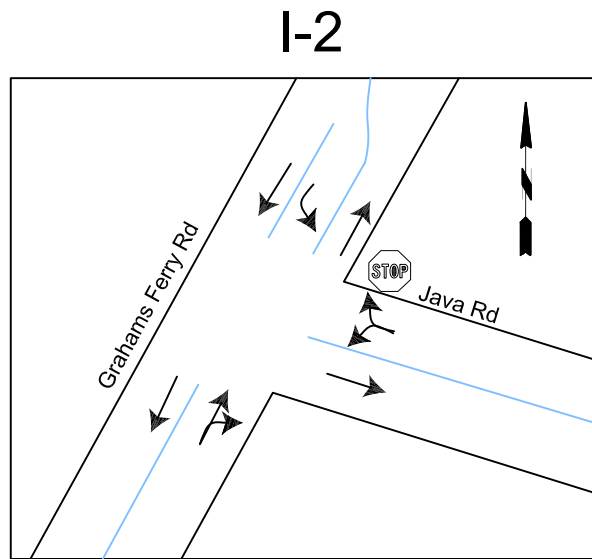
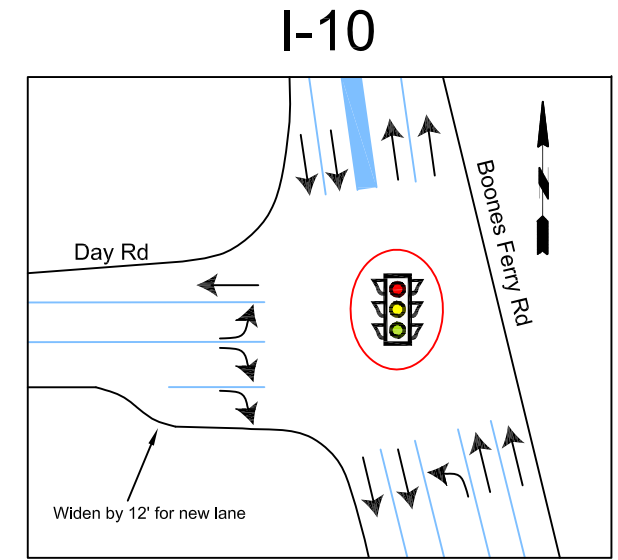
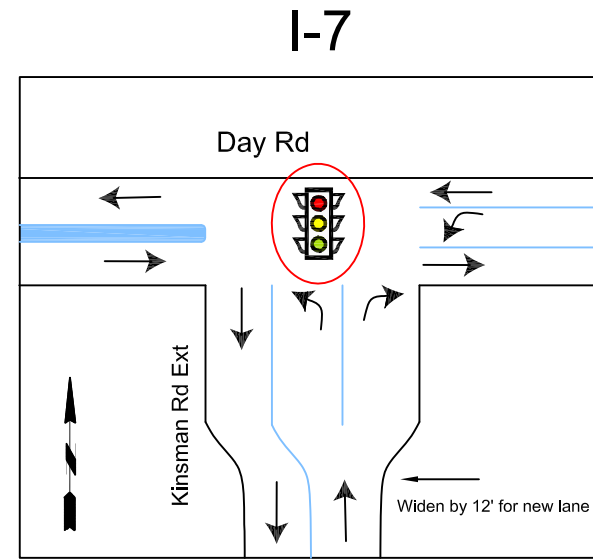
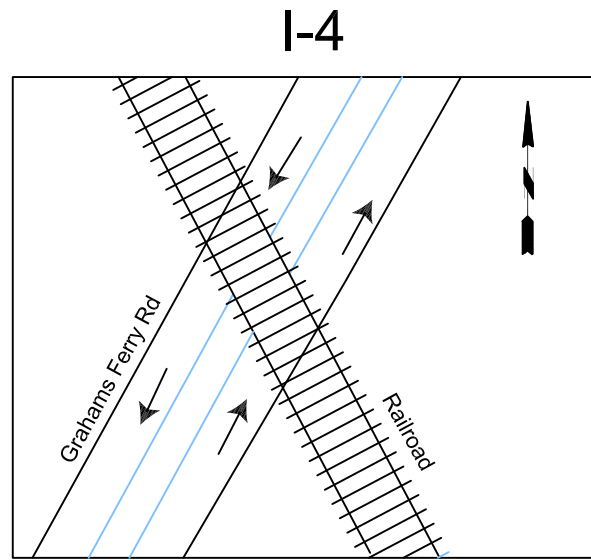
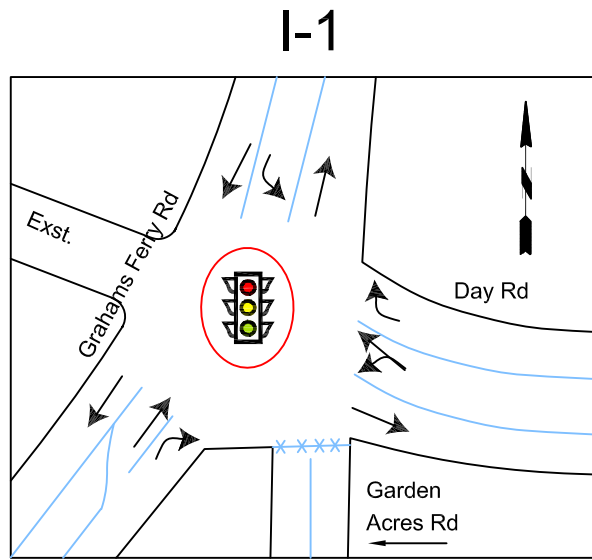
Profile Java Rd

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
1" = 200'
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Asbuilt Number

Sheet
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Sheet 10 of 12





Revisions

Drawn by SJ

**Coffee Creek
Industrial Area
Infrastructure Analysis**

**Preliminary
Intersection Plan**

City of Wilsonville
29799 SW Town Center
Loop East
503-682-4960

April 5, 2011
N.T.S.
Job Number: 4175
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- 3. An FCS Group Memorandum, dated April 5, 2011, from Todd Chase, regarding Coffee Creek Funding and Marketing Plan, Task 7 findings.**

To: Chris Neamtzu, City of Wilsonville **Date:** April 5, 2011
From: Todd Chase, FCS GROUP
RE: Coffee Creek Funding and Marketing Plan, Task 7 findings

INTRODUCTION

This memorandum includes findings from FCS GROUP regarding potential funding and marketing strategies for the Coffee Creek Master Plan area of north Wilsonville.

The work reflected in this memorandum includes the following items:

- Summary of Development Build-out Assumptions
- Summary of Capital Improvement Costs
- Existing Funding Sources
- Potential Funding Sources
- Potential Funding Scenarios
- Potential Marketing Strategies
- Policy Issues and Considerations

The City of Wilsonville formally adopted a Master Plan for Coffee Creek I in 2007, after the area was added to the Metro UGB in 2002. The scope of work for the Wilsonville Coffee Creek Industrial Area Economic Development and Infrastructure Analysis (TA-U-11-178) builds upon the Wilsonville Economic Opportunities Analysis (EOA adopted by city in 2008) and the Master Plan for Coffee Creek, by focusing on refinement plans, strategies and activities needed to facilitate implementation of planned employment development in the Coffee Creek I study area.

METHODOLOGY

The technical methodology used to generate this funding analysis and marketing strategy entailed a series of internal technical meetings with consultant team members and city planning, engineering, business development, and community development/finance staff members. These meetings were held in December, January, February and March to review interim project assumptions and preliminary findings, and to coordinate work activities.

The funding analysis incorporates the city's most recent findings regarding preliminary engineering and infrastructure development phasing assumptions, which are summarized in the Coffee Creek Planning Area Preliminary Engineering Summary, updated March 8, 2011.

DEVELOPMENT AND INFRASTRUCTURE COST ASSUMPTIONS

The Coffee Creek Master Plan envisions development of a new employment center in north Wilsonville for approximately 1,800 jobs. The master plan for Coffee Creek includes new design standards that support multi-level industrial-office buildings along Day Road and a pedestrian/bicycle network that creates a transit and pedestrian-oriented “Class A” employment center. Green street design standards with a passive-solar building orientation/street grid are also incorporated into the employment center. New development is expected to serve general industrial, warehouse, flex and research and development (R&D) functions. The pedestrian and bicycle facilities will be provided along all collector and arterial streets (with direct access to the Metro regional Tonquin Trail) for convenient and safe access to all modes of travel.

Current assumptions and findings from the preliminary engineering analysis indicate that there are no major environmental constraints in the Coffee Creek Master Plan area. The current estimate of development potential (based upon a current analysis by the city) indicates a total gross land area (private ownership) of 187 acres. New roadways are expected to require approximately 13 acres of land area, leaving 174 net buildable acres for future development.¹

It is assumed that based on current zoning and market trends, the Coffee Creek Master Plan area will take between 20 and 30 years to achieve full build-out. For purposes of this study, it is assumed that the 20-year build-out is a “high forecast” and a 30-year build-out scenario is assumed to be a “low forecast” for the funding analysis.

The amount of potential development that could occur within the Coffee Creek Master Plan area over the 20 to 30 year absorption time period is expected to include a mix of general industrial/flex and R&D/tech buildings. This analysis assumes a mix of 2/3 general industrial/flex and 1/3 R&D/tech building types, and a floor-to-area (FAR) ratio of 0.30 for general industrial/flex buildings and 0.25 for R&D/tech buildings. These assumptions result in approximately 2.1 million square feet of industrial development floor area at build-out.

The total amount of permanent on-site employment within the Coffee Creek Master Plan area is expected to include approximately 1,800 direct jobs (including full and part-time employment) at build-out. This estimate assumes a 10% vacancy rate, and an average of 1,250 SF per job for general industrial/flex space and 750 SF per job for R&D/tech building types.

The total estimated cost of on-site public infrastructure needed to serve the Coffee Creek Master Plan area is \$22.4 million (2011 dollars). As indicated in **Table 1**, phase 1 improvements (years 1-4) are expected to be approximately \$8.1 million. Streets and intersections are the primary infrastructure cost items with \$6.2 million in phase 1 costs and \$10.7 million in phase 2 costs, or nearly 75% of all on-site infrastructure cost requirements. Off-site improvement requirements are expected to require about \$10.9 million in improvements, including \$4 million for a railroad underpass, \$3.96 million for water system, \$0.96 million for sewer upgrades, and \$2 million for roads and trails. A conceptual illustration depicting potential phasing of future Coffee Creek development is provided in **Figure 1**.

¹ *In comparison, the 2007 Coffee Creek Master Plan assumed slightly higher gross/net acre assumptions with a larger master plan area that included public right-of-ways and Significant Resource Overlay Zone areas.*

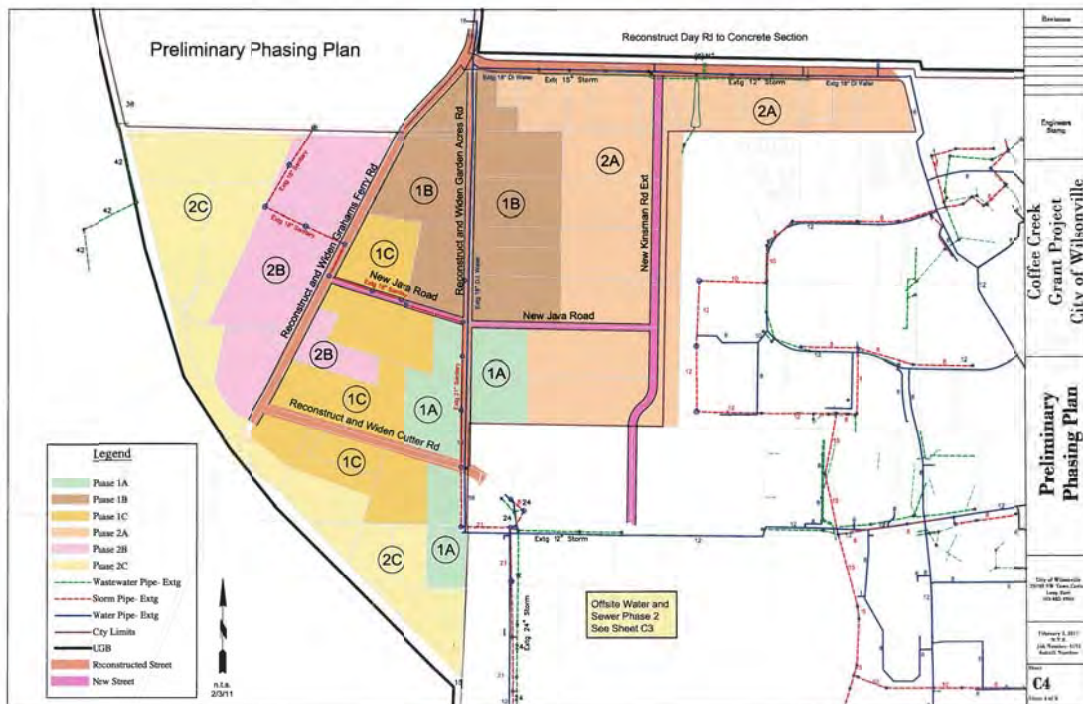
Table 1. Coffee Creek Preliminary Infrastructure Capital Costs (2011 dollars)

	Phase 1 (years 1-4)	Phase 2 (years 5-20)	Total
On-Site Infrastructure			
Streets	\$5,617,500	\$8,720,000	\$14,337,500
Intersections	\$600,000	\$2,025,000	\$2,625,000
Water	\$319,325	\$976,775	\$1,296,100
Sewer	\$707,500	\$395,000	\$1,102,500
Storm Sewer	\$622,700	\$1,381,000	\$2,003,700
Park/Trail/Other	\$375,000	\$995,500	\$1,370,500
Subtotal	\$8,242,025	\$14,493,275	\$22,735,300
Off-Site Infrastructure*			
Water		\$3,960,000	\$3,960,000
Sewer		\$960,000	\$960,000
Transportation			
Grahams Ferry RR underpass		\$4,000,000	\$4,000,000
Other Transportation		\$2,016,000	\$2,016,000
Total Off-Site		\$10,936,000	\$10,936,000
Grand total	\$8,242,025	\$25,429,275	\$33,671,300

* Additional off-site construction costs include sewer (\$960K), water (\$3.96M) and transportation (\$2.01M) are not reflected in these cost estimates since they primarily address other needs.

Source: City of Wilsonville, Preliminary Engineering Summary, March 29, 2011.

Figure1. Preliminary Phasing Plan



FUNDING ANALYSIS

The implementation of large-scale master planned developments requires improvements to virtually all public infrastructure facilities, in a series of near-term and long-term capital improvement projects. For a detailed list of the planned capital improvement projects for the Coffee Creek employment center please refer to the city of Wilsonville Preliminary Engineering Summary report.

The planned infrastructure improvements necessary to serve Coffee Creek are a significant financial expenditure for the community. Since some of the enhancements to Coffee Creek will provide a direct benefit to on and off-site businesses and workers and residents, such as the Kinsman Road connection, Grahams Ferry Road, and Day Road improvements; and local pedestrian/bicycle system improvements; a mix of local and city-wide funding techniques would be appropriate to help spread the cost of the improvements to those who benefit.

Potential Funding Options

The primary purpose of this section is to consider ways the City of Wilsonville can work with existing and future property owners and private investors/developers/tenants to generate adequate revenues required to construct or fund necessary on-site infrastructure. Potential funding options that have been evaluated include:

- System Development Charges (SDC)
- Supplemental Street SDCs
- Urban Renewal Program, Tax Increment Financing
- Local Improvement Districts (LID)
- Zone of Benefit or Reimbursement District (ZBD)
- Economic Improvement District (EID)
- Utility Rates and Connection Charges
- General Obligation and/or Revenue Bonds

A brief summary of *local funding* techniques used in Oregon includes:

System Development Charges

ORS 223.297 – 223.314 provides “a uniform framework for the imposition of system development charges by governmental units” and establishes “that the charges may be used only for capital improvements.” An SDC can be formulated to include one or both of the following components: (1) a reimbursement fee, intended to recover an equitable share of the cost of facilities already constructed or under construction and (2) an improvement fee, intended to recover a fair share of future, planned, capital improvements needed to increase the capacity of the system. ORS 222.299 defines “capital improvements” as facilities or assets used for:

- Water supply, treatment and distribution;
- Waste water collection, transmission, treatment and disposal;

- Drainage and flood control;
- Transportation; or
- Parks and recreation.

SDCs may include an “improvement fee” for new facilities and a “reimbursement fee” associated with capital improvements already constructed. SDCs cannot be used for operation or routine maintenance.

Wilsonville already collects SDCs for the above-mentioned categories and may apply SDC funding to designated Coffee Creek capital improvements that enhance capacity as required to address future growth needs. Potentially applicable facilities include streets, transit facilities, pedestrian and bicycle facilities, storm drainage and flood control improvements.

Since Coffee Creek is located primarily within Washington County, the city may also explore the use of Washington County Transportation Development Tax (TDT) revenues for eligible roadway elements, such as improvements to Grahams Ferry Road, Day Road and Kinsman Road. Note, the city could work with Washington County to amend the long-range transportation project list of eligible TDT projects.

In order to enhance SDC revenues and allocate SDC funds, the city should consider revisiting and updating its SDC methodology reports for transportation, parks and storm water facilities. This would entail an update to the capital facilities program list, cost estimates, and calculation of improvement fee and reimbursement fee calculations. Key objectives of the SDC updates could focus on:

- **Full Cost Recovery** (*the use of the current Coffee Creek capital facilities plan, with consideration of a reimbursement fee, improvement fee, and planning/permitting component, annual escalations*).
- **Bike, pedestrian and transit facilities elements** (*relates to Full Cost Recovery for street and pedestrian, bicycle and transit facility improvements*).
- **Incentive-Based SDCs** (*SDC adjustment/reduction for future developments in the Coffee Creek that provide on-site travel demand management techniques which lower peak trip generation*).
- **Variable SDCs for higher density and “green” design** (*special SDC reductions can be provided for developments that meet certain policy objectives, such as density targets or “green design” standards*).

Rather than creating/adopting an SDC overlay for Coffee Creek (which may result in higher fees that discourage redevelopment there), the city may desire to revisit its overall methodology for calculating SDCs.

Supplemental Transportation System Development Charges

Wilsonville may consider working with Washington County and the city of Tualatin to create an SDC overlay district for the combined Coffee Creek and Basalt Creek planning areas. Since transportation elements usually account for over $\frac{3}{4}$ of the total infrastructure costs, the primary emphasis in an SDC overlay district would likely include streets, pedestrian, bicycle and transit

facilities. FCS GROUP has conducted a preliminary analysis of the revenue potential of a supplemental street SDC overlay for the Coffee Creek area in the next section.

Local Improvement District

Cities in Oregon have the statutory authority to establish local improvement districts and levy special assessments on the benefited property to pay for improvements. These are payable in annual installments for up to 30 years. LIDs are generally used for capital improvement projects that benefit numerous large tenants and/or private property owners. The formation of LID districts could be considered as a potential primary source of funding downtown streetscape improvements because there will be direct benefits to multiple property owners.

The primary advantage of LIDs from the city's perspective is the ability to attain a consistent level of revenue generation early in the development process. Financial intermediaries, such as banks, now view LIDs as a more reliable funding source than some funding sources (such as SDCs) and therefore are more apt to provide loans based on future LID revenue streams. However, the financing terms for "raw land" LIDs have become far more stringent since the 2007 "financial crisis," and are now far less favorable than the financing terms given to municipal bond issues or state infrastructure loans.

Zone of Benefit or Reimbursement District

Similar to LIDs, cities can negotiate public/private advance financing arrangements with developers, where a developer agrees to front capital improvements/investment within a designated zone of benefit district (ZBD). The developer is then partially reimbursed as new land use development approvals are granted within the ZBD over a period that usually extends 10-15 years. While ZBDs have been successfully utilized in Wilsonville in the past, there is no guarantee that future revenues will be as steady and reliable as with the LID or property tax assessments.

Economic Improvement District

Cities may establish an Economic Improvement District (EID) or business improvement district (BID) to create additional revenue for targeted infrastructure improvements or enhanced operating/advertising services (e.g., public safety or marketing within downtown). EIDs require the formation of a special benefit district area, identification of improvements and services to be funded, along with an assessment mechanism and methodology report that is subject to approval by the majority of property owners within the district. In Oregon, most EIDs are limited to relatively small annual assessments and used to enhance maintenance and marketing activities. For analysis purposes, FCS GROUP evaluated the revenue generation potential from a local special EID property tax assessment within the Coffee Creek area in the next section.

Utility Fees and Connection Charges

Utility rates and connection charges are a common way to raise local revenues to pay for required infrastructure facilities and operations but require approval and adoption by the City (utility district) and must meet state and local regulations. In light of the fact that the City of Wilsonville has relatively high water rates (in comparison to other cities in the greater Portland region), a rate overlay district that results in higher water or sewer rates for the Coffee Creek area may render the area less competitive and is not recommended at this time.

Urban Renewal District

There may be opportunities to utilize funding from the creation of a new Coffee Creek Urban Renewal District (URD) for eligible economic development improvements. In many cases, URD funds are combined with other local funding sources (e.g., LIDs) to leverage non-local grants or loans. Based on discussions with city staff, the existing URD funding potential is limited by current URDs (which are approaching the maximum allowed land area levels). Hence, a new URD is not a likely near-term funding option. The establishment of a URD could be revisited in a few years. The city may consider either creating a new URD or expanding an existing URD.

Maximum Indebtedness Requirements

After the passage of House Bill 3056 (passed by the Oregon Legislature in 2009) urban renewal agencies have new limits on the amounts of maximum indebtedness (MI) in an urban renewal plan adopted after January 1, 2010.

- If the total “frozen tax base” is \$50 million or less, the total MI may not exceed \$50 million.
- If the frozen base is more than \$50 million, but less than or equal to \$150 million, then MI may not exceed \$50 million, plus ½ of the difference between \$50 million and \$150 million.
- If the total frozen base is greater than \$150 million, the total MI may not exceed \$100 million, plus 35% of the amount over \$150 million.
- Increases in MI may not exceed an aggregate of 20% of the original MI of the UR Plan, but with an “indexing” of the original MI from July 1, 1999 or one year after the plan was initially approved, whichever is later. Indexing may only happen once.

Revenue Sharing Possibilities

There are also new possibilities for revenue sharing with overlapping districts for plans adopted or substantially amended to increase MI after January 1, 2010.

- Revenue sharing among overlapping tax districts begins in the later of the 11th year after the initial plan was adopted, or when TIF collections equal or exceed 10% of the initial MI.
- For any year when TIF collections equal or exceed 10% of the initial MI, but are less than 12.5% of the initial MI, the UR agency receives the 10%, plus 25% of the tax increment between 10% and 12.5%. Overlapping tax districts receive 75% of the tax increment between 10% and 12.5%.
- For any year when TIF collections equal or exceed 12.5% of the initial MI, the UR agency receives the 12.5% tax increment, and any tax increment collections greater than 12.5% are distributed to overlapping taxing districts.

Concurrence Waivers

Variations in the maximum indebtedness requirements and the revenues sharing provisions can occur if the municipality obtains the written concurrence of the overlapping tax districts that impose at least 75% of the taxes imposed under the permanent rate limits in the URD.

In light of these and other URD provisions, the city of Wilsonville may consider an expansion of an existing URD or the creation of a new district. Revenue generation potential from urban renewal tax increment collections within a district that coincides with Coffee Creek is further analyzed in the next section.

Issuing Bonds

At present, the City is not in a financial position to pay for needed capital improvements with existing fund reserves or taxes. Absent existing available funding and low-cost loan programs (which may be available from the Oregon Special Public Works Fund or other source managed by the Business Oregon, Infrastructure Finance Authority), the City may rely on conventional municipal bond debt to finance the construction of its proposed capital program. There are some benefits to this form of financing. First, as with all debt, it spreads capital costs over the term of the bonds. Furthermore, bonds implement a level of equity by dissipating the burden among current and future customers. Finally, bonds allow flexibility that the aforementioned assisted programs do not through repayment options.

General Obligation Bonds

General Obligation (G.O.) Bonds offer attractive conditions relative to revenue bonds. G.O. bonds are issued against the City's general fund and taxing authority. G.O. bonds offer slightly lower interest rates than revenue bonds, being backed by the City's tax base. From the investor's perspective, tax backed debt is more secure. These bonds also carry no additional coverage requirement, allowing the City to collect revenues necessary to meet annual debt service with no additional financial consequences. G.O. bonds can be politically unpalatable if the municipality's constituency doesn't support the project purpose.

General obligation bonds, while issued against the taxing authority of the City, may be repaid by other dedicated revenues. This arrangement takes advantage of the more favorable terms, while still requiring system users to repay the debt. The General Fund would ultimately remain responsible for debt repayment should rate revenues prove insufficient.

Revenue Bonds

Revenue Bonds are, by definition, backed by the revenue of a utility or enterprise fund, or some other dedicated revenue source. Because the payment stream is less secured than tax backed bonds, revenue bonds carry higher interest rates than G.O. bonds. This differential, however, may be minimal.

Revenue bonds are perhaps the most common source of funding for construction of major public facility or utility projects. To issue revenue bonds, the City will be required to commit to certain security conditions related to repayment, specifically reserve and coverage requirements for annual rate revenues. These conditions are included in the bond resolution to be adopted by the City and essentially impose certain conservative financial practices on the City as a way of making the bonds more secure.

The reserve requirement commits the City to maintain a bond reserve, which could be used to meet payments if the utility is incapable of doing so. This reserve is often set at the least of (a) 10 percent of the issue price of all new and outstanding parity bonds, (b) maximum annual debt service on all new and outstanding parity bonds, and (c) 1.25 times average annual debt service on all new and outstanding parity bonds. The reserve

requirement is dictated by the terms of the bond resolution. Since the reserve can be invested and earn interest, the net cost of providing the reserve is relatively small. The City has the option of borrowing the reserve requirement as part of the total loan amount, or can fund it over a five-year period through rates and interest earnings.

Revenue bond coverage is a legal requirement binding a utility to demonstrate that annual revenues exceed expenses by a multiple of the debt service payment. This factor is usually at least 1.25, and is higher for agencies with unrated bonds or low bond ratings. Revenue bond coverage factors can require higher utility rates than otherwise necessary in order to meet the coverage target. Any accumulated assessment reserves or other available fund reserves may be used to pay off all or some of the outstanding principal.

Double Barreled Bonds or Hybrid Bonds

Double barreled bonds or hybrid bonds include municipal bonds that are backed by two or more revenue sources. These bond instruments may be viewed as less risky than revenue bonds, since there are multiple revenue streams that are dedicated to bond payments.

Loans and Grants

Federal and state grant programs, once readily available for financial assistance, were mostly eliminated or replaced by low-cost loan programs. Remaining grant programs are generally limited in application, lightly funded and heavily subscribed. Nonetheless, the economic benefit of grants and low-interest loans can make the effort of applying worthwhile.

Common special programs identified as potential funding sources are summarized below:

- **Bank and State Loans:** The city may utilize private bank loans or state loans to make strategic capital facility upgrades. Given the city of Wilsonville's limited operating revenues, bank loans would only be viable for smaller budget improvements that promise rapid return on the investment. State loan funds available from Business Oregon currently include the Special Public Works Fund, and the Oregon Bond Bank. Special Public Works funds are available on a competitive basis to public jurisdictions and can fund projects up to \$3.0 million in size, but require well-secured loan guarantees from the applicants. Oregon Bond Bank or Oregon Infrastructure Finance Authority loan funds may be available if the project is well secured and other funding alternatives are not available.
- **Grants and Low-Interest Financing:** Grants offer some potential for the capital improvement projects and initiatives that the city is considering. The city may be able to leverage non-local dollars using dedicated local funding. There are several regional, state and federal grant and loan programs that may be available for transportation, water, sewer, and storm water improvements. Please refer to Metro and Business Oregon contacts for current grant and loan funding opportunities.

EVALUATION OF FUNDING OPTIONS

A preliminary evaluation of funding options was conducted to ascertain the relative benefit of implementing the potential funding and financing measures identified above. The funding sources to be considered must be adequate to address all or part of the estimated \$26.1 million in Coffee Creek infrastructure construction costs.

To help evaluate the relative benefits of potential funding options, preliminary evaluation criteria were identified and compared to one another in **Table 3**. Initial funding evaluation criteria included:

- **Legal Precedence** – Is this funding technique allowed under Oregon law? Has it been applied in Wilsonville recently?
- **Funding or Financing Potential** – Will the funding stream result in a stable and reliable source of revenues? Will the revenues be deemed credit worthy by potential lenders, and become a source of near term funding for the planned improvements?
- **Direct Cost Burden on Coffee Creek Development** – Will the funding technique be considered as an extraordinary development cost, and dissuade potential investment in Coffee Creek?
- **Equity** – Will the funding technique and its implementation process be deemed equitable by those who pay?

Table 3. Preliminary Evaluation of Funding Options

Funding Option	Evaluation Criteria					
	Legal Precedence in Oregon	Funding/ Financing Potential	Direct Cost Burden on Coffee Creek Development	Equity	Overall Score (sum of + s)	Recommended for Additional Consideration
System Development Charges	+++	++	+++	+++	11	✓
Local Improvement District	+++	+++	+	++	9	✓
Zone of Benefit/Reimbursement Dist.	++	+	+++	+++	9	✓
Urban Renewal District	+++	++	+++	++	10	✓
Economic Improvement Dist.	+	+	+++	++	7	
Road SDC Overlay Charge	+	++	+++	++	8	✓
Utility Fee Surcharge	+	+	+++	++	7	
GO Bonds	+++	+++	+++	+++	12	✓
Revenue Bonds	+++	+++	++	+++	11	✓
Loans	+++	+	++	+++	9	✓
Grants	+++	++	+++	++	10	✓

Notes:

+ least positive

++

+++ most positive

Next, FCS GROUP conducted a preliminary 30-year cash flow analysis of selected infrastructure development finance techniques. The preliminary funding analysis helps determine a range of low to high revenue generation potential from local funding sources that may be used as a match towards non-local (regional, state or federal) grant funding programs. The preliminary analysis included three development absorption forecasts ranging with low (20-year build-out) to medium (25-year build-out) to high (30-year build-out).

The preliminary fiscal revenue forecasts for the selected funding options are summarized in constant 2011 dollars in **Table 4**. The results indicate that the potential development assessed value that is created in Coffee Creek is expected to support or generate an additional \$6.1 to \$8.0 million in local general government tax revenues over the next 30 years.

Local system development charge (SDC) program revenues are expected to generate between \$5.7 and \$8.7 million in combined infrastructure funding, with between \$3.5 and \$5.3 million derived from local street SDC charges. It should be noted that local SDC funds are not usually dedicated to specific locations, such as the Coffee Creek employment area, and instead are used to fund eligible projects anywhere in the city that are identified in the locally-adopted capital improvement program.

Table 4. Revenue Forecast for Preliminary Funding Options (constant 2011 dollars)

	Low	High
Property Tax Revenues (City General Government)		
Years 1-10	\$720,427	\$1,046,626
Years 11-20	\$2,253,526	\$3,262,433
Years 21-30	\$3,169,152	\$3,657,222
Subtotal	\$6,143,106	\$7,966,280
Development Impact Fees Base (SDCs)		
Street SDC revenues	\$3,518,102	\$5,277,153
Parks SDC revenues	\$464,921	\$697,382
Water SDC revenues	\$486,439	\$729,659
Sewer SDC & hook-up revenues	\$318,778	\$678,002
Stormwater revenues	\$870,204	\$1,305,307
Subtotal	\$5,658,445	\$8,687,503
Supplemental Revenue Options		
EID - Levy (@ \$0.50 per \$1,000 assessed value)	\$1,414,289	\$1,834,027
Supplemental Street SDC	\$832,335	\$1,248,502
LID - \$2M (low) to \$4M (high) +/- bond/loan	\$2,418,998	\$4,837,996
URD - 15 year sunset	\$23,151,454	\$33,544,903
Subtotal	\$27,817,076	\$41,465,428
Total Excluding City Property Tax Revenue	\$33,475,521	\$50,152,930
Grand total (including City General Government property tax revenues for yrs 21-30)	\$36,644,700	\$53,810,000

* assumes 1.5% annual real discount rate.

Source: derived from assumptions shown in Appendix A.

Supplemental revenue options including establishment of an economic improvement district (EID), street SDC overlay district, local improvement district, and an urban renewal district were also evaluated, and are summarized in **Table 4** with supporting details in the Appendix.

A locally-adopted EID (limited to the Coffee Creek area and based on a \$0.50 per \$1,000 in assessed valuation property tax levy), could generate an additional \$1.4 to \$1.8 million in

revenue over the next 30 years. Note, this relatively low level of funding is not likely to warrant implementation of this revenue source.

A local supplemental street SDC limited to the Coffee Creek area, with a 25% increase in the base SDC rate would be expected to generate between \$800,000 and \$1.2 million in revenue over the build-out time frame. Note, it is recommended that this option be further considered in context with the Basalt Creek planning area, and not limited to the Coffee Creek area.

Urban Renewal District Considerations

Notwithstanding the political challenges, the creation of an urban renewal district could generate significant levels of tax increment financing (TIF) revenue as new development generates additional assessed valuation in the area. The preliminary analysis by city staff and FCS GROUP indicates that Coffee Creek would be a prime candidate for an urban renewal program, where significant under-utilized areas could be enhanced with new development and employment growth. TIF could enable the construction of new roads and water/sewer lines along with adequate public amenities such as parks and streetscapes to attract and sustain private development and job creation.

Currently, the average assessed valuation in the Coffee Creek area is approximately \$169,477 per acre, and the Coffee Creek area has relatively low levels of employment and business activity. Based on an analysis of several existing industrial areas and buildings in Wilsonville, the average assessed value for industrial campus/tech developments is \$3,230,000 per acre; and the average assessed value for general industrial/warehouse/flex developments is \$1,193,000 per acre. A blended average of these two development types yields a potential value of \$1,872,000 per acre for future development within Coffee Creek once it is built-out in accordance with the master plan.

Based on these assumptions, a Coffee Creek Urban Renewal District with a 15-year sunset would support approximately \$23 to \$33 million in tax increment revenues. A shorter 10-year sunset would support about \$13 to \$19 million in tax increment revenues that could be used for capital project construction. However, as noted previously, revenue sharing provisions may limit the amount of funding that may be used by the urban renewal agency.

The city would need to work closely with affected special districts (and the public) before attempting to create a new URD. A preliminary property tax revenue potential analysis by FCS GROUP indicates that the largest property tax districts include: Sherwood School District #88, Washington County, City of Wilsonville and Tualatin Valley Fire and Rescue (please refer to **Table 5**).

If a Coffee Creek URD area was created with a 10-15 year sunset provision, there would be a significant amount of tax revenues that accrue to special districts after that time. A preliminary analysis indicates that the level of potential aggregate property tax revenues that would accrue to the special districts listed in **Table 5** would range from \$36 million to \$45 million (cumulative revenues over years 15-30 stated in constant 2011 dollars). Hence, all affected special districts would experience an overall net gain in tax revenues after the URD sunsets.

Table 5. Special Districts and Property Tax Rates within Coffee Creek Master Plan Area

Special District Name	Tax Rate Per \$1000 AV	Percent of Total
Washington County	\$ 2.9840	18%
NW Regional ESD	\$ 0.1538	1%
Portland Community College	\$ 0.6325	4%
Sherwood School District #88	\$ 8.9223	53%
Tualatin Valley Fire & Rescue	\$ 1.5976	9%
City of Wilsonville	\$ 2.1718	13%
Port of Portland	\$ 0.0566	0%
Metro	\$ 0.3883	2%
Total	\$16.9069	100%

Source: Washington County Assessor, reflects tax district area 088.08 for fiscal year 2009/10.

MARKETING STRATEGY

The recommended marketing strategy for the Coffee Creek employment center should highlight the vision for this emerging employment center using the conceptual rendering provided (see **Figure 2**). The marketing brochure the city creates should also attempt to describe the advantages of the Coffee Creek area with respect to key site selection metrics, such as:

- Transportation access (proximity and access to I-5);
- Regional, west coast, and international market access (population, labor force, GDP within 50 miles, 200 miles, 500 miles);
- Labor force (regional labor force characteristics within Portland-Beaverton-Vancouver PMSA);
- Local Employers (located in Wilsonville or nearby areas). List prominent business names and obtain testimonials from strategic clusters. The clusters identified in the Wilsonville EOA include: light manufacturing, high tech manufacturing and software, specialty contractors/construction, sustainable product manufacturing and distribution, creative services, health care, and secondary education;
- Infrastructure (high light available water, sewer and power capacity and high speed internet access);
- Local amenities (reference existing city commercial and retail services and local parks and transit options, including WES and SMART);
- Education and Workforce training (highlight new OIT campus plans, other colleges, and workforce investment programs); and
- Proactive “business friendly” practices (assist property owners with obtaining Oregon Industrial Site Certification, or include state or local business and tax incentive programs that new businesses may opt for, such as Oregon Strategic Investment Program).

POLICY CONSIDERATIONS

The findings contained in this analysis indicate that the Coffee Creek employment area has the potential to become a major economic engine for Wilsonville, Washington County, the Metro Region, and the state of Oregon. The area can support over 1,800 direct jobs. With adjacent sewer, water, and street systems, the upfront development cost for providing infrastructure is a relatively modest \$8.1 million. The primary cost item includes street and intersection related improvements expected to cost about \$6.2 million.

Given the importance of transportation improvements, and current lack of local funding for street projects, Wilsonville should attempt to establish public/private partnerships by working with Washington County, the city of Tualatin and private developers/property owners to explore creation of a supplemental transportation SDCs (in conjunction with the Basalt Creek concept plan), at least one other primary funding method, such as a LID, ZBD and/or URD. The city should consider creating a new urban renewal district in 2-5 years, with an established sunset. The SDC overlay in combination with the URD and local LIDs could likely fund most if not all major on-site and some off-site infrastructure projects.

Long-term improvements, including the on- and off-site water and sewer capacity upgrades may require a review and update of the city's water or sewer utility rates, after plans for the adjacent Basalt Creek Planning Area are formulated. Also, major off-site rail/freight corridor investments with a new railroad truck underpass on Grahams Ferry Road should consider ODOT, Metro and federal funding opportunities to help leverage local funding. New pedestrian bridges and connections with the Tonquin Regional Trail may consider Metro funding for parks and open space improvements.

The continuation of "business friendly" development policies may be pursued to help "streamline" the development approval process for new developments within Coffee Creek (or other locations identified by the city). This could include: efforts to establish time lines for development approvals/annexation; seeking voter approval for annexing the Coffee Creek; and creating and adopting a long-term financial and phasing plan for the Coffee Creek area, with strategic funding options (such as the SDC, LID, URD, etc.).

These policy actions would be intended to enable near-term developments to proceed if they propose financial arrangements that are consistent with the financial and phasing plan (such as remonstrance agreements to participate in existing or future funding districts). The benefits of these policy actions would help facilitate near term private investment and job creation, and help alleviate some timeline uncertainty that property owners and developers would likely experience when seeking annexation into the city of Wilsonville.

Figure 2. Coffee Creek Concept Rendering (view looking southeast from corner of Day Road and Grahams Ferry Road)



TECHNICAL APPENDIX

A-1. Coffee Creek Employment Area Development Assumptions

Development Assumptions		Units
Gross Buildable Acres	187	acres
Less Public ROW & Easements	13	
Net Buildable Acres over 20 Years	174	
Expected Development Type		
General Industrial/Warehouse/Flex	67%	share of net acres
Industrial R&D/Tech	33%	share of net acres
20-Year Development Forecast		
General Industrial/Warehouse/Flex	115.9	acres
Industrial R&D/Tech	58.1	acres
20-Year Development Forecast		
General Industrial/Warehouse/Flex	0.30	FAR
Industrial R&D/Tech	0.25	FAR
20-Year Development Forecast		
General Industrial/Warehouse/Flex	1,514,372	Floor Area SF
Industrial R&D/Tech	632,883	Floor Area SF
Total (SF)	2,147,255	Floor Area SF

Average Annual Absorption	High (20 yrs)	Medium (25 yrs)
General Industrial/Warehouse/Flex	75,719	60,575
Industrial R&D/Tech	31,644	25,315
Total (SF)	107,363	85,890
Avg. Annual Potential Acres Absorbed	8.7	7.0

Employment Assumptions		
General Industrial/Warehouse/Flex	1,250	SF per job
Industrial R&D/Tech	750	SF per job
Vacancy Allowance	10%	percent
Average Building Size	100,000	Floor Area SF
Impervious SF (average % of site area)	80%	percent of land area

Induced Property Assessed Valuation Assumptions

Current AV in Coffee Creek Area	\$ 38,084,831	AV as of 2010
Existing AV Per Acre	\$ 203,662	AV as of 2010
General Industrial/Warehouse/Flex		
Industrial R&D/Tech	\$ 1,192,829	Note 1
Campus Industrial/Tech (AV)	\$ 3,230,169	Note 1
Weighted Average	\$ 1,873,301	Note 1
Potential Change in AV Per Acre	\$ 1,669,638	Note 1
Avg. Annual Change in AV per Year	2.5%	

A-2. Coffee Creek Employment Area Funding Assumptions

SDC Assumptions		
Sewer - for "Other Industrial Facilities"	\$ 4,153	per ERU
Sewer SDC Permit "commercial & Ind."	\$ 570	per ERU
Sewer Equivalent Residential Units (ERUs)	14,000	SF of floor area per ERU
Water SDC & Meter Fee - 2 inch line	\$ 36,306	one time fee
Parks SDC for Ind. Business Park	\$ 347	TGSF
Street SDC for blended rate (flex and ind. park)	\$ 3,484	TGSF
Street SDC for Flex	\$ 2,850	TGSF
Street SDC for Industrial Park	\$ 5,002	TGSF
Storm SDC for impervious drainage area	\$ 0.23	per SF of imperv. area
Supplemental Street SDC for Flex	\$ 871	TGSF (25% increase)
Supplemental Street SDC for Industrial Park	\$ 713	TGSF (25% increase)
School Construction Excise Tax	\$ 0.50	per floor area SF up to \$25k
Metro Excise Tax	\$ 0.0012	of valuation up to \$12k
City Financing Long Term Debt Assumptions		
Term (years)	15	
Rate (annual)	6.0%	
Coverage (SDC or URD district)	1.5	
Coverage (utility rate district)	1.0	
Reserves	15%	
Discount Rate	1.5%	

A-3. Coffee Creek Employment Area Absorption Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
General Industrial/Flex (SF)	75,719	75,719	75,719		
R&D Industrial/Tech (SF)	31,644	31,644	31,644		
Total SF	107,363	107,363	107,363		
Cumulative New SF (Jan.)		966,265	2,039,893		
Acres Developed	8.7	8.7	8.7		
Cumulative Acres (Jan.)		78.3	165.3		
Medium Growth Forecast					
General Industrial/Flex (SF)	60,575	60,575	60,575	60,575	
R&D Industrial/Tech (SF)	25,315	25,315	25,315	25,315	
Total SF	85,890	85,890	85,890	85,890	
Cumulative New SF (Jan.)		773,012	1,631,914	2,061,365	
Acres Developed	7.0	7.0	7.0	7.0	
Cumulative Acres (Jan.)		62.6	132.2	167.0	
Low Growth Forecast					
General Industrial/Flex (SF)	50,479	50,479	50,479	50,479	50,479
R&D Industrial/Tech (SF)	21,096	21,096	21,096	21,096	21,096
Total SF	71,575	71,575	71,575	71,575	71,575
Cumulative New SF (Jan.)		644,177	1,359,928	1,717,804	2,075,680
Acres Developed	5.8	5.8	5.8	5.8	5.8
Cumulative Acres (Jan.)		52.2	110.2	139.2	168.2

A-4. Coffee Creek Employment Area, Street SDC Revenue Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
General Industrial/Flex	\$ 215,798	\$ 215,798	\$ 215,798		
R&D Industrial/Tech	\$ 158,284	\$ 158,284	\$ 158,284		
Total	\$ 374,082	\$ 374,082	\$ 374,082		
Cumulative New SDCs		\$ 3,366,739	\$ 7,107,560		
Medium Growth Forecast					
General Industrial/Flex	\$ 172,638	\$ 172,638	\$ 172,638	\$ 172,638	
R&D Industrial/Tech	\$ 126,627	\$ 126,627	\$ 126,627	\$ 126,627	
Total	\$ 299,266	\$ 299,266	\$ 299,266	\$ 299,266	
Cumulative New SDCs		\$ 2,693,391	\$ 5,686,048	\$ 7,182,377	
Low Growth Forecast					
General Industrial/Flex	\$ 143,865	\$ 143,865	\$ 143,865	\$ 143,865	\$ 143,865
R&D Industrial/Tech	\$ 105,523	\$ 105,523	\$ 105,523	\$ 105,523	\$ 105,523
Total	\$ 249,388	\$ 249,388	\$ 249,388	\$ 249,388	\$ 249,388
Cumulative New SDCs		\$ 2,244,493	\$ 4,738,374	\$ 5,985,314	\$ 7,232,254

A-5. Coffee Creek Employment Area, Base Sewer SDC & Hook-up Revenue Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
Floor Area Added	107,363	107,363	107,363		
Annual SDCs and Permit Fee Revenue	\$36,220	\$36,220	\$36,220		
Cumulative New SDCs & Permit Fee Rev.		\$325,976	\$688,172		
Medium Growth Forecast					
Floor Area Added	85,890	85,890	85,890	85,890	
Annual SDCs and Permit Fee Revenue	\$28,976	\$28,976	\$28,976	\$28,976	
Cumulative New SDCs & Permit Fee Rev.		\$260,781	\$550,538	\$695,416	
Low Growth Forecast					
Floor Area Added	50,479	50,479	50,479	50,479	50,479
Annual SDCs and Permit Fee Revenue	\$17,029	\$17,029	\$17,029	\$17,029	\$17,029
Cumulative New SDCs & Permit Fee Rev.		\$153,265	\$323,560	\$408,707	\$493,855

A-6. Coffee Creek Employment Area, Base Water SDC Revenue Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
Buildings Added	1.1	1.1	1.1		
Annual SDCs and Permit Fee Revenue	\$38,979	\$38,979	\$38,979		
Cumulative New SDCs & Permit Fee Rev.		\$350,812	\$740,603		
Medium Growth Forecast					
Buildings Added	0.9	0.9	0.9	0.9	
Annual SDCs and Permit Fee Revenue	\$31,183	\$31,183	\$31,183	\$31,183	
Cumulative New SDCs & Permit Fee Rev.		\$280,650	\$592,483	\$748,399	
Low Growth Forecast					
Buildings Added	0.7	0.7	0.7	0.7	0.7
Annual SDCs and Permit Fee Revenue	\$ 25,986	\$25,986	\$25,986	\$25,986	\$25,986
Cumulative New SDCs & Permit Fee Rev.		\$233,875	\$493,736	\$623,666	\$753,596

A-7. Coffee Creek Employment Area, Base Parks SDC Revenue Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
General Industrial/Flex	\$26,274	\$26,274	\$26,274		
R&D Industrial/Tech	\$10,981	\$10,981	\$10,981		
Total	\$37,255	\$37,255	\$37,255		
Cumulative New SDCs		\$335,294	\$707,843		
Medium Growth Forecast					
General Industrial/Flex	\$21,019	\$21,019	\$21,019	\$21,019	
R&D Industrial/Tech	\$8,784	\$8,784	\$8,784	\$8,784	
Total	\$29,804	\$29,804	\$29,804	\$29,804	
Cumulative New SDCs		\$268,235	\$566,274	\$715,294	
Low Growth Forecast					
General Industrial/Flex	\$17,516	\$17,516	\$17,516	\$17,516	\$17,516
R&D Industrial/Tech	\$7,320	\$7,320	\$7,320	\$7,320	\$7,320
Total	\$24,837	\$24,837	\$24,837	\$24,837	\$24,837
Cumulative New SDCs		\$223,529	\$471,895	\$596,078	\$720,261

A-8. Coffee Creek Employment Area, Base Storm Drainage SDC Revenue Assumptions (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
Impervious Land Area Added (SF)	303,178	303,178	303,178		
Annual SDCs	\$69,731	\$69,731	\$69,731		
Cumulative New SDCs & Permit Fee Rev.		\$627,578	\$1,324,886		
Medium Growth Forecast					
Impervious Land Area Added (SF)	242,542	242,542	242,542	242,542	
Annual SDCs	\$55,785	\$55,785	\$55,785	\$55,785	
Cumulative New SDCs & Permit Fee Rev.		\$502,062	\$1,059,909	\$1,338,832	
Low Growth Forecast					
Impervious Land Area Added (SF)	202,118	202,118	202,118	202,118	202,118
Annual SDCs	\$46,487	\$46,487	\$46,487	\$46,487	\$46,487
Cumulative New SDCs & Permit Fee Rev.		\$418,385	\$883,257	\$1,115,694	\$1,348,130

A-9. Coffee Creek Employment Area, Supplemental Street SDC Revenue Assumptions (assumes \$846 average supplemental SDC per 1,000 sq.ft. of building floor area; by selected time increments)

Coffee Creek Supplemental Street SDC Revenue Forecasts					
(assumes 25% increase over base SDC)					
	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
General Industrial/Flex	\$ 65,956	\$ 65,956	\$ 65,956		
R&D Industrial/Tech	\$ 22,546	\$ 22,546	\$ 22,546		
Total	\$ 88,503	\$ 88,503	\$ 88,503		
Cumulative New SDCs		\$ 796,524	\$ 1,681,551		
Medium Growth Forecast					
General Industrial/Flex	\$ 52,765	\$ 52,765	\$ 52,765	\$ 52,765	
R&D Industrial/Tech	\$ 18,037	\$ 18,037	\$ 18,037	\$ 18,037	
Total	\$ 70,802	\$ 70,802	\$ 70,802	\$ 70,802	
Cumulative New SDCs		\$ 637,219	\$ 1,345,241	\$ 1,699,252	
Low Growth Forecast					
General Industrial/Flex	\$ 43,971	\$ 43,971	\$ 43,971	\$ 43,971	\$ 43,971
R&D Industrial/Tech	\$ 15,031	\$ 15,031	\$ 15,031	\$ 15,031	\$ 15,031
Total	\$ 59,002	\$ 59,002	\$ 59,002	\$ 59,002	\$ 59,002
Cumulative New SDCs		\$ 531,016	\$ 1,121,034	\$ 1,416,043	\$ 1,711,052

A-10. Coffee Creek Employment Area, Local Improvement District Revenue Sensitivity Analysis (assumes 15-year LID, by selected time increments)

	2013	2018	2023	2028
Year:	1	5	10	15
Net Present Value of LID Issue				
@\$2 million, annual assessment per SF	\$0.03	\$0.03	\$0.03	\$0.03
@\$4 million, annual assessment per SF	\$0.05	\$0.05	\$0.05	\$0.05
@\$6 million, annual assessment per SF	\$0.08	\$0.08	\$0.08	\$0.08
Annual Revenues @ \$2MLID	\$204,645	\$204,645	\$204,645	\$204,645
Cumulative Revenues @ \$2MLID		\$818,580	\$1,841,804	\$2,865,028
Annual Revenues @ \$4MLID	\$409,290	\$409,290	\$409,290	\$409,290
Cumulative Revenues @ \$4MLID		\$1,637,159	\$3,683,608	\$5,730,057
Annual Revenues @ \$6MLID	\$613,935	\$613,935	\$613,935	\$613,935
Cumulative Revenues @ \$6 M LID		\$2,455,739	\$5,525,412	\$8,595,085

A-11. Coffee Creek Employment Area, Economic Improvement District Analysis (based on local levy of \$0.50 per \$1,000 AV)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$14,525,854	\$145,258,538	\$290,517,075	\$290,517,075	\$290,517,075
Total Assessed Valuation	\$52,610,685	\$192,821,273	\$351,401,397	\$359,402,097	\$368,454,155
Annual Change in Assessed Value		\$15,685,920	\$16,010,837	\$1,680,122	\$1,900,904
Cumulative Change in Assessed Value		\$140,210,588	\$298,790,712	\$306,791,412	\$315,843,470
Annual Property Tax Revenue		\$70,105	\$149,395	\$153,396	\$157,922
Cumulative Property Tax Increment		\$279,642	\$1,336,144	\$2,090,924	\$2,866,732
Net Present Value of Cash Flow to City					
Years 1-20	\$1,226,661				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$116,407				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$77,605				
Supportable Debt	(\$753,715)				
Medium Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$11,620,683	\$116,206,830	\$232,413,660	\$290,517,075	\$290,517,075
Total Assessed Valuation	\$49,705,514	\$163,769,565	\$293,297,982	\$359,402,097	\$368,454,155
Annual Change in Assessed Value		\$12,780,750	\$13,105,666	\$13,300,805	\$1,900,904
Cumulative Change in Assessed Value		\$114,064,051	\$243,592,468	\$309,696,583	\$318,748,641
Annual Property Tax Revenue		\$57,032	\$121,796	\$154,848	\$159,374
Cumulative Property Tax Increment		\$227,349	\$1,087,752	\$1,762,640	\$2,545,710
Net Present Value of Cash Flow to City					
Years 1-20	\$1,209,549				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$94,618				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$63,079				
Supportable Debt	(\$612,636)				
Low Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$9,683,903	\$96,839,025	\$193,678,050	\$242,097,563	\$290,517,075
Total Assessed Valuation	\$47,768,734	\$144,401,760	\$254,562,372	\$310,982,585	\$368,454,155
Annual Change in Assessed Value		\$10,843,969	\$11,168,886	\$11,364,025	\$11,584,807
Cumulative Change in Assessed Value		\$96,633,027	\$206,793,639	\$263,213,851	\$320,685,421
Annual Property Tax Revenue		\$48,317	\$103,397	\$131,607	\$160,343
Cumulative Property Tax Increment		\$192,487	\$922,158	\$1,495,364	\$2,210,647
Net Present Value of Cash Flow to City					
Years 1-20	\$1,209,549				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$80,092				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$53,395				
Supportable Debt	(\$518,583)				

A-12. Coffee Creek Employment Area, Potential Local General Government Property Tax Revenue Analysis (by selected time increments)

	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
High Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$14,525,854	\$145,258,538	\$290,517,075	\$290,517,075	\$290,517,075
Total Assessed Valuation	\$52,610,685	\$192,821,273	\$351,401,397	\$359,402,097	\$368,454,155
Annual Change in Assessed Value		\$15,685,920	\$16,010,837	\$1,680,122	\$1,900,904
Cumulative Change in Assessed Value		\$140,210,588	\$298,790,712	\$306,791,412	\$315,843,470
Annual Property Tax Revenue		\$304,509	\$648,914	\$666,290	\$685,949
Cumulative Property Tax Increment		\$1,214,652	\$5,803,677	\$9,082,139	\$12,451,935
Net Present Value of Cash Flow to City					
Years 1-20	\$5,328,123				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$505,625				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$337,083				
Supportable Debt	(\$3,273,834)				
	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
Medium Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$11,620,683	\$116,206,830	\$232,413,660	\$290,517,075	\$290,517,075
Total Assessed Valuation	\$49,705,514	\$163,769,565	\$293,297,982	\$359,402,097	\$368,454,155
Annual Change in Assessed Value		\$12,780,750	\$13,105,666	\$13,300,805	\$1,900,904
Cumulative Change in Assessed Value		\$114,064,051	\$243,592,468	\$309,696,583	\$318,748,641
Annual Property Tax Revenue		\$247,724	\$529,034	\$672,599	\$692,258
Cumulative Property Tax Increment		\$987,512	\$4,724,761	\$7,656,204	\$11,057,547
Net Present Value of Cash Flow to City					
Years 1-20	\$5,253,795				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$410,983				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$273,989				
Supportable Debt	(\$2,661,045)				
	2013	2023	2033	2038	2043
Year:	1	10	20	25	30
Low Growth Forecast					
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$60,884,322	\$68,885,022	\$77,937,080
New Development Assessed Valuation	\$9,683,903	\$96,839,025	\$193,678,050	\$242,097,563	\$290,517,075
Total Assessed Valuation	\$47,768,734	\$144,401,760	\$254,562,372	\$310,982,585	\$368,454,155
Annual Change in Assessed Value		\$10,843,969	\$11,168,886	\$11,364,025	\$11,584,807
Cumulative Change in Assessed Value		\$96,633,027	\$206,793,639	\$263,213,851	\$320,685,421
Annual Property Tax Revenue		\$209,868	\$449,114	\$571,648	\$696,465
Cumulative Property Tax Increment		\$836,085	\$4,005,484	\$6,495,265	\$9,602,167
Net Present Value of Cash Flow to City					
Years 1-20	\$5,253,795				
Supportable Debt Calculation					
Avg. Revenue First 10 Years	\$347,888				
Supportable Debt (1.5 coverage, 6%, 15yr)					
Debt Payment	\$231,926				
Supportable Debt	(\$2,252,519)				

A-13. Coffee Creek Employment Area, Potential Urban Renewal District Revenue Analysis (by selected time increments)

Urban Renewal Dist. Value Per Acre:	\$ 29,705			
(constant 2011 \$)				
	2013	2023	2028	2033
Year:	1	10	15	20
High Growth Forecast				
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$53,812,869	\$60,884,322
New Development Assessed Valuation	\$14,525,854	\$145,258,538	\$217,887,806	\$290,517,075
Total Assessed Valuation	\$52,610,685	\$192,821,273	\$271,700,675	\$351,401,397
Annual Change in Assessed Value		\$15,685,920	\$15,838,363	\$16,010,837
Cumulative Change in Assessed Value		\$140,210,588	\$219,089,991	\$298,790,712
Annual Property Tax Revenue		\$2,494,543	\$3,897,918	\$5,315,905
Cumulative Property Tax Increment		\$9,950,435	\$25,224,408	\$47,543,760
Net Present Value of Cash Flow to City				
Years 1-20	\$43,648,018			
Supportable Debt Calculation				
Avg. Revenue First 10 Years	\$4,142,080			
Supportable Debt (1.5 coverage, 6%, 15yr)				
Debt Payment	\$2,761,386			
Supportable Debt	(\$26,819,273)			
Year:	1	10	15	20
Medium Growth Forecast				
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$53,812,869	\$60,884,322
New Development Assessed Valuation	\$11,620,683	\$116,206,830	\$174,310,245	\$232,413,660
Total Assessed Valuation	\$49,705,514	\$163,769,565	\$228,123,114	\$293,297,982
Annual Change in Assessed Value		\$12,780,750	\$12,933,192	\$13,105,666
Cumulative Change in Assessed Value		\$114,064,051	\$178,417,600	\$243,592,468
Annual Property Tax Revenue		\$2,029,359	\$3,174,299	\$4,333,851
Cumulative Property Tax Increment		\$8,089,701	\$20,520,886	\$38,705,273
Net Present Value of Cash Flow to City				
Years 1-20	\$43,039,124			
Supportable Debt Calculation				
Avg. Revenue First 10 Years	\$3,366,774			
Supportable Debt (1.5 coverage, 6%, 15yr)				
Debt Payment	\$2,244,516			
Supportable Debt	(\$21,799,297)			
Year:	1	10	15	20
Low Growth Forecast				
Existing Assessed Valuation	\$38,084,831	\$47,562,735	\$53,812,869	\$60,884,322
New Development Assessed Valuation	\$9,683,903	\$96,839,025	\$145,258,538	\$193,678,050
Total Assessed Valuation	\$47,768,734	\$144,401,760	\$199,071,407	\$254,562,372
Annual Change in Assessed Value		\$10,843,969	\$10,996,412	\$11,168,886
Cumulative Change in Assessed Value		\$96,633,027	\$151,302,673	\$206,793,639
Annual Property Tax Revenue		\$1,719,237	\$2,691,886	\$3,679,148
Cumulative Property Tax Increment		\$6,849,212	\$17,385,205	\$32,812,949
Net Present Value of Cash Flow to City				
Years 1-20	\$43,039,124			
Supportable Debt Calculation				
Avg. Revenue First 10 Years	\$2,849,903			
Supportable Debt (1.5 coverage, 6%, 15yr)				
Debt Payment	\$1,899,936			
Supportable Debt	(\$18,452,647)			

A-14. Coffee Creek Employment Area, Summary of Potential Local Revenues, Low Forecast (by five-year time increments)

Wilsonville Coffee Creek Development Revenue Forecast							
Low Forecast (30-year absorption)							
(constant 2011\$)							
	1.0150	1.0773	1.1605	1.2502	1.3469	1.4509	1.5631
	2013	2018	2023	2028	2033	2038	2043
	1	5	10	15	20	25	30
Cumulative Revenues							
Development Impact Fees							
Street SDC revenues	\$0	\$997,552	\$2,244,493	\$3,491,433	\$4,738,374	\$5,985,314	\$7,232,254
Parks SDC revenues	\$0	\$99,346	\$223,529	\$347,712	\$471,895	\$596,078	\$720,261
Water SDC revenues	\$0	\$103,944	\$233,875	\$363,805	\$493,736	\$623,666	\$753,596
Sewer SDC & hook-up revenues	\$0	\$68,118	\$153,265	\$238,413	\$323,560	\$408,707	\$493,855
Stormwater revenues	\$0	\$185,949	\$418,385	\$650,821	\$883,257	\$1,115,694	\$1,348,130
Subtotal	\$0	\$1,454,910	\$3,273,547	\$5,092,184	\$6,910,822	\$8,729,459	\$10,548,096
Wilsonville City Gov. Prop. Tax Revenues	\$0	\$138,804	\$836,085	\$2,122,216	\$4,005,484	\$6,495,265	\$9,602,167
Total (excluding franchise fees)	\$0	\$1,593,714	\$4,109,632	\$7,214,400	\$10,916,305	\$38,168,437	\$79,716,327
Supplemental Revenue Options							
EID - Levy @ \$0.50 per \$1,000 AV)	\$0	\$31,956	\$192,487	\$488,585	\$922,158	\$1,495,364	\$2,210,647
Street SDC overlay district	\$0	\$236,007	\$531,016	\$826,025	\$1,121,034	\$1,416,043	\$1,711,052
LID - \$2M+/- bond scenario	\$0	\$818,580	\$1,841,804	\$2,865,028	\$0	\$0	\$0
URD - 10 year sunset	\$0	\$1,080,553	\$6,508,703	\$16,520,899	\$0	\$0	\$0
Subtotal	\$0	\$2,167,096	\$9,074,010	\$20,700,537	\$2,043,192	\$2,911,408	\$3,921,699
Net Present Value Analysis *							
Property Tax Revenues							
Years 1-10	\$720,427						
Years 11-20	\$2,253,526						
Years 21-30	\$3,169,152						
Subtotal	\$6,143,106						
Development Impact Fees Base (SDCs)							
Street SDC revenues	\$3,518,102						
Parks SDC revenues	\$464,921						
Water SDC revenues	\$486,439						
Sewer SDC & hook-up revenues	\$318,778						
Stormwater revenues	\$870,204						
Subtotal SDCs	\$5,658,445						
Supplemental Revenue Options							
EID - Levy @ \$0.50 per \$1,000 AV)	\$1,414,289						
Street SDC overlay district	\$832,335						
LID - \$2M+/- bond scenario	\$2,418,998						
URD - 10 year sunset	\$13,214,266						
Subtotal	\$17,879,887						
Grandtotal	\$28,961,011						
* assumes 3.5% annual real discount rate.							

A-15. Coffee Creek Employment Area, Summary of Potential Local Revenues, High Forecast (by five-year time increments)

Wilsonville Coffee Creek Development Revenue Forecast							
High Forecast (20-year absorption)							
(constant 2011\$)							
	1.0150	1.0773	1.1605	1.2502	1.3469	1.4509	1.5631
	2013	2018	2023	2028	2033	2038	2043
Cumulative Revenues	1	5	10	15	20	25	30
Development Impact Fees							
Street SDC revenues	\$0	\$1,496,328	\$3,366,739	\$5,237,150	\$7,107,560	\$0	\$0
Parks SDC revenues	\$0	\$149,020	\$335,294	\$521,568	\$707,843	\$0	\$0
Water SDC revenues	\$0	\$155,917	\$350,812	\$545,708	\$740,603	\$0	\$0
Sewer SDC & hook-up revenues	\$0	\$144,878	\$325,976	\$507,074	\$688,172	\$0	\$0
Stormwater revenues	\$0	\$278,923	\$627,578	\$976,232	\$1,324,886	\$0	\$0
Subtotal	\$0	\$2,225,066	\$5,006,399	\$7,787,732	\$10,569,065	\$0	\$0
Wilsonville City Gov. Prop. Tax Revenues	\$0	\$201,898	\$1,214,652	\$3,079,149	\$5,803,677	\$9,082,139	\$12,451,935
Total (excluding franchise fees)	\$0	\$2,426,965	\$6,221,051	\$10,866,881	\$16,372,742	\$55,192,198	\$110,673,457
Supplemental Revenue Options							
EID - Levy @ \$0.50 per \$1,000 AV)	\$0	\$46,482	\$279,642	\$708,893	\$1,336,144	\$2,090,924	\$2,866,732
Street SDC overlay district	\$0	\$354,011	\$796,524	\$1,239,038	\$1,681,551	\$0	\$0
LID - \$4M bond scenario	\$0	\$1,637,159	\$3,683,608	\$5,730,057	\$0	\$0	\$0
URD - 15 year sunset	\$0	\$1,571,727	\$9,455,749	\$23,970,376	\$45,180,120	\$0	\$0
Subtotal	\$0	\$3,609,379	\$14,215,523	\$31,648,364	\$48,197,816	\$2,090,924	\$2,866,732
Net Present Value Analysis *							
Property Tax Revenues							
Years 1-10	\$1,046,626						
Years 11-20	\$3,262,433						
Years 21-30	\$3,657,222						
Subtotal	\$7,966,280						
Development Impact Fees Base (SDCs)							
Street SDC revenues	\$5,277,153						
Parks SDC revenues	\$697,382						
Water SDC revenues	\$729,659						
Sewer SDC & hook-up revenues	\$678,002						
Stormwater revenues	\$1,305,307						
Subtotal SDCs	\$8,687,503						
Supplemental Revenue Options							
EID - Levy @ \$0.50 per \$1,000 AV)	\$1,834,027						
Street SDC overlay district	\$1,248,502						
LID - \$4M+/- bond scenario	\$4,837,996						
URD - 15 year sunset	\$33,544,903						
Subtotal	\$41,465,428						
Grandtotal	\$57,072,585						

* assumes 3.5% annual real discount rate.

RESOLUTION NO. 2634



A RESOLUTION OF THE CITY OF WILSONVILLE ADOPTING THE TRANSPORTATION SYSTEM DEVELOPMENT CHARGE METHODOLOGY REPORT AND ESTABLISHING THE CHARGE RATE

WHEREAS, the City has adopted Street System Development Charge (SDC) methodologies and charges over time, the most recent by Resolution No. 2098 in 2008; and

WHEREAS, the City has adopted a new Transportation System Plan (TSP) (adopted in 2013 and updated in 2016), including the list of transportation improvement projects to address the City's needs through the 2035 horizon; and

WHEREAS, the City has an interest in building and maintaining a fully interconnected and efficient transportation system for all travel modes; and

WHEREAS, the City continues to grow which increases the demand on the transportation system and requires additional capacity be planned and constructed in a timely manner; and

WHEREAS, the City desires to have growth-related development pay for transportation improvements commensurate with what is needed to mitigate the associated new trips and impacts on the City's transportation system; and

WHEREAS, considering the new TSP and project list, the City determined that an update to the TSDC methodology was necessary; and

WHEREAS, ORS 223.302 establishes the process for establishing and modifying system development charges and was used to complete this TSDC update; and

WHEREAS, the City contracted with FCS Group to review the existing Metro, Clackamas and Washington County, and Wilsonville TSPs, update the TSDC methodology, and determine the maximum defensible transportation system development charge using standard practices; and

WHEREAS, the attached April 2017 Transportation System Development Charge Methodology Report (Report), Public Review Draft, presents the results of their analysis; and

WHEREAS, **Exhibit A** to the Report, TSDC By Land Use, will be used to calculate TSDCs; and

WHEREAS, city staff engaged the Home Builders Association of Metropolitan Portland in a collaborative process on two occasions prior to release of the draft report (August 23, 2016 and February 17, 2017); and

WHEREAS, notice was issued pursuant to ORS 223.304 to interested parties (see **Exhibit B** to the Report, Notification Record) and advertised on the City's website on April 5, 2017; and

WHEREAS, the Public Review Draft will be renamed Adopted after the City Council adopts this resolution.

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

1. The Transportation System Development Charge Methodology Report, attached hereto and incorporated herein, is adopted.
2. Pursuant to **Exhibit A**, the Maximum Defensible System Development Charge is determined to be \$904.00 per person trip as identified in the Report. Notwithstanding the foregoing the charge shall initially be set at a lower \$775.00 per person trip with the expectation for an alternative funding source and implemented thirty days after adoption of this Resolution.
3. Proper notice was provided to interested parties as documented in **Exhibit B** to the report, attached hereto and incorporated herein.
4. Resolution No. 2634 replaces Resolution No. 2098.
5. The resolution becomes effective upon adoption.

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 5th day of June, 2017, and filed with the Wilsonville City Recorder this date.


Tim Knapp, Mayor

ATTEST:



Sandra C. King, City Recorder, MMC

SUMMARY OF VOTES:

Mayor Knapp	Yes
Council President Starr	Excused
Councilor Akervall	Yes
Councilor Stevens	Yes
Councilor Lehan	Yes

Attachments:

Transportation System Development Charge Methodology Report – Public Review Draft
Exhibit A – TSDC By Land Use
Exhibit B – Notification Record

City of Wilsonville



TRANSPORTATION
SYSTEM DEVELOPMENT
CHARGE
METHODOLOGY REPORT

Public Review Draft

April 2017

FCS GROUP

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 **FCS GROUP**
Solutions-Oriented Consulting

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SECTION I: INTRODUCTION

This section describes the policy context and project scope upon which the body of this report is based.

A. SYSTEM DEVELOPMENT CHARGES

Oregon Revised Statutes (ORS) 223.297 to 223.314 authorize local governments to establish system development charges (SDCs), one-time fees on new development paid at the time of development. SDCs are intended to recover a fair share of the cost of existing and planned facilities that provide capacity to serve future growth.

ORS 223.299 defines two types of SDCs:

- ♦ A reimbursement fee that is designed to recover “costs associated with capital improvements already constructed, or under construction when the fee is established, for which the local government determines that capacity exists”
- ♦ An improvement fee that is designed to recover “costs associated with capital improvements to be constructed”

ORS 223.304(1) states, in part, that a reimbursement fee must be based on “the value of unused capacity available to future system users or the cost of existing facilities” and must account for prior contributions by existing users and any gifted or grant-funded facilities. The calculation must “promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities.” A reimbursement fee may be spent on any capital improvement related to the system for which it is being charged (whether cash-financed or debt-financed) and on the costs of compliance with Oregon’s SDC law.

ORS 223.304(2) states, in part, that an improvement fee must be calculated to include only the cost of projected capital improvements needed to increase system capacity for future users. In other words, the cost of planned projects that correct existing deficiencies or do not otherwise increase capacity for future users may not be included in the improvement fee calculation. An improvement fee may be spent only on capital improvements (or portions thereof) that increase the capacity of the system for which it is being charged (whether cash-financed or debt-financed) and on the costs of compliance with Oregon’s SDC law.

B. PROJECT

The City contracted with FCS GROUP to perform an SDC update. We conducted the study using the following general approach:

- ♦ **Framework for Charges.** In this step, we worked with City staff to identify and agree on the approach to be used and the components to be included in the analysis.

- ◆ **Technical Analysis.** In this step, we worked with City staff to isolate the recoverable portion of facility costs and calculate SDC rates. We present the technical analysis in **Appendices A and B.**
- ◆ **Draft Methodology Report Preparation.** In this step, we documented the calculation of the SDC rates included in this report.

C. CALCULATION OVERVIEW

In general, SDCs are calculated by adding a reimbursement fee component and an improvement fee component—both with potential adjustments. Each component is calculated by dividing the eligible cost by growth in units of demand. The unit of demand becomes the basis of the charge. Below are details on the components and how they may be adjusted. **Exhibit 1.1** shows this calculation in equation format:

Exhibit 1.1 – SDC Equation			
$\frac{\text{Eligible costs of available capacity in existing facilities}}{\text{Units of growth in demand (Trips)}}$	+	$\frac{\text{Eligible costs of capacity-increasing capital improvements}}{\text{Units of growth in demand (Trips)}}$	+
		$\text{Pro-rata share of costs of complying with Oregon SDC law}$	=
			SDC per Trip

C.1 Reimbursement Fee

The reimbursement fee is the cost of available capacity per unit of growth that such available capacity will serve. In order for a reimbursement fee to be calculated, unused capacity must be available to serve future growth. For facility types that do not have available capacity, no reimbursement fee may be calculated.

C.2 Improvement Fee

The improvement fee is the cost of planned capacity-increasing capital projects per unit of growth that those projects will serve. The unit of growth becomes the basis of the fee. In reality, the capacity added by many projects serves a dual purpose of both meeting existing demand and serving future growth. To compute a compliant SDC rate, growth-related costs must be isolated, and costs related to current demand must be excluded.

We have used the capacity approach to allocate costs to the improvement fee basis.¹ Under this approach, the cost of a given project is allocated to growth by the portion of total project capacity that represents capacity for future users. That portion, referred to as the improvement fee eligibility percentage, is multiplied by the total project cost to determine that project's improvement fee cost basis.

¹ Two alternatives to the capacity approach are the incremental approach and the causation approach. The incremental approach is computationally complicated because it requires the computation of hypothetical project costs to serve existing users. Only the incremental cost of the actual project is included in the improvement fee cost basis. The causation approach, which allocates 100 percent of all growth-related projects to growth, is vulnerable to legal challenge.

C.3 Adjustments

Two cost basis adjustments are applicable to both reimbursement and improvement fees: fund balance and compliance costs.

C.3.a Fund Balance

To the extent that transportation SDC and/or Transportation Development Tax (TDT), a tax run by Washington County consistent with SDC law, revenue is currently available in a fund balance held by the City of Wilsonville, that revenue is deducted from its corresponding cost basis. This prevents “double-charging” for projects that will be constructed with existing fund balance monies. All fund balance deductions will be from the improvement fee cost basis because the TDT and current SDC contain only an improvement fee cost basis.

C.3.b Compliance Costs

ORS 223.307(5) authorizes the expenditure of SDCs for “the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures.” To avoid spending monies for compliance that might otherwise have been spent on growth-related projects, this report includes an estimate of eligible compliance costs in the SDC calculation.

SECTION II: SDC CALCULATIONS

This section provides the rationale and calculations for proposed transportation SDCs. As discussed previously, an SDC can include three components: a reimbursement fee, an improvement fee, and a compliance cost recovery fee. Below we provide detailed calculations for each component of the fee.

A. GROWTH CALCULATION

The growth calculation is the basis by which an SDC is charged, measured in units that most directly reflect the source of demand. For transportation SDCs, the most applicable and administratively feasible unit of growth is trips.

Wilsonville's prior transportation SDC growth calculation was based on P.M. peak-hour vehicle trip-ends. The proposed SDC methodology utilizes an average daily person trip-end (ADPT) basis for calculating future trip growth. Whereas P.M. peak-hour trips only include vehicle trips that occurred between 4 and 6 p.m., ADPTs include vehicle trips during the entire day along with estimated people per vehicle and non-motor vehicle trips that utilize bicycle and pedestrian facilities. This appropriately accounts for a balanced transportation system with a mix of motor vehicle, bicycle, and pedestrian facilities. **Exhibit 2.1** shows the trips growth in Wilsonville during the planning period based on the Wilsonville Transportation System Plan in ADPTs. The person trip (ADPT) adjustment is based on models of Wilsonville's specific transportation patterns and is consistent with the Metro (regional government) transportation model and the adopted Wilsonville Transportation System Plan. The conversion of vehicle trips to person trips indicates the number of people expected to utilize a land use on an average day (including multiple people per vehicle plus those walking and biking), rather than just the number of arriving/departing vehicles.

	2010	2017 proj.	2035 proj.	Growth	Growth as a % of Future Customers	Compound Ann'l Growth Rate
Household: Trips	125,204	141,420	193,426	52,006	26.89%	1.76%
Employee: Trips	108,115	123,406	173,404	49,998	28.83%	1.91%
Total Trips	233,320	264,826	366,830	102,004	27.81%	1.83%

Source: City of Wilsonville Transportation System Plan, DKS Associates, and ITE Handbook 9th Edition, compiled by FCS GROUP. Excludes pass-through trips that do not originate or terminate in Wilsonville.

B. REIMBURSEMENT FEE COST BASIS

The reimbursement fee cost basis is the cost of capacity available in the existing system. Calculation of the reimbursement fee begins with the historical cost of assets or recently completed projects that have unused capacity to serve future users. For each asset or project, the historical cost is adjusted by that portion of the asset or project that is available to serve future users. To avoid charging growth for facilities provided at no cost to the City or its ratepayers, the reimbursement fee cost basis may be reduced by any grants or contributions used to fund the assets or projects included in the cost basis. Furthermore, unless a reimbursement fee will be specifically used to pay debt service, the reimbursement fee cost basis should be reduced by any outstanding debt related to the assets or

projects included in the cost basis to avoid double charging. These reductions result in the gross reimbursable cost.

The current estimated value of Wilsonville’s excess capacity in the transportation system was determined based on previous expenditures for SDC-funded projects. Eligible reimbursement costs reflect the amount of current infrastructure capacity that will accommodate future growth. For this analysis, we assume the capacity of any project built with SDC monies will be reduced at the projected annual rate of growth in person trips during the planning period. **Exhibit 2.2** shows the reimbursement fee basis calculation (see **Appendix A** for SDC fund expenditures).

Exhibit 2.2: Reimbursement Fee Basis Calculation		
Fiscal Year Ending 6/30:	Annual Expenditures	Remaining Capacity¹
2007	\$524,144	\$435,910
2008	\$1,516,766	\$1,284,902
2009	\$879,845	\$759,212
2010	\$1,915,762	\$1,683,851
2011	\$1,946,140	\$1,742,375
2012	\$792,956	\$723,139
2013	\$2,750,813	\$2,555,285
2014	\$665,497	\$629,694
2015	\$830,507	\$800,447
2016	\$1,330,871	\$1,306,564
Total	\$13,153,301	\$11,921,378

Source: City of Wilsonville, compiled by FCS GROUP.

¹ Assume capacity is reduced by the annual trip growth rate of 1.83% as determined by the Wilsonville Transportation System Plan (see Exhibit 2.1).

C. IMPROVEMENT FEE COST BASIS

The improvement fee cost basis is based on a specific list of planned capacity-increasing capital improvements. The portion of each project that can be included in the improvement fee cost basis is determined by the extent to which each new project creates capacity for future users.

Since portions of the City of Wilsonville fall within Washington County, the City has historically collected a local transportation SDC as well as the Washington County Transportation Development Tax (TDT). This methodology assumes that the City will continue its current policy of only charging the local transportation SDC since it is higher than the TDT. The City will continue to account for TDT funds separately from SDC funds, and will account for TDT payments separate from the SDC, but the TDT will not be charged in addition to the citywide SDC.²

Exhibit 2.3 shows the total improvement fee cost basis with reductions that will be explained below (see **Appendix B** for a complete list of the projects and eligibility by project). The eligible portion shown in the exhibit is a weighted average of all project allocations.

² Charging only the local transportation SDCs in Wilsonville eliminates the potential for double counting improvement costs or administrative costs on City projects that may be listed on both the Wilsonville transportation SDC and the Washington County TDT project lists.

Exhibit 2.3: Improvement Fee Cost Basis	
	Total
Total Project Costs	\$176,319,908
Total Eligible Portion	48.26%
SDC-Eligible Cost	\$85,083,554
SDC/TDT Fund Balance	(\$6,666,094)
Improvement Fee Cost Basis	\$78,417,460

Source: Appendix B, compiled by FCS GROUP.

As noted in **Exhibit 2.3**, after calculating the total improvement fee-eligible cost we must deduct the ending fund balance for the SDC/TDT fund. Deducting these funds avoids double-charging for projects that could be built with available funds. See **Exhibit 2.4** for the fund balance adjustment.

Exhibit 2.4: Improvement Fee Cost Adjustments	
Fund Balance Adjustment	Cost Adjustments
SDC Street Fund Balance¹	\$6,666,094

Source: City staff, compiled by FCS GROUP.

¹SDC Street Fund contains both SDC and TDT monies.

D. COMPLIANCE COST BASIS

ORS 223.307(5) authorizes the expenditure of SDCs on “the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures.” This SDC methodology assumes compliance costs of two percent of the improvement cost basis plus cost estimates for a future SDC methodology update and transportation system plan update. See **Exhibit 2.5** for a complete list of the compliance cost estimates.

Exhibit 2.5: Compliance Cost Estimates	
	Estimate
Transportation SDC Updates	\$30,000
Transportation System Plan Update	\$150,000
Percent of Improvement Fee Costs	\$1,701,671
Total	\$1,881,671

Source: City staff, compiled by FCS GROUP.

*Percent of Improvement Fee Costs¹ are equal to two percent of the improvement fee cost basis before deductions.

SECTION III: CONCLUSION

A. CALCULATED SDC

Dividing the sum of the cost bases described above by the projected average daily person trip (ADPT) growth produces the proposed transportation SDC. **Exhibit 3.1** summarizes the components of the SDC. The total proposed SDC is \$905 per ADPT.

Exhibit 3.1: Transportation	
Reimbursement Fee	
SDC Funded Infrastructure	\$ 11,921,378
Less: Debt Principle	\$ -
	\$ 11,921,378
Growth to End of Planning Period	102,004 ADPT
Reimbursement Fee	\$ 117 per ADPT
Improvement Fee	
Capacity Expanding CIP	\$ 85,083,554
Less: SDC Fund Balance	\$ (6,666,094)
	\$ 78,417,460
Growth to End of Planning Period	102,004 ADPT
Improvement Fee	\$ 769 per ADPT
Compliance Fee	
Costs of Compliance	\$ 1,881,671
Growth to End of Planning Period	102,004 ADPT
Compliance	\$ 18 per ADPT
Total System Development Charge	
Reimbursement Fee	\$ 117 per ADPT
Improvement Fee	\$ 769 per ADPT
Compliance Fee	\$ 18 per ADPT
Total SDC	\$ 904 per ADPT

Source: Previous tables, compiled by FCS GROUP.

B. CREDITS, EXEMPTIONS, AND DISCOUNTS

The City of Wilsonville will continue to establish local policies for issuing credits, exemptions, annual adjustments, and other administrative procedures.

B.1 Credits

A credit is a reduction in the amount of the SDC for a specific development. ORS 223.304 requires that credit be allowed for the construction of a qualified public improvement which: is required as a condition of development approval; is identified in the City's capital improvements program; and either is "not located on or contiguous to property that is the subject of development approval," or is located "on or contiguous to such property and is required to be built larger or with greater capacity than is necessary for the particular development project...."

Additionally, a credit must be granted “only for the cost of that portion of an improvement which exceeds the minimum standard facility size or capacity needed to serve” the particular project up to the amount of the improvement fee. For multi-phase projects, any “excess credit may be applied against SDCs that accrue in subsequent phases of the original development project.”

In addition to these required credit policies required by state law, the City may adopt a local resolution that: provides a greater credit amount (than required by state law); establishes a system providing for the transferability of credits; provides a credit for a capital improvement not identified in the City’s SDC Capital Improvements Plan; or provides a share of the cost of an improvement by other means (i.e., partnerships, other City revenues, etc.).

In event a developer is entitled to SDC and TDT credits for the same improvement (e.g., an improvement that inside and outside the City boundary), SDC credits and TDT credits must be accounted for separately. Furthermore, SDC credits may not be used to meet TDT payment obligations. Please refer to the Washington County TDT Procedures Manual for policies regarding TDT credits.

B.2 Exemptions

The City may exempt specific classifications of development, such as minor additions, from the requirement to pay transportation SDCs. The City may not arbitrarily exempt customers or customer types from SDCs. It must have a cost or demand-based justification.

C. INDEXING

Oregon law (ORS 223.304) also allows for the periodic indexing of system development charges for inflation, as long as the index used is:

- “(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;
- (B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and
- (C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.”

Wilsonville City Code dictates that the City index its charges to the *Engineering News Record* Construction Cost Index (ENR CCI) for the City of Seattle. This index is used for all infrastructure types within the City when indexing occurs. There is no comparable Oregon-specific ENR CCI index.

Another local index used by Washington County and jurisdictions within Washington County is the TDT annual escalation rate. The TDT uses a five-year rolling average of the national highway CCI (weighted 50%), Bureau of Labor Services employment cost index (weighted 30%), and Washington County land value changes (weighted 20%).

We recommend Council adopt an annual index for the transportation SDC via resolution that best reflects council priorities.

D. COMPARISON

The maximum defensible transportation SDCs per this methodology are higher than the current SDCs being charged in Wilsonville. **Exhibit 3.2** shows the current and estimated maximum defensible transportation SDCs for new construction of certain land use development types.

	City SDC ¹	Washington County TDT ²	Maximum Defensible SDC
Single Family Home, per DU	\$7,695	\$8,458	\$13,731
Multifamily Home, per DU	\$4,771	\$5,533	\$9,447
Office Park, per 1,000 SFGFA	\$11,389	\$11,738	\$16,598
Supermarket, per 1,000 SFGFA	\$42,324	\$23,413	\$57,582

Source: City staff and FCS GROUP estimates.

¹Wilsonville SDC applies in Clackamas County

²Washington County TDT Applies in Washington County as of 7/1/2017

E. FEE BASIS

The transportation SDC is based on the number of person trips that a change in land use generates. The Institute of Transportation Engineers (ITE) *Trip Generation Manual* contains trip rates based on studies conducted nationwide and provides the base data of unadjusted counts of trips generated by various types of land use. The trip numbers are generally in vehicle trips. For administrative ease, we recommend the City charge the SDC based on the ADPT conversion factors and ITE land use classifications.

Land use trip generation rates in this methodology includes all trips entering or leaving a particular use and removes pass-by and diverted/linked trips because they would occur regardless of development activity.³

The number of net new average daily vehicle trips (ADVTs) generated per day for each type of land use is calculated using the following formula:

$$ITE\ ADVT\ Trip\ Rate \times (1 - \% \text{ Pass-by Trips}) = Adjusted\ ADVT\ Trip\ Rate$$

Then, the adjusted ADVTs are transformed to ADPTs using a multiplier of 1.61 ADPT per ADVT.

$$Adjusted\ ADVT \times Person\ Trip\ Conversion\ Factor\ (1.61) = Adjusted\ ADPT$$

The SDC per unit of development is calculated for each type of land use by multiplying the number of ADPTs for each land use by the SDC per ADPT.

$$SDC\ \$\ per\ ADPT \times New\ ADPT\ by\ Land\ Use = SDC\ \$\ Amount$$

In the event that the ITE does not contain a land use category that reflects a new development being considered, the City SDC Administrator shall calculate the transportation SDC based on accepted practices using a multiplier of 1.61 ADPT per ADVT. The City may also allow the applicant to

³ Pass by and diverted/linked trips are trips that interrupt a trip between the origin and destination. Pass-by trips do not require additional movement from the intended route, while diverted/linked trips are those in which a person turns off the intended route to a side street for a land use. Both are deducted from the total trips of a land use.

submit a traffic study for city review/approval by an Oregon-registered professional engineer that identifies net new person trip generation estimates created by the proposed development.

APPENDIX

Appendix A – Reimbursement Fee Eligible Costs

Street SDC Fund SDC-Related Expenditures										
Fiscal Year Ending 6/30:	2007	2008	2009	2010	2011	2012	2013	2014	2015	
49120 Trf out – CIP and Other	\$524,144	1,516,766	879,845	1,915,762	1,946,140	792,956	2,750,813	665,497	\$830,507	

Source: City of Wilsonville annual budget documents, compiled by FCS GROUP.
 Actual annual expenditures on transportation capacity improvements in SDC fund.

Fund 640 Activity - FY 2016-17	
Resources	
Beginning Balance 7/1/15	\$ 5,461,081
New SDC Revenues	2,639,577
Interest Earnings	43,752
Available Resources	\$ 8,144,410
Expenditures	
Project Uses	
Credit Card Processing	\$ 7,925
Miscellaneous Charges	139,520
Total Project Uses	\$ 1,330,871
Total Expenses	\$ 1,478,316
Ending Fund Balance 6/30/16	\$ 6,666,094

Source: City of Wilsonville, compiled by FCS GROUP.

Appendix B – Transportation SDC Project List

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
UU-05	Parkway Avenue Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	\$5,286,684	Years 0-5	70%	100%	\$3,700,679
UU-08	Garden Acres Road Urban Upgrade	Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.	\$15,241,782	Years 0-5	25%	100%	\$3,810,446
RE-13	Java Road Connection & Signal	Construct Java Road from Boones Ferry Road to Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection and disconnect Clutter Street from Grahams Ferry Road.	\$3,277,261	Years 5-10	25%	100%	\$819,315
SI-03	Stafford Road/65th Avenue Intersection Improvements	Improve turn radii, sight distance and grade differential by combining intersections as either a roundabout or traffic signal	\$2,114,674	Years 15-20	25%	100%	\$528,668
BW-14	City Wayfinding	Provide bicycle, pedestrian, and transit wayfinding signage directing users to/from the Ice Age Tonquin Trail, the SMART and WES transit center, and other points of interest throughout the city	\$68,727	Years 0-5	100%	28%	\$19,111
RE-11	Meridian Creek Middle School Public Street Improvements	Construct the collector roadways and site improvements associated with the proposed Meridian Creek Middle School Site.	\$297,439	Years 0-5	100%	100%	\$297,439
RE-12A	Frog Pond West Neighborhood Collector Roads	Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan.	\$562,169	Years 5-10	100%	100%	\$562,169
UU-09	Printer Parkway Urban Upgrade	Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse paths.	\$3,679,652	Years 0-5	100%	100%	\$3,679,652
UU-10	Advance Road Urban Upgrade	Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63rd Avenue (entrance to proposed Meridian Creek Middle School).	\$453,824	Years 0-5	100%	100%	\$453,824

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
TI-01	Pedestrian Access to Transit	Construct sidewalk and curb ramp improvements at SMART stops throughout the city to meet ADA requirements, create safe street crossings, and connect new development with transit (includes retrofits at substandard stops)	\$211,467	Years 0-5	100%	28%	\$58,803
TI-02	Transit Street Improvements	Widen roadways or construct sidewalk extensions on a case-by-case basis to improve transit on-time performance and passenger/pedestrian safety; may involve on-site bus turnarounds with property owner approval	\$317,201	Years 0-5	100%	28%	\$88,204
SI-P2	Grahams Ferry Road Undercrossing Improvements at Railroad Bridge	Reconstruct existing railroad under-crossing to City of Wilsonville Minor Arterial standards; Higher Priority project list includes project development portion of this project (costs are separate)	\$4,758,016	Years 15-20	100%	50%	\$2,379,008
SI-02	Grahams Ferry Railroad Undercrossing Project Development	Perform project development including roadway alignment and geometry.	\$528,668	Years 10-15	25%	28%	\$36,752
BW-02	95th Avenue Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of 95th Avenue from Boeckman Road to Hillman Court, and construct transit stop improvements	\$89,874	Years 5-10	100%	28%	\$24,991
RT-03A	Ice Age Tonquin Trail	Construct sections of the Ice Age Tonquin Trail north of Boeckman Road; City to construct portion within City limits (approximately \$750,000) and coordinate portion farther north with Washington County and neighboring cities	\$2,156,967	Years 10-15	33%	100%	\$711,799
RW-01	Boeckman Road Bridge and Corridor Improvements	Widen Boeckman Road from Boberg Road to 500 feet east of Parkway Avenue to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes reconstruction of the bridge over I-5 and improvements at Boeckman Road/Boberg Road and Boeckman Road/Parkway Avenue intersections and adjacent transit stops	\$14,379,781	Years 15-20	100%	60%	\$8,627,869

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
UU-01	Boeckman Road Dip Improvements	Upgrade at vertical curve east of Canyon Creek Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); options should also be considered to make connections to the regional trail system and to remove the culvert and install a bridge	\$12,920,656	Years 10-15	100%	100%	\$12,920,656
UU-02	Boeckman Road Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); project includes a traffic signal or roundabout at the Boeckman Road-Advance Road/Stafford Road-Wilsonville Road Intersection	\$1,241,882	Years 0-5	100%	28%	\$345,329
UU-06	Stafford Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements). Project costs cover the east side of the road, west side oversizing, and roundabout options.	\$4,440,815	Years 5-10	100%	100%	\$4,440,815
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill	Construct bike lanes (both sides of street) and sidewalks (south side of street) from Parkway Avenue to Canyon Creek Road	\$544,528	Years 5-10	100%	50%	\$272,264
RE-04B	East West Connector Corridor Construction (Phase from Boones Ferry to Kinsman)	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connect at either Bailey Street or 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trail terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection	\$8,458,695	Years 0-5	0%	100%	\$0
RE-04C	East West Connector Corridor Construction (Phase from Kinsman to Brown)	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Kinsman Road to Brown Road	\$7,359,304	Years 10-15	100%	100%	\$7,359,304
RE-06	Costa Circle Loop Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Villebois Drive to Mont Blanc Street	\$3,172,011	Years 0-5	100%	100%	\$3,172,011

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
RE-08	Kinsman Road Extension (South)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Boeckman Road; project also includes a roundabout at Kinsman Road/Boeckman Road intersection	\$8,881,629	Years 0-5	55%	100%	\$4,884,910
UU-03	Brown Road Upgrades	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stops)	\$3,700,679	Years 0-5	100%	28%	\$1,029,045
UU-07	Tooze Road Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Tooze Road intersection	\$8,352,961	Years 0-5	25%	100%	\$2,088,240
BW-03	Boberg Road Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of the roadway from Boeckman Road to Barber Street, and construct transit stop improvements	\$396,501	Years 10-15	100%	50%	\$198,251
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development	Perform feasibility study and project development for bike/pedestrian/emergency bridge over the Willamette River to provide a non-motorized alternative to the I-5 freeway deck	\$1,459,125	Years 0-5	0%	100%	\$0
BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements	Create more direct connections between destinations within Town Center area, improve accessibility to civic uses and transit stops, retrofit sidewalks with curb ramps, highlight crosswalks with colored pavement, and construct other similar treatments that support pedestrian, bicycle, and transit access and circulation; also construct shared-use path along Town Center Loop West from Wilsonville Road to Parkway Avenue and restripe Town Center Loop East from Wilsonville Road to Parkway Avenue to a three-lane cross-section with bike facilities	\$528,668	Years 5-10	100%	28%	\$147,006
BW-09	I-5 Pedestrian and Bikeway Overcrossing	Construct bike/pedestrian bridge over I-5 approximately aligned with Barber Street to improve connectivity of Town Center area with businesses and neighborhoods on west side of I-5; include aesthetic design treatments	\$8,458,695	Years 10-15	100%	100%	\$8,458,695

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
BW-10	French Prairie Drive Pathway	Construct 10-foot wide shared-use path along French Prairie Drive from Country View Lane to Miley Road or reconfigure existing roadway to remove a travel lane in each direction and add bicycle and pedestrian facilities	\$1,205,364	Years 10-15	100%	28%	\$335,175
SR-01	Boeckman Creek primary Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a new 10 to 12-foot bike path on the south side of the existing sidewalk that meanders south of the tree line and connects to the existing marked crosswalk near the school parking lot	\$68,727	Years 5-10	20%	0%	\$0
RT-01B	Boeckman Creek Trail (South)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	\$1,215,937	Years 5-10	25%	28%	\$84,529
UU-P2A	Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	\$6,238,287	Years 15-20	100%	28%	\$1,734,677
LT-P4	Canyon Creek Trail	Shared Use Path from Canyon Creek Park to Boeckman Creek Trail providing connectivity to neighborhoods to the south	\$211,467	Years 10-15	100%	100%	\$211,467
BW-P4	Wilsonville Road Enhanced Pedestrian Crossing at Rose Lane	Install new pedestrian crossing adjacent to Rose Lane and nearby transit stops; potential crossing treatments include, but are not limited to, rectangular rapid flashing beacons (RRFBs), signage, etc.	\$105,734	Years 10-15	100%	0%	\$0
LT-P5	New School Site Trail	Shared Use Path from Boeckman Creek Elementary School to planned school and park site, with possible connections to adjacent neighborhoods	\$740,136	Years 0-5	50%	100%	\$370,068
10133	French Prairie Bicycle/Pedestrian/Emergency Bridge from Boones Ferry Rd. to Butteville Rd.	New bicycle/pedestrian/emergency vehicle only bridge crossing the Willamette River.	\$21,146,737	Years 10-15	25%	100%	\$5,286,684

Transportation Capital Improvements, 2016 to 2035							
Project #	Name	Description	2017 Cost Estimate	Project Timing	City Share of Costs Eligible for SDC	SDC-Eligible %	SDC-Eligible Costs
RW-02	Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road intersections	\$10,794,223	Years 5-10	25%	50%	\$1,349,278
RE-P1	Boones Ferry Road Extension	Construct 2-lane roadway from Ridder Road to Commerce Circle with bike lanes, sidewalks, and transit improvements to facilitate access and circulation in the area surrounding Ridder Road and 95th Avenue	\$2,146,464	Years 15-20	100%	100%	\$2,146,464
BW-P1	Cahalin Road Bike Lanes and Sidewalks	Construct bike lanes and sidewalks from Garden Acres Road extension to Ice Age Tonquin Trail	\$740,136	Years 15-20	100%	100%	\$740,136
BW-P2	Commerce Circle Loop Sidewalk Infill	Fill in gaps in the sidewalk network on Commerce Circle Loop	\$105,734	Years 15-20	100%	100%	\$105,734
LT-P2	Area 42 Trail	Shared Use Path from Kinsman Road to Day Road	\$224,868	Years 10-15	100%	0%	\$0
LT-P3	BPA Power Line Trail	Shared Use Path from Day Road to Ice Age Tonquin Trail providing trail users access to City's northern industrial area	\$528,668	Years 15-20	100%	0%	\$0
UU-P3 A/B	Elligsen Road Urban Upgrade	Upgrade Elligsen Road from Parkway Center to Stafford Road to meet applicable crosssection standards including bike lanes, sidewalks, and transit improvements	\$6,344,021	Years 15-20	25%	28%	\$441,019
8600	Boones Ferry from Basalt Creek Parkway to Day	Widen to 5 lanes	\$1,163,071	Years 10-15	100%	100%	\$1,163,071
Total			\$176,319,908				\$85,083,554

Source: Wilsonville 2013 Transportation System Plan, Washington County TDT Project List as Amended 1-20-15, and the City of Wilsonville, compiled by FCS GROUP. Costs escalated to 2017 using the Engineer News Record, Seattle Construction Cost Index. Original costs in TSP from 2011 and TDT project list or Metro RTP project costs escalated from 2014.

**Transportation System Development Charge
Methodology Report
EXHIBIT A
TSDC Per Land Use**

EXHIBIT A
City of Wilsonville
TSDC Charge per Land Use

ITE Code	Land Use	Unit	ITE Average Daily Trips	Primary Trip Adjustments as a Percent of Total ¹	ITE Adjusted Average Daily Trips	Number of Person Trips ²	Reimbursement Fee	Improvement Fee	Compliance Fee	Total TSDC per Unit
750	Office Park	1,000 SFGFA	11.42*	100%	11.42	18.36	\$2,146	\$14,114	\$339	\$16,598
760	Research and Development Center	1,000 SFGFA	8.11*	100%	8.11	13.04	\$1,524	\$10,023	\$241	\$11,787
770	Business Park	1,000 SFGFA	12.44*	100%	12.44	20.00	\$2,337	\$15,374	\$369	\$18,081
812	Building Materials and Lumber Store	1,000 SFGFA	45.16*	100%	45.16	72.60	\$8,485	\$55,812	\$1,339	\$65,636
813	Free-Standing Discount Superstore	1,000 SFGFA	53.42	72%	38.46	61.83	\$7,226	\$47,535	\$1,141	\$55,902
814	Variety Store	1,000 SFGFA	64.03*	48%	30.57	49.15	\$5,744	\$37,786	\$907	\$44,437
815	Free-Standing Discount Store	1,000 SFGFA	57.24*	48%	27.33	43.94	\$5,135	\$33,779	\$811	\$39,725
816	Hardware/Paint Store	1,000 SFGFA	51.29*	45%	22.82	36.69	\$4,288	\$28,208	\$677	\$33,173
817	Nursery (Garden Center)	1,000 SFGFA	68.10*	82%	55.84	89.77	\$10,492	\$69,014	\$1,656	\$81,162
820	Shopping Center	1,000 SFGFA	42.70*	50%	21.41	34.42	\$4,023	\$26,460	\$635	\$31,117
826	Specialty Retail Center	1,000 SFGFA	44.32*	82%	36.34	58.42	\$6,828	\$44,915	\$1,078	\$52,821
841	Automobile Sales	1,000 SFGFA	32.30*	100%	32.30	51.93	\$6,069	\$39,919	\$958	\$46,945
843	Automobile Parts Sales	1,000 SFGFA	61.91*	44%	27.24	43.79	\$5,118	\$33,666	\$808	\$39,592
848	Tire Store	1,000 SFGFA	24.87*	69%	17.08	27.45	\$3,209	\$21,106	\$506	\$24,821
850	Supermarket	1,000 SFGFA	102.24*	39%	39.62	63.69	\$7,444	\$48,963	\$1,175	\$57,582
851	Convenience Market (Open 24 Hours)	1,000 SFGFA	737.99*	33%	240.04	385.89	\$45,100	\$296,662	\$7,119	\$348,880
857	Discount Club	1,000 SFGFA	41.80*	57%	23.83	38.30	\$4,477	\$29,446	\$707	\$34,629
862	Home Improvement Superstore	1,000 SFGFA	38.03	44%	16.73	26.90	\$3,144	\$20,681	\$496	\$24,321
863	Electronics Superstore	1,000 SFGFA	45.04*	100%**	45.04	72.41	\$8,462	\$55,664	\$1,336	\$65,462
880	Pharmacy/Drugstore without Drive-Through	1,000 SFGFA	90.06	42%	38.13	61.29	\$7,163	\$47,118	\$1,131	\$55,412
881	Pharmacy/Drugstore with Drive-Through	1,000 SFGFA	96.91*	38%	36.83	59.20	\$6,919	\$45,512	\$1,092	\$53,523
890	Furniture Store	1,000 SFGFA	5.06*	37%	1.86	2.98	\$349	\$2,293	\$55	\$2,697
912	Drive-In Bank	1,000 SFGFA	148.15*	27%	40.49	65.10	\$7,608	\$50,046	\$1,201	\$58,855
931	Quality Restaurant	1,000 SFGFA	89.95*	43%	38.23	61.46	\$7,183	\$47,246	\$1,134	\$55,562
932	High-Turnover (Sit-Down) Restaurant	1,000 SFGFA	127.15*	40%	50.54	81.25	\$9,496	\$62,464	\$1,499	\$73,459
934	Fast-Food Restaurant with Drive-Through	1,000 SFGFA	496.12*	41%	203.13	326.56	\$38,166	\$251,049	\$6,024	\$295,238
937	Coffee/Donut Shop with Drive-Through	100 SFGFA	81.86	11%	8.96	14.40	\$1,683	\$11,072	\$266	\$13,021
938	Coffee/Donut Kiosk	100 SFGFA	180.00	11%	19.80	31.83	\$3,720	\$24,470	\$587	\$28,778
944	Gasoline/Service Station	VFP	168.56	35%	59.00	94.84	\$11,084	\$72,912	\$1,750	\$85,746
945	Gasoline/Service Station with Convenience Market	VFP	162.78	13%	20.80	33.44	\$3,908	\$25,706	\$617	\$30,231
946	Gasoline/Service Station with Car Wash	VFP	152.84	24%	36.51	58.70	\$6,860	\$45,124	\$1,083	\$53,067

Source: ITE Trip Generation Manual, 9th Edition, and City staff, compiled by FCS GROUP.

¹Primary trip adjustments include pass by trips and diverted/linked trips.

²Person trips calculated with 1.61 person trips equal to one average daily person trip, provided by DKS.

*Estimate provided by City staff based on previous traffic studies.

**Estimate.

EXHIBIT A

City of Wilsonville

TSDC Charge per Land Use

Wilsonville Transportation SDC by Land Use, FY 2017/18										
ITE Code	Land Use	Unit	ITE Average Daily Trips	Primary Trip Adjustments as a Percent of Total	ITE Adjusted Average Daily Trips	Number of Person Trips ²	Reimbursement Fee	Improvement Fee	Compliance Fee	Total SDC per Unit
110	General Light Industrial	1,000 SFGFA	6.97*	100%	6.97	11.21	\$1,310	\$8,614	\$207	\$10,130
120	General Heavy Industrial	1,000 SFGFA	1.50*	100%**	1.50	2.41	\$282	\$1,854	\$44	\$2,180
130	Industrial Park	1,000 SFGFA	6.83*	100%	6.83	10.98	\$1,283	\$8,441	\$203	\$9,927
140	Manufacturing	1,000 SFGFA	3.82*	100%	3.82	6.14	\$718	\$4,721	\$113	\$5,552
150	Warehousing	1,000 SFGFA	3.56*	100%**	3.56	5.72	\$669	\$4,400	\$106	\$5,174
151	Mini-Warehouse	1,000 SFGFA	2.50*	100%	2.50	4.02	\$470	\$3,090	\$74	\$3,633
152	High-Cube Warehouse/Distribution Center	1,000 SFGFA	1.68*	100%**	1.68	2.70	\$316	\$2,076	\$50	\$2,442
160	Data Center	1,000 SFGFA	0.99	100%	0.99	1.59	\$186	\$1,224	\$29	\$1,439
210	Single-Family Detached Housing	Dwelling unit	9.45	100%	9.45	15.19	\$1,775	\$11,676	\$280	\$13,731
220	Apartment	Dwelling unit	6.50	100%	6.50	10.45	\$1,221	\$8,033	\$193	\$9,447
230	Residential Condominium/Townhouse	Dwelling unit	5.65	100%	5.65	9.09	\$1,062	\$6,984	\$168	\$8,214
240	Mobile Home Park	ODU	4.90	100%	4.90	7.88	\$921	\$6,058	\$145	\$7,124
254	Assisted Living	Bed	2.56	100%	2.56	4.12	\$482	\$3,167	\$76	\$3,725
310	Hotel	Room	7.86	100%	7.86	12.63	\$1,476	\$9,709	\$233	\$11,418
320	Motel	Room	5.63	100%	5.63	9.05	\$1,058	\$6,958	\$167	\$8,183
411	City Park	Acre	6.13	100%	6.13	9.86	\$1,152	\$7,579	\$182	\$8,914
417	Regional Park	Acre	4.99	100%	4.99	8.02	\$938	\$6,169	\$148	\$7,255
430	Golf Course	Acre	5.27	100%	5.27	8.47	\$990	\$6,515	\$156	\$7,662
492	Health/Fitness Club	1,000 SFGFA	30.32	100%	30.32	48.75	\$5,697	\$37,474	\$899	\$44,070
495	Recreational Community Center	1,000 SFGFA	33.82*	100%	33.82	54.37	\$6,354	\$41,797	\$1,003	\$49,155
520	Elementary School	1,000 SFGFA	15.43*	59%	9.10	14.64	\$1,710	\$11,251	\$270	\$13,231
522	Middle School/Junior High School	1,000 SFGFA	13.78*	59%	8.13	13.07	\$1,528	\$10,048	\$241	\$11,817
530	High School	1,000 SFGFA	12.89*	59%	7.61	12.23	\$1,429	\$9,399	\$226	\$11,055
540	Junior/Community College	1,000 SFGFA	27.49*	100%	27.49	44.19	\$5,165	\$33,974	\$815	\$39,955
560	Church	1,000 SFGFA	9.11*	100%	9.11	14.65	\$1,712	\$11,259	\$270	\$13,241
565	Day Care Center	1,000 SFGFA	74.06*	33%	24.44	39.29	\$4,592	\$30,205	\$725	\$35,521
590	Library	1,000 SFGFA	56.24*	100%	56.24	90.41	\$10,567	\$69,506	\$1,668	\$81,740
610	Hospital	1,000 SFGFA	12.17	100%	12.17	19.56	\$2,287	\$15,041	\$361	\$17,688
620	Nursing Home	1,000 SFGFA	7.60*	100%	7.60	12.22	\$1,428	\$9,393	\$225	\$11,046
630	Clinic	1,000 SFGFA	31.45*	100%**	31.45	50.56	\$5,909	\$38,868	\$933	\$45,710
710	General Office Building	1,000 SFGFA	11.03*	66%	7.28	11.70	\$1,368	\$8,997	\$216	\$10,581
714	Corporate Headquarters Building	1,000 SFGFA	7.98*	100%**	7.98	12.83	\$1,499	\$9,862	\$237	\$11,598
715	Single Tenant Office Building	1,000 SFGFA	11.65*	100%**	11.65	18.73	\$2,189	\$14,398	\$345	\$16,932
720	Medical-Dental Office Building	1,000 SFGFA	36.13*	100%	36.13	58.08	\$6,788	\$44,652	\$1,071	\$52,512
731	State Motor Vehicles Department	1,000 SFGFA	120.90	100%	120.90	194.36	\$22,715	\$149,418	\$3,585	\$175,718
732	United States Post Office	1,000 SFGFA	108.19*	100%	108.19	173.93	\$20,327	\$133,710	\$3,208	\$157,245

Transportation System Development Charge

Methodology Report

EXHIBIT B

60-day and 90-day Notification Record



**City of Wilsonville
60-Day Public Notice of
Transportation System Development Charge
Methodology Modifications**

The City of Wilsonville hereby issues public notice, pursuant to ORS 223.304, of its intent to modify the local system development charge for transportation facilities.

A draft technical report addressing the methodology and calculation of the proposed charges on new development within Wilsonville is available for review at Wilsonville City Hall, located at 29799 SW Town Center Loop East, Wilsonville, OR 97070, and the City website at www.ci.wilsonville.or.us, or by calling the Wilsonville Engineering Department at 503-682-4960.

A public hearing to take comments regarding the proposed system development charges is tentatively scheduled June 5, 2017 for 7:00 p.m. at Wilsonville City Hall. If you wish to comment but cannot attend the public hearing, please address written comments as follows:

City of Wilsonville
Mike Ward, Civil Engineer
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
ward@ci.wilsonville.or.us

Written comments must be received by May 10, 2017 to be considered.



April 18, 2016

Subject: Notice of Proposed Hearing to Adopt Transportation System Development Charges (SDCs) and to Adopt a Revised Transportation Capital Improvement Plan

This letter serves as notice that the City of Wilsonville is considering making changes to the Transportation SDC's. The Public Hearing concerning adoption of a transportation development charge, which will revise and replace the existing street system development charge, will be held July 20, 2016 at City Hall.

Copies of the plan, when available, will be obtained at the front desk of City Hall, by calling (503)682-4960. The street capital improvement plan is included in the 2013 Transportation System Plan. The CIP will be modified to reflect and update from 2013 to 2016 and to include information required in ORS 223.303. Adoption of the transportation SDC resolution will also include adoption of the revised capital improvement plan.

This letter constitutes notice of the proposed modifications to the persons who have requested written notice under ORS223.304(6)

If you have specific suggestions or questions concerning the methodology or the ordinance for the revised transportation system development charges please contact Mike Ward via email (ward@ci.wilsonville.or.us) or phone (503-570-1546).

Sincerely,

Nancy Kraushaar
Community Development Director

cc: PC Requested Written Notice – Home Builders Association
Courtesy Copies: Potentially Impacted Developers
Sandy King, City Recorder
Barbara Jacobson
File

Name	Company	Address	City	State	Zip
Tualatin Valley Water District		1850 SW 170 th Ave	Beaverton	OR	97005-4211
Columbia Cable of Oregon		14200 SW Brigadoon Ct	Beaverton	OR	97005
City Planner	City of Canby	PO Box 930	Canby	OR	97013
Mike Strauch, District Manager	ODOT Region 2A	9200 SE Lawnfield Road	Clackamas	OR	97015
Diane Taniguchi-Dennis	Clean Water Services	2550 SW Hillsboro Hwy	Hillsboro	OR	97123
Andy Back	Wash County Long Range Planning	155 N First Avenue	Hillsboro	OR	97124
James Clark	BPA, Realty Department	2715 Tepper Lane	Keizer	OR	97303
Justin Wood, Assoc. Dir. of Government & Builder Rel	Home Builders Associations	15555 SW Bangy Road, Suite 301	Lake Oswego	OR	97035
Jon Kloor, Government & Political Rel Coord	Home Builders Associations	15555 SW Bangy Road, Suite 301	Lake Oswego	OR	97035
Mike McCallister	Clackamas Co Transportation & Development	150 Beaver Creek Road	Oregon City	OR	97045
	Oregon Dept of Environ Quality	811 SW Sixth Avenue	Portland	OR	97204
Brian Harper	Metro	600 NE Grand Avenue	Portland	OR	97232
Anthony Buczek	Metro	600 NE Grand Avenue	Portland	OR	97232
Paulette Copperstone	Metro	600 NE Grand Avenue	Portland	OR	97233
Manager, Community Development	Metro Growth Management Services	600 NE Grand Avenue	Portland	OR	97232
Engineering Department	NW Natural Gas	220 NW 2 nd Avenue	Portland	OR	97209
Attn Development Review	ODOT	123 NW Flanders Street	Portland	OR	97209
Ben Baldwin	Tri-Met Project Planning Dept	4012 SE 17th Avenue	Portland	OR	97202
Bobbi Burton	Community Coordinator, Facilities Division	2575 Center Street, NE	Salem	OR	97310
Doug Young	Department of Corrections	2575 Center Street NE	Salem	OR	97310
John Lilly	Department of State Lands	775 Summer Street, NE	Salem	OR	97301-1279
Bill Ferber, Region Manager	Oregon Water Resources Department	725 Summer Street, NE, Suite A	Salem	OR	97301
Sherwood School Dist Admin Office		23295 SW Main Street	Sherwood	OR	97140
Planning Director	City of Sherwood	22560 SW Pine Street	Sherwood	OR	97140
Aquilla Hurd-Ravich	City of Tualatin	18880 SW Martinazzi Avenue	Tualatin	OR	97062
Dr. Kathy Ludwig	West Linn/Wilsonville School District 3JT	22210 SW Stafford Rd	Tualatin	OR	97062
Tualatin Valley Fire and Rescue		29875 SW Kinsman Road	Wilsonville	OR	97070
Tualatin Valley Fire and Rescue		8445 SW Ellhgsen Road	Wilsonville	OR	97070
Brian Buswell	Portland General Electric	9480 SW Boeckman Road	Wilsonville	OR	97070
Frank Lonergan	United Disposal Services	10295 SW Ridder Road	Wilsonville	OR	97070
	Chamber of Commerce	8565 SW Salsish Lane	Wilsonville	OR	97070

Transportation Development Tax Road Project List Amended

Appendix C: Road Project List
Ordinance 691-A as amended
R+O 23-24
April 18, 2023

Project ID	Jurisdiction	Facility	From	To	Project	Project Cost	Proportion of Project Related to Capacity (%)	Other Primary Funding Source	Other Primary Funding Revenue	Eligible Capacity Amount	Growth Share	Eligible SDC Amount	Estimated Project Completion Timeframe
2500	Banks	OR 6	Aerts Road		Construct intersection improvement or roundabout	\$ 5,800,000	100%	City SDCs		\$ 5,800,000	100%	\$ 5,800,000	2025-2040
2501	Banks	Banks Rd	OR 47	Aerts Rd	Widen, improve intersection sight distance, provide shoulders, construct continuous or intermittent left-turn lanes	\$ 10,200,000	100%	City SDCs		\$ 10,200,000	100%	\$ 10,200,000	2025-2040
2502	Banks	New Collector (West Banks)	Cedar Canyon Road	Main Street/OR 47 (South of Sunset Park)	Construct new 2/3 lane collector	\$ 15,700,000	100%	City SDCs		\$ 15,700,000	100%	\$ 15,700,000	2025-2040
2503	Banks	New Collector (East Banks)	Banks Road	Aerts Rd (north of OR 6)	Construct new 2/3 lane collector	\$ 5,500,000	100%	City SDCs		\$ 5,500,000	100%	\$ 5,500,000	2025-2040
Banks TOTAL						\$ 37,200,000				\$ 37,200,000		\$ 37,200,000	
2000	Beaverton	114th/115th	MAX Light Rail	Beaverton-Hillsdale/Griffith	Construct 2-lane multimodal	\$ 11,040,000	100%			\$ 11,040,000	100%	\$ 11,040,000	2014-2024
2001	Beaverton	120th	Center	Canyon	Construct 2-lane multimodal	\$ 9,825,600	100%			\$ 9,825,600	100%	\$ 9,825,600	2014-2024
2002	Beaverton	125th	Brockman	Hall	Extend 2-lane multimodal	\$ 15,345,600	100%			\$ 15,345,600	100%	\$ 15,345,600	2014-2024
2003	Beaverton	Allen	Hwy 217	Western	Add turn lanes, signals, bike/ped	\$ 6,955,200	100%			\$ 6,955,200	100%	\$ 6,955,200	2014-2024
2004	Beaverton	Allen	Murray	Hwy 217	Add turn lanes, bike lanes, sidewalks & signalize	\$ 45,926,400	100%			\$ 45,926,400	100%	\$ 45,926,400	2014-2024
2005	Beaverton	Allen: Murray to Scholls Ferry; Cedar Hills:			Adaptive signal systems	\$ 11,040,000	100%			\$ 11,040,000	100%	\$ 11,040,000	2014-2024
2006	Beaverton	Baltic	US26 WB	Barnes	Add NB aux lane; Add SB aux lane	\$ 570,000	100%			\$ 570,000	100%	\$ 570,000	2025-2039
2007	Beaverton	Barnes	117th	Baltic	Bus pullouts, shelters, and transit amenities	\$ 700,000	100%			\$ 700,000	100%	\$ 700,000	2014-2024
2008	Beaverton	Barnes	116th		Construct traffic signal; Construct 2nd WB left turn lane	\$ 500,000	100%			\$ 500,000	77%	\$ 384,058	2014-2024
2009	Beaverton	Barnes	Cedar Hills		Add 2nd EB to SB right turn lane	\$ 450,000	100%			\$ 450,000	100%	\$ 450,000	2014-2024
2010	Beaverton	Barnes	Cedar Hills	Valeria	Add WB aux lane; modify signals	\$ 1,250,000	100%			\$ 1,250,000	100%	\$ 1,250,000	2014-2024
2011	Beaverton	Barnes	Station North/Holly		Construct signal and interconnect; Add WB right turn lane	\$ 600,000	100%			\$ 600,000	100%	\$ 600,000	2014-2024
2012	Beaverton	Barnes	Station North/Holly	Lois	Add EB and WB aux lanes; Modify traffic signal and interconnect	\$ 1,900,000	100%			\$ 1,900,000	100%	\$ 1,900,000	2014-2024
2013	Beaverton	Barnes	Lois	OR217	Add NB aux lane; Add 2nd SB left turn lane; Modify transit station entrance; Modify traffic signal	\$ 600,000	100%			\$ 600,000	100%	\$ 600,000	2014-2024
2014	Beaverton	Barnes	OR 217		Add NB right turn lane; Add NB aux lane; Add Wb right turn lane; Add WB aux lane to US 26 WB; Modify traffic signal	\$ 2,100,000	100%			\$ 2,100,000	100%	\$ 2,100,000	2014-2024
2015	Beaverton	Barnes	OR 217	Leahy	Interconnect traffic signals	\$ 200,000	100%			\$ 200,000	88%	\$ 175,824	2025-2039
2016	Beaverton	Barnes	Baltic		Add EB right turn lane, Add WB left turn lane; Add WB aux lane; Add NB left turn lane; Add NB aux lane; Add dual NB right turn lane; Modify traffic signal	\$ 2,700,000	100%			\$ 2,700,000	100%	\$ 2,700,000	2014-2024
2017	Beaverton	Barnes	Baltic	Monterey Pl	Add WB aux lane; Modify traffic signals	\$ 600,000	100%			\$ 600,000	100%	\$ 600,000	2025-2039

Transportation Development Tax Road Project List Amended

Appendix C: Road Project List
Ordinance 691-A as amended
R+O 23-24
April 18, 2023

Project ID	Jurisdiction	Facility	From	To	Project	Project Cost	Proportion of Project Related to Capacity (%)	Other Primary Funding Source	Other Primary Funding Revenue	Eligible Capacity Amount	Growth Share	Eligible SDC Amount	Estimated Project Completion Timeframe
2018	Beaverton	Barnes	Monterey		Add EB left turn lane; Modify traffic signal	\$ 500,000	100%			\$ 500,000	88%	\$ 439,560	2025-2039
2019	Beaverton	Barnes	Miller		Add aux lanes at all intersection approaches; Modify Miller SB lane approaches; Modify Miller SB lane assignments; Modify traffic signals	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2025-2039
2020	Beaverton	Beaverton-Hillsdale	Western		Turn lanes, signal improvements	\$ 2,064,480	100%			\$ 2,064,480	100%	\$ 2,064,480	2025-2039
2021	Beaverton	Butner	Cedar Hills		Add dual EB left turn lanes; Add single EB right turn lane; Modify signal; Interconnect to US26 interchange signals	\$ 1,430,000	100%			\$ 1,430,000	100%	\$ 1,430,000	2014-2024
2022	Beaverton	Canyon	170th	OR 217	Access management	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2014-2024
2023	Beaverton	Canyon	Cedar Hills		Turn lanes, signal improvements	\$ 6,922,080	100%			\$ 6,922,080	100%	\$ 6,922,080	2025-2039
2024	Beaverton	Cedar Hills	300' north of Celeste	Barnes	Add NB and SB aux lanes, extend 300' north of Celeste	\$ 2,330,000	100%			\$ 2,330,000	100%	\$ 2,330,000	2014-2024
2025	Beaverton	Cedar Hills	Barnes	US 26 WB	Add SB multi-use bike/ped facility	\$ 250,000	100%			\$ 250,000	100%	\$ 250,000	2014-2024
2026	Beaverton	Cedar Hills	US 26 WB		Add NB aux lane to Barnes; Add bike/ped tunnel under WB on ramp; Modify WB offramp lane assignments; Modify and interconnect signals	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2014-2024
2027	Beaverton	Cedar Hills	US 26 WB	US 26 EB	Construct sidewalks and bike lanes	\$ 670,000	100%			\$ 670,000	100%	\$ 670,000	2014-2024
2028	Beaverton	Cedar Hills	US 26 EB		Construct dual SB left turn lanes and EB aux lane; Construct EB left and right turn lanes; Construct signals and interconnect	\$ 1,770,000	100%			\$ 1,770,000	100%	\$ 1,770,000	2014-2024
2029	Beaverton	Cedar Hills	US 26 EB	Butner	Convert NB right turn lane into Th-Rt Aux lane to US26 EB with ped island; Add sidewalk and bike lanes	\$ 448,000	100%			\$ 448,000	100%	\$ 448,000	2014-2024
2030	Beaverton	Cedar Hills	Walker		Add double left turn lanes on all approaches, add EB rt turn lane	\$ 3,643,200	100%			\$ 3,643,200	97%	\$ 3,545,614	2025-2039
2031	Beaverton	Cedar Hills	Walker	Farmington	Add turn lanes, bike lanes	\$ 20,976,000	100%			\$ 20,976,000	100%	\$ 20,976,000	2014-2024
2032	Beaverton	Cedar Hills	Jenkins		Turn lanes, signal improvements	\$ 2,550,240	100%			\$ 2,550,240	100%	\$ 2,550,240	2025-2039
2033	Beaverton	Cedar Hills	Hall		Add NB rt turn lane	\$ 728,640	100%			\$ 728,640	100%	\$ 728,640	2025-2039
2034	Beaverton	Cornell	113th		Add aux lanes at all intersection approaches; Modify traffic signal	\$ 700,000	100%			\$ 700,000	100%	\$ 700,000	2014-2024
2035	Beaverton	Cornell	107th		Construct traffic signal	\$ 360,000	100%			\$ 360,000	100%	\$ 360,000	2014-2024
2037	Beaverton	Davies	Scholls Ferry	Barrows	Extend 2-lane multimodal	\$ 5,409,600	100%			\$ 5,409,600	100%	\$ 5,409,600	2014-2024
2038	Beaverton	Dawson/Westgate	Rose Biggi	Hocken	Extend 2-lane multimodal	\$ 9,825,600	100%			\$ 9,825,600	100%	\$ 9,825,600	2014-2024
2039	Beaverton	Denney	Hall	Scholls Ferry	Add turn lanes, bike lanes & signalize	\$ 6,734,400	100%			\$ 6,734,400	100%	\$ 6,734,400	2014-2024
2040	Beaverton	Farmington	Cedar Hills		Turn lanes, signal improvements	\$ 3,036,000	100%			\$ 3,036,000	100%	\$ 3,036,000	2025-2039
2041	Beaverton	Farmington	Lombard		Add NB rt turn lane	\$ 1,689,120	100%			\$ 1,689,120	100%	\$ 1,689,120	2025-2039
2042	Beaverton	Hall extension	to Jenkins		Construct 2 or 4 lane	\$ 15,897,600	100%			\$ 15,897,600	100%	\$ 15,897,600	2025-2039
2044	Beaverton	Hall	Cedar Hills	Farmington	Add turn lanes, bike lanes	\$ 5,740,800	100%			\$ 5,740,800	100%	\$ 5,740,800	2014-2024
2045	Beaverton	Hall	Center		Turn lanes, signal improvements	\$ 121,440	100%			\$ 121,440	100%	\$ 121,440	2025-2039

**Transportation Development Tax
Road Project List Amended**

Appendix C: Road Project List
Ordinance 691-A as amended
R+O 23-24
April 18, 2023

Project ID	Jurisdiction	Facility	From	To	Project	Project Cost	Proportion of Project Related to Capacity (%)	Other Primary Funding Source	Other Primary Funding Revenue	Eligible Capacity Amount	Growth Share	Eligible SDC Amount	Estimated Project Completion Timeframe
2046	Beaverton	Hall	Allen		Add EB&WB rt turn lanes, NB&SB double lefts	\$ 2,373,600	100%			\$ 2,373,600	100%	\$ 2,373,600	2025-2039
2047	Beaverton	Hall	Denney		Turn lanes, signal improvements	\$ 850,080	100%			\$ 850,080	100%	\$ 850,080	2025-2039
2048	Beaverton	Hall	500' south of Allen	12th	Add turn lanes, bike lanes	\$ 6,734,400	100%			\$ 6,734,400	100%	\$ 6,734,400	2014-2024
2049	Beaverton	Millikan	TV Hwy	141st	Add turn lanes, signals, bike and ped	\$ 18,878,400	100%			\$ 18,878,400	100%	\$ 18,878,400	2014-2024
2050	Beaverton	Millikan	Murray		Rt turn lane for WB Millikan	\$ 607,200	100%			\$ 607,200	100%	\$ 607,200	2025-2039
2051	Beaverton	Millikan	141st	Hocken	Add signal, turn lanes, bike & ped	\$ 2,870,400	100%			\$ 2,870,400	100%	\$ 2,870,400	2014-2024
2052	Beaverton	Millikan	Watson	114th	Extend 2-lane multimodal	\$ 15,235,200	100%			\$ 15,235,200	100%	\$ 15,235,200	2014-2024
2053	Beaverton	Murray	Allen		Turn lanes, signal improvements	\$ 1,578,720	100%			\$ 1,578,720	100%	\$ 1,578,720	2025-2039
2054	Beaverton	Murray	Brockman		Add WB & SB rt turn lanes	\$ 1,280,640	100%			\$ 1,280,640	100%	\$ 1,280,640	2025-2039
2055	Beaverton	New street	Broadway	115th	Construct 2-lane multimodal	\$ 4,968,000	100%			\$ 4,968,000	100%	\$ 4,968,000	2014-2024
2056	Beaverton	Nimbus	Denney	Hall	Extend 2-lane multimodal	\$ 17,001,600	100%			\$ 17,001,600	100%	\$ 17,001,600	2014-2024
2058	Beaverton	Rose Biggi	TV Hwy	Broadway	Extend 2-lane multimodal	\$ 3,312,000	100%			\$ 3,312,000	100%	\$ 3,312,000	2014-2024
2059	Beaverton	Scholls Ferry	Allen		Turn lanes, signal improvements	\$ 4,128,960	100%			\$ 4,128,960	95%	\$ 3,929,172	2025-2039
2060	Beaverton	Scholls Ferry	Nimbus		Turn lanes, signal improvements	\$ 1,733,280	100%			\$ 1,733,280	100%	\$ 1,733,280	2025-2039
2061	Beaverton	Scholls Ferry	125th		Add SB rt turn lane	\$ 1,280,640	100%			\$ 1,280,640	100%	\$ 1,280,640	2025-2039
2062	Beaverton	Scholls Ferry	Davies		Add NB rt turn lane, close east end of Scholls Ferry @Barrows	\$ 331,200	100%			\$ 331,200	100%	\$ 331,200	2025-2039
2063	Beaverton	Scholls Ferry	Barrows (west end)		Add SB rt turn lane	\$ 331,200	100%			\$ 331,200	100%	\$ 331,200	2025-2039
2064	Beaverton	Sexton Mountain	160th	155th	Extend 2-lane multimodal	\$ 2,760,000	100%			\$ 2,760,000	100%	\$ 2,760,000	2014-2024
2065	Beaverton	Walker	173rd		Turn lanes, signal improvements	\$ 2,760,000	100%			\$ 2,760,000	100%	\$ 2,760,000	2025-2039
2066	Beaverton	Walker	167th		Signalize, add SB left turn lane	\$ 187,680	100%			\$ 187,680	100%	\$ 187,680	2025-2039
2067	Beaverton	Weir	155th	175th	Turn lanes, bike lanes, sidewalks	\$ 4,526,400	100%			\$ 4,526,400	100%	\$ 4,526,400	2014-2024
2068	Beaverton	175th	UGB	Scholls Ferry	Widen to 5 lanes	\$ 6,345,000	100%	SCM TSDC		\$ 6,345,000	100%	\$ 6,345,000	2014-2024
2069	Beaverton	New East-West Collector	Tile Flat	Loon	New 3 lane collector	\$ 22,755,000	100%	SCM TSDC		\$ 22,755,000	100%	\$ 22,755,000	2014-2024
2070	Beaverton	New North-South Collector	UGB	Scholls Ferry	New 2 lane collector	\$ 11,020,000	100%	SCM TSDC		\$ 11,020,000	100%	\$ 11,020,000	2014-2024
2071	Beaverton	Scholls Ferry	Tile Flat	175th / Roy Rogers	Widen to 5 lanes	\$ 8,165,000	100%	SCM TSDC		\$ 8,165,000	100%	\$ 8,165,000	2014-2024
2072	Beaverton	Scholls Ferry	Horizon/Teal		New right turn lanes at Scholls Ferry Rd / Horizon-Teal Blvd intersection	\$ 500,000	100%	SCM TSDC		\$ 500,000	100%	\$ 500,000	2025-2039
2073	Beaverton	Tile Flat	UGB	Scholls Ferry	Widen to 3 lanes	\$ 3,025,000	100%	SCM TSDC		\$ 3,025,000	100%	\$ 3,025,000	2025-2039
2074	Beaverton	Western	Allen	Beaverton-Hillsdale	Reconstruct 4-lane roadway as 3-lane arterial with separated bicycle and pedestrian paths between Allen & 5th St. Add bike lanes between 5th St. and B-H Hwy. Includes traffic signals modification.	\$ 6,500,000	100%			\$ 6,500,000	100%	\$ 6,500,000	2014-2024
2075	Beaverton	Hocken Ave	RR Tracks	Tualatin-Valley Hwy	Add 2nd southbound lane, bike lanes and sidewalks. Requires signal and RR crossing pole relocation	\$ 2,500,000	100%			\$ 2,500,000	76%	\$ 1,900,000	2014-2024

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2076	Beaverton	Watson	Hall	Farmington	Construct protected bike lanes, traffic signals and intersection improvements.	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2024-2034
Beaverton TOTAL						\$ 370,139,600				\$ 370,139,600		\$ 369,041,668	
7004	Cornelius	Davis St Extension	4th	7th	New 2-lane collector	\$ 2,255,000	100%			\$ 2,255,000	100%	\$ 2,255,000	2040+
7006	Cornelius	Holladay St Extension	Yew (Forest Grove)	4th	New 2-lane collector	\$ 2,960,000	100%			\$ 2,960,000	100%	\$ 2,960,000	2028-2040
7007	Cornelius	Holladay St Extension	10th	Gray	New 2-lane collector	\$ 2,810,000	100%			\$ 2,810,000	100%	\$ 2,810,000	2040+
7008	Cornelius	Holladay St Extension	Gray	19th	New 2-lane collector	\$ 3,085,000	100%			\$ 3,085,000	100%	\$ 3,085,000	2040+
7009	Cornelius	19th Ave	20th Ave	Council Creek Bridge	Build complete street with sidewalk and bike facilities. Also new RR crossing and possible mini-roundabouts at Holladay & Davis	\$ 1,975,000	100%			\$ 1,975,000	100%	\$ 1,975,000	2018-2027
7011	Cornelius	New N-S Collector	Baseline	Kodiak	New 2-lane collector for SE UGB Expansion Area, with improved rail crossing south of Baseline and new signalized intersection with Baseline.	\$ 9,390,000	100%			\$ 9,390,000	100%	\$ 9,390,000	2018-2027
7012	Cornelius	SE Cornelius New Collectors	South of Ginger St	South UGB Boundary	New collector through UGB expansion area: 20th, Jasper, 26th, 29th, Kodiak, and shared-use path south of Jasper Roundabout	\$ 13,955,000	100%			\$ 13,955,000	100%	\$ 13,955,000	2018-2027
7014	Cornelius	Dogwood Extension	28th	345th	Extend collector within UGB expansion area	\$ 2,085,000	100%			\$ 2,085,000	100%	\$ 2,085,000	2028-2040
7015	Cornelius	Complete Collector Pedestrian Facilities	Citywide		4th Ave: Adair to Fawn 20th Ave: Alpine to Elder 29th Ave: North UGB to Baseline Adair: 1st to 7th Baseline: 4th to 10th (north side)	\$ 2,913,000	100%			\$ 2,913,000	100%	\$ 2,913,000	2018-2027
7016	Cornelius	Baseline North Frontage Rd	East Lane	NW 344th Ave	Create collector frontage road on north side of Baseline and intersection improvements with possible signal at NW 341st Ave	\$ 2,830,000	100%			\$ 2,830,000	100%	\$ 2,830,000	2018-2027
7017	Cornelius	Davis Street Extension	10th Ave	Fred Meyer Eastern Driveway	Complete pedestrian/bike facilities west of 19th and build new collector east of 19th	\$ 3,490,000	100%			\$ 3,490,000	100%	\$ 3,490,000	2028-2040
7018	Cornelius	341st Ave	Baseline	North terminus of street	Complete pedestrian facilities and improve to collector standards	\$ 526,000	100%			\$ 526,000	100%	\$ 526,000	2028-2040
7019	Cornelius	Baseline St	26th Ave	East Lane	Complete pedestrian facilities	\$ 1,035,000	100%			\$ 1,035,000	100%	\$ 1,035,000	2028-2040
7020	Cornelius	29th Blvd	S. City Limits	S. UGB (345th/Cook Rd)	New collector	\$ 2,120,000	100%			\$ 2,120,000	100%	\$ 2,120,000	2040+
7021	Cornelius	Baseline St	20th	E. City Limits	Complete two-way bike blvd.	\$ 1,500,000	100%			\$ 1,500,000	100%	\$ 1,500,000	2040+
7022	Cornelius	Baseline Frontage Rd (south side)	NW 341st Ave	E. City Limits	Create collector frontage road	\$ 1,545,000	100%			\$ 1,545,000	100%	\$ 1,545,000	2040+

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7023	Cornelius	Davis Street Extension	Fred Meyer Drive	N. 26th Ave	Extend collector	\$ 2,065,000	100%			\$ 2,065,000	100%	\$ 2,065,000	2040+
7024	Cornelius	Complete Collector Ped and Bike facilities	Citywide		Complete bicycle facilities on collectors (e.g. pavement markings, shared streets, signage, etc.) and fill sidewalk gaps on collectors	\$ 8,030,000	100%			\$ 8,030,000	100%	\$ 8,030,000	2040+
Cornelius TOTAL						\$ 64,569,000				\$ 64,569,000		\$ 64,569,000	
8000	Durham	Upper Boones Ferry	At Tualatin River		Add 2 through lanes (Durham share of cost only)	\$ 600,000	100%			\$ 600,000	57%	\$ 342,857	2014-2024
Durham TOTAL						\$ 600,000				\$ 600,000		\$ 342,857	
7500	Forest Grove	19th	Poplar	HWY 47	Extend 2-lane collector	\$ 1,517,156	100%			\$ 1,517,156	100%	\$ 1,517,156	2019-2029
7501	Forest Grove	23rd/24th	Hawthorne	Quince	Construct 2-lane collector	\$ 4,260,000	100%			\$ 4,260,000	100%	\$ 4,260,000	2025-2039
7502	Forest Grove	26th	Sunset	Oak	Extend 2-lane collector and improve 26th Ave to city standards	\$ 9,800,000	95%			\$ 9,310,000	100%	\$ 9,310,000	2019-2029
7503	Forest Grove	OR 47	Maple		Construct improvements (e.g. traffic signal including interconnect with rail crossing in longer term)	\$ 5,000,000	75%			\$ 3,750,000	100%	\$ 3,750,000	2019-2029
7504	Forest Grove	OR 47	Elm		Construct improvements (e.g. traffic signal)	\$ 520,000	75%			\$ 390,000	100%	\$ 390,000	2019-2029
7506	Forest Grove	David Hill	Thatcher Road	Forest Gale Dr.	Full street reconstruction to urban collector standard	\$ 4,000,000	100%			\$ 4,000,000	100%	\$ 4,000,000	2021-2031
7507	Forest Grove	E/Pacific/19th	E	19th	Extend 2-lane couplet	\$ 4,940,000	100%			\$ 4,940,000	100%	\$ 4,940,000	2019-2029
7508	Forest Grove	Hawthorne	26th	Willamina	Extend 2-lane collector	\$ 7,885,582	100%			\$ 7,885,582	100%	\$ 7,885,582	2019-2029
7509	Forest Grove	Heather	OR 47	Mountain View	Extend 2-lane collector	\$ 1,730,000	100%			\$ 1,730,000	100%	\$ 1,730,000	2019-2029
7510	Forest Grove	Laurel	26th	22nd	Extend 2-lane collector	\$ 8,598,914	100%			\$ 8,598,914	100%	\$ 8,598,914	2019-2029
7512	Forest Grove	Oak	OR 47	Pacific	Upgrade to 2-lane collector; add signal	\$ 6,200,788	75%			\$ 4,650,591	100%	\$ 4,650,591	2019-2029
7513	Forest Grove	Thatcher	Gales Creek	David Hill	Realign and signalize intersection; road improvements from Gales Creek to David Hill	\$ 14,543,206	75%			\$ 10,907,405	100%	\$ 10,907,405	2019-2029
7514	Forest Grove	TV Hwy	Quince		Add turn lanes / signal	\$ 4,294,293	25%			\$ 1,073,573	100%	\$ 1,073,573	2019-2029
7515	Forest Grove	Willamina	Main	Sunset	Improve collector to city standards	\$ 2,168,128	95%			\$ 2,059,722	100%	\$ 2,059,722	2019-2029
7516	Forest Grove	Yew	Adair	Pacific	Construct Improvements (e.g. traffic signal or restrictions)	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2021-2031
7517	Forest Grove	OR 47	Martin		Construct Improvements (e.g. traffic signal or roundabout)	\$ 8,000,000	100%			\$ 8,000,000	100%	\$ 8,000,000	2019-2029
Forest Grove TOTAL						\$ 86,458,067				\$ 76,072,942		\$ 76,072,942	
9000	Gaston	Church	3rd	Trail	Improve to collector standards	\$ 720,000	100%			\$ 720,000	100%	\$ 720,000	2014-2025
9001	Gaston	Third	Park	Cottonwood	Improve to collector standards	\$ 225,000	100%			\$ 225,000	100%	\$ 225,000	2014-2025
Gaston TOTAL						\$ 945,000				\$ 945,000		\$ 945,000	
3000	Hillsboro	1st/Glencoe	Grant		Install traffic signal/ widen Glencoe for southbound left turn lane, add left turn lane on Grant	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2025-2039
3001	Hillsboro	13th/River	TV Hwy		Add EB right turn lane and NB left turn lane	\$ 4,500,000	100%			\$ 4,500,000	100%	\$ 4,500,000	2025-2039

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3002	Hillsboro	28th	Cornell	Main	Widen 3 lanes Main to Hyde Circle, Widen to 5-lanes Hyde Circle to Cornell, Modify LRT Crossing equipment	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2014-2024
3003	Hillsboro	69th	Quatama	Main	New 3 lane extension	\$ 4,943,785	100%			\$ 4,943,785	100%	\$ 4,943,785	2025-2039
3004	Hillsboro	185th	Walker		Intersection capacity and signal improvements	\$ 6,000,000	100%			\$ 6,000,000	100%	\$ 6,000,000	2025-2039
3005	Hillsboro	Amberglen Pkwy/194th Extension	Cornell	Amberglen Pkwy	New 3-lane collector, Remove segment Amberglen Pkwy	\$ 2,250,000	100%			\$ 2,250,000	100%	\$ 2,250,000	2014-2024
3006	Hillsboro	Amberglen Pkwy/194th Extension	Stucki Extension		Signalize or construct roundabout	\$ 1,100,000	100%			\$ 1,100,000	100%	\$ 1,100,000	2025-2039
3007	Hillsboro	Amberglen Pkwy/194th Extension	Stucki Extension	Wilkins	New 3-lane collector	\$ 3,500,000	100%			\$ 3,500,000	100%	\$ 3,500,000	2025-2039
3008	Hillsboro	Amberglen Pkwy/194th Extension	Wilkins		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3009	Hillsboro	205th/John Olson	Wilkins	MAX Light Rail	Complete bike lanes	\$ 200,000	100%			\$ 200,000	100%	\$ 200,000	2014-2024
3010	Hillsboro	209th	Blanton		Signalize; turn lane improvements	\$ 671,000	100%			\$ 671,000	100%	\$ 671,000	2014-2024
3011	Hillsboro	209th	Kinnaman		Signalize; turn lane improvements	\$ 1,016,000	100%			\$ 1,016,000	100%	\$ 1,016,000	2014-2024
3012	Hillsboro	209th	McInnis Lane		Construct traffic signal or roundabout	\$ 1,574,000	100%			\$ 1,574,000	100%	\$ 1,574,000	2014-2024
3014	Hillsboro	209th	Deline		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3015	Hillsboro	209th	Vermont		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3016	Hillsboro	209th	Murphy Lane		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3018	Hillsboro	67th	Alexander	Kinnaman	Widen to 3 lanes	\$ 4,126,000	100%			\$ 4,126,000	100%	\$ 4,126,000	2014-2024
3019	Hillsboro	Century	Kinnaman		construct roundabout	\$ 1,027,000	100%			\$ 1,027,000	100%	\$ 1,027,000	2014-2024
3020	Hillsboro	Century	Kinnaman	Rosedale	Widen to 3 lanes; Realign and construct Butternut Creek bridge	\$ 16,007,000	100%			\$ 16,007,000	100%	\$ 16,007,000	2025-2039
3021	Hillsboro	Century	Murphy		Construct roundabout or signal	\$ 1,046,000	100%			\$ 1,046,000	100%	\$ 1,046,000	2025-2039
3022	Hillsboro	231st	MAX Light Rail	Baseline	Widen to 3 lanes	\$ 6,800,000	100%			\$ 6,800,000	100%	\$ 6,800,000	2014-2024
3026	Hillsboro	Century	Johnson		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3027	Hillsboro	Starr	Meek	Evergreen	New 3-lane collector	\$ 12,000,000	100%			\$ 12,000,000	100%	\$ 12,000,000	2014-2024
3028	Hillsboro	Starr	Huffman		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3029	Hillsboro	Starr	Evergreen		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3030	Hillsboro	25th Ave	Cornell		Intersection capacity and signal imp	\$ 6,000,000	100%	MSTIP	\$ 5,000,000	\$ 1,000,000	100%	\$ 1,000,000	2014-2024
3031	Hillsboro	30th	Meek	Evergreen	New 3 lane collector	\$ 15,250,000	100%			\$ 15,250,000	100%	\$ 15,250,000	2025-2039
3032	Hillsboro	30th	Huffman		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3033	Hillsboro	30th	Evergreen		Signalize and add EB, WB, SB right turn lanes	\$ 1,291,000	100%			\$ 1,291,000	100%	\$ 1,291,000	2025-2039
3034	Hillsboro	Airport (Butler)	Brookwood	Dawson Cr	Widen to 3 lanes and install new signal at Brookwood Pkwy	\$ 1,100,000	100%			\$ 1,100,000	100%	\$ 1,100,000	2025-2039
3037	Hillsboro	Blanton Extension	East Neighborhood Route		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3038	Hillsboro	Aloclek	Walker	Cornelius Pass	Extend 3 lane	\$ 3,909,666	100%			\$ 3,909,666	100%	\$ 3,909,666	2014-2024
3039	Hillsboro	Walker	Cornelius Pass	John Olsen	Widen to 3 lane	\$ 2,932,250	100%			\$ 2,932,250	100%	\$ 2,932,250	2014-2024

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3040	Hillsboro	Walker Extension	Amberbrook	Stucki extension	Extend 3 lanes	\$ 1,400,000	100%			\$ 1,400,000	100%	\$ 1,400,000	2014-2024
3041	Hillsboro	Walker Extension	194th		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3042	Hillsboro	Bentley	Brookwood		Add EB Left turn lane and Signalize	\$ 1,100,000	100%			\$ 1,100,000	100%	\$ 1,100,000	2025-2039
3045	Hillsboro	Brookwood	Cornell		Add SB through lane, Add EB and WB 2nd Left Turn Lanes	\$ 5,500,000	100%			\$ 5,500,000	100%	\$ 5,500,000	2014-2024
3046	Hillsboro	Campus Ct extension	West terminus	Ray Circle	Construct new 2/3 lane collector	\$ 1,800,000	100%	Developer	\$100,000	\$ 1,700,000	100%	\$ 1,700,000	2014-2024
3047	Hillsboro	Century	Baseline	Lois	New 3 lane and bridge over Rock Creek	\$ 16,500,000	100%			\$ 16,500,000	100%	\$ 16,500,000	2014-2024
3048	Hillsboro	Century/229th	West Union	Evergreen	Extend 3 lane, including Hwy 26 overcrossing	\$ 21,000,000	100%			\$ 21,000,000	100%	\$ 21,000,000	2014-2024
3049	Hillsboro	Century	Johnson	Alexander	Widen to 5 lanes; Reconstruct Railroad crossing, Add EB right turn lane, EB bus pullout, Modify TV Hwy signal	\$ 7,943,000	100%			\$ 7,943,000	100%	\$ 7,943,000	2014-2024
3050	Hillsboro	Century	Alexander		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3051	Hillsboro	Century	Alexander	Old UGB	Construct multi-modal improvements	\$ 519,000	100%			\$ 519,000	100%	\$ 519,000	2025-2039
3052	Hillsboro	Century	Davis	67th	New 3 lane collector	\$ 5,127,000	100%			\$ 5,127,000	100%	\$ 5,127,000	2014-2024
3054	Hillsboro	Cornelius Pass	TV Hwy		Extend Cornelius Pass Road south, Construct at-grade rail crossing and close private crossings, Add intersection capacity, modify signal	\$ 27,429,000	100%			\$ 27,429,000	100%	\$ 27,429,000	2014-2024
3055	Hillsboro	Cornelius Pass	TV Hwy	Rosedale	Extend as new 5 lane to Murphy Lane, 3-lane in 5-lane ROW to Rosedale, 7-lane ROW TV Hwy to Alexander-Blanton; Construct Butternut Creek 5-lane bridge	\$ 45,848,000	100%			\$ 45,848,000	100%	\$ 45,848,000	2014-2024
3056	Hillsboro	Cornelius Pass	Town Center X-ing		Construct signalized Z-crossing	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3057	Hillsboro	Cornelius Pass	Blanton		Signalize and add turn lanes	\$ 724,000	100%			\$ 724,000	100%	\$ 724,000	2014-2024
3058	Hillsboro	Cornelius Pass	Kinnaman		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3059	Hillsboro	Cornelius Pass	McInnis Lane		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3060	Hillsboro	Cornelius Pass	Butternut Creek		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3061	Hillsboro	Cornelius Pass	Deline		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3062	Hillsboro	Cornelius Pass	Vermont		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3063	Hillsboro	Cornelius Pass	Murphy Lane		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3064	Hillsboro	Cornelius Pass	Rosedale		Construct roundabout or signal	\$ 1,408,000	100%			\$ 1,408,000	100%	\$ 1,408,000	2025-2039
3065	Hillsboro	Cornell	25th	Main	Widen 5 lane, Construct Intersection capacity/signal and/or safety improvements	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2025-2039
3067	Hillsboro	Cornell	Amberbrook		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3068	Hillsboro	Cornell	185th		Add EB right turn lane and 3rd SB through lane	\$ 1,200,000	100%			\$ 1,200,000	100%	\$ 1,200,000	2025-2039
3070	Hillsboro	Edgeway (Salix Ext)	Holly	Walker	New 3 lane extension	\$ 4,000,000	100%			\$ 4,000,000	100%	\$ 4,000,000	2014-2024
3071	Hillsboro	Evergreen	Jackson School (south)	15th	Widen to 5 lanes	\$ 6,500,000	100%			\$ 6,500,000	100%	\$ 6,500,000	2025-2039

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3072	Hillsboro	Evergreen	229th		Add 2nd EB/WB Left turn lanes, Add NB Right Turn lane, and modify traffic signal	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2014-2024
3073	Hillsboro	Evergreen	Imbrie		Add second eastbound left turn lane	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2014-2024
3076	Hillsboro	Farmington	209th		Modify signal, add SB right turn lane, add 2nd SB left turn lane; add NB Right turn lane	\$ 1,067,000	100%			\$ 1,067,000	100%	\$ 1,067,000	2025-2039
3077	Hillsboro	Grant	Cornell		Add eastbound/westbound left turn lanes	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2025-2039
3078	Hillsboro	Harewood	at Jackson School		Construct Roundabout	\$ 772,466	100%			\$ 772,466	100%	\$ 772,466	2025-2039
3079	Hillsboro	Huffman	Jackson School	Brookwood	Construct 3 or 5-lane arterial	\$ 67,000,000	100%			\$ 67,000,000	100%	\$ 67,000,000	2014-2024
3080	Hillsboro	Imbrie	Evergreen	Cornelius Pass	Widen to accommodate second EB lane	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2014-2024
3081	Hillsboro	Imlay	TV Hwy		Signalize	\$ 364,000	75%			\$ 273,000	100%	\$ 273,000	2025-2039
3082	Hillsboro	Jackson School	Evergreen	Grant	Widen to 3 lanes	\$ 7,000,000	100%	MSTIP	\$5,000,000	\$ 2,000,000	100%	\$ 2,000,000	2014-2024
3083	Hillsboro	Jacobson	Century		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3084	Hillsboro	Jacobson	Croeni		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3085	Hillsboro	Kinnaman	229th	209th	New 3 lane collector	\$ 9,916,000	100%			\$ 9,916,000	100%	\$ 9,916,000	2014-2024
3086	Hillsboro	Kinnaman	West Neighborhood Route		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3087	Hillsboro	Kinnaman	East Neighborhood Route		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3089	Hillsboro	Meek	West UGB	Starr	Widen to 3 lanes	\$ 13,500,000	100%			\$ 13,500,000	100%	\$ 13,500,000	2025-2039
3090	Hillsboro	Minter Bridge	River Rd	South UGB	Construct ped/bike improvements	\$ 2,250,000	100%			\$ 2,250,000	100%	\$ 2,250,000	2014-2024
3091	Hillsboro	Quatama	227th	205th	Widen to 3 lanes	\$ 8,210,299	100%			\$ 8,210,299	100%	\$ 8,210,299	2025-2039
3092	Hillsboro	River	Rood Bridge		Add eastbound right turn lane	\$ 750,000	100%			\$ 750,000	100%	\$ 750,000	2025-2039
3093	Hillsboro	Rosedale	River Rd		Construct roundabout	\$ 1,031,000	100%			\$ 1,031,000	100%	\$ 1,031,000	2025-2039
3094	Hillsboro	Rosedale	River Rd	229th	Widen 2-lane, add shoulder improvements	\$ 1,321,000	100%			\$ 1,321,000	100%	\$ 1,321,000	2025-2039
3095	Hillsboro	Rosedale	Century		Add EB left turn lane	\$ 380,000	100%			\$ 380,000	100%	\$ 380,000	2025-2039
3096	Hillsboro	Rosedale	Century	209th	Widen to 3 lanes	\$ 4,986,000	100%			\$ 4,986,000	100%	\$ 4,986,000	2025-2039
3097	Hillsboro	Rosedale	209th		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2014-2024
3098	Hillsboro	Stucki Extension	Walker	Wilkins extension	New 3-lane Collector with Multi-modal improvements; 5-lane at Walker Road approach, Realign Stucki North of Walker	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2025-2039
3099	Hillsboro	Stucki Extension	Wilkins Extension		Signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3100	Hillsboro	Stucki Extension	Wilkins	205th/206th	New 3-lane collector with Multi-modal improvements	\$ 6,500,000	100%			\$ 6,500,000	100%	\$ 6,500,000	2025-2039
3101	Hillsboro	Stucki extension	205th/206th		Signalize or construct roundabout	\$ 1,100,000	100%			\$ 1,100,000	100%	\$ 1,100,000	2025-2039
3102	Hillsboro	Murphy	Century	209th	New 3 lane collector	\$ 9,047,000	100%			\$ 9,047,000	100%	\$ 9,047,000	2014-2024
3103	Hillsboro	Wilkins	194th extension	185th	New 3 lane extension	\$ 16,000,000	100%			\$ 16,000,000	100%	\$ 16,000,000	2025-2039
3104	Hillsboro	Witch Hazel	River		signalize	\$ 364,000	100%			\$ 364,000	100%	\$ 364,000	2025-2039
3105	Hillsboro	Hidden Creek	47th	53rd	New 3 lane collector	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2014-2024

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3106	Hillsboro	Schaaf	Helvetia	520 ft east of Helvetia	Right-of-way acquisition only	\$ 600,000	100%			\$ 600,000	100%	\$ 600,000	2014-2024
3107	Hillsboro	Meek	West UGB	Jackson School	Safety improvements	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2014-2024
3108	Hillsboro	Evergreen	Town Center	185th	Construct 2nd Westbound through lane	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2014-2024
3109	Hillsboro	185th	Evergreen	Sunset Hwy	Extend northbound right-turn lane to Evergreen, provide dual right-turns onto WB on-ramp	\$ 3,500,000	100%			\$ 3,500,000	100%	\$ 3,500,000	2014-2024
3110	Hillsboro	47th	Brookwood/Ihly	Hidden Creek	Improve 2-lane roadway and construct sidewalk	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2025-2039
3111	Hillsboro	Huffman (east leg)	Brookwood		Add second eastbound receiving lane and signalize future public street on eastern leg of intersection	\$ 4,200,000	100%			\$ 4,200,000	100%	\$ 4,200,000	2018-2024
3112	Hillsboro	Jackson School	US 26 WB Ramps	Meek	Intersection improvements	\$ 8,356,000	100%			\$ 8,356,000	100%	\$ 8,356,000	2025-2039
3113	Hillsboro	Jackson School	Waible Creek	Evergreen	Widen 3-Lane Arterial	\$ 8,700,000	100%			\$ 8,700,000	100%	\$ 8,700,000	2014-2024
3114	Hillsboro	Sewell Avenue	Meek	Evergreen	Construct 2-Lane Collector	\$ 9,800,000	100%			\$ 9,800,000	100%	\$ 9,800,000	2025-2039
3115	Hillsboro	25th	Jackson School	Beacon	Construct 3-Lane Arterial and Realignment	\$ 18,978,000	100%			\$ 18,978,000	100%	\$ 18,978,000	2025-2039
3116	Hillsboro	Jackson School	Huffman		Signalize or Roundabout	\$ 1,108,000	100%			\$ 1,108,000	100%	\$ 1,108,000	2025-2039
3117	Hillsboro	Jackson School	25th		Signalize	\$ 500,000	75%			\$ 375,000	100%	\$ 375,000	2025-2039
3118	Hillsboro	TV Hwy	Brookwood		Add SB Right-Turn Lane and Dual WB Left-Turn Lanes	\$ 3,812,000	100%			\$ 3,812,000	100%	\$ 3,812,000	2025-2039
3119	Hillsboro	Brookwood	Alexander	River	Construct 3-Lane Arterial and Gordon Creek Bridge	\$ 21,600,000	100%			\$ 21,600,000	100%	\$ 21,600,000	2025-2039
3120	Hillsboro	Brookwood	Hazeltine		Construct Roundabout or Traffic Signal	\$ 1,108,000	100%			\$ 1,108,000	100%	\$ 1,108,000	2025-2039
3121	Hillsboro	Brookwood	Davis		Signalize	\$ 471,000	75%			\$ 353,250	100%	\$ 353,250	2025-2039
3122	Hillsboro	River	Pheasant		Signalize	\$ 453,000	75%			\$ 339,750	100%	\$ 339,750	2025-2039
3123	Hillsboro	River	Brookwood		Construct Roundabout	\$ 1,108,000	100%			\$ 1,108,000	100%	\$ 1,108,000	2025-2039
3124	Hillsboro	Baseline/ Main	Century		Add SB, EB, WB Right-Turn Lanes	\$ 3,480,000	100%			\$ 3,480,000	100%	\$ 3,480,000	2025-2039
3125	Hillsboro	Helvetia	West Union	US26	Construct 3-Lane Arterial	\$ 8,800,000	100%			\$ 8,800,000	100%	\$ 8,800,000	2025-2039
3126	Hillsboro	West Union	Helvetia	Cornelius Pass	Construct 3-Lane Arterial	\$ 15,900,000	100%			\$ 15,900,000	100%	\$ 15,900,000	2025-2039
3127	Hillsboro	Gibbs	Walker	Stucki	Construct 3-Lane Collector	\$ 1,428,000	100%			\$ 1,428,000	100%	\$ 1,428,000	2014-2024
3128	Hillsboro	Gibbs	Walker		Signalize	\$ 450,000	75%			\$ 337,500	100%	\$ 337,500	2025-2039
3129	Hillsboro	Brookwood	US26 WB Ramps		Modify signal control, lane configuration, and signage for WB to SB Exit Ramp	\$ 810,000	75%			\$ 607,500	100%	\$ 607,500	2025-2039
3130	Hillsboro	Brookwood	US26 EB Ramps		Add Dual NB Right-Turn Lanes	\$ 2,400,000	100%			\$ 2,400,000	100%	\$ 2,400,000	2025-2039
3131	Hillsboro	River	Davis	UGB	Widen to 3-Lane Arterial	\$ 7,455,000	100%			\$ 7,455,000	100%	\$ 7,455,000	2025-2039
3132	Hillsboro	Hazeltine	Brookwood	UGB	Construct 2-Lane Collector	\$ 5,151,000	100%			\$ 5,151,000	100%	\$ 5,151,000	2025-2039
3134	Hillsboro	Brookwood	Crescent Trail		Construct grade-separated trail overcrossing	\$ 3,500,000	100%			\$ 3,500,000	100%	\$ 3,500,000	2025-2039
Hillsboro TOTAL						\$ 597,068,466				\$ 586,206,466		\$ 586,206,466	
8300	King City	131st	Beef Bend	Fischer	Improve to collector standards	\$ 1,600,000	100%			\$ 1,600,000	86%	\$ 1,376,000	2014-2024

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King City TOTAL						\$ 1,600,000				\$ 1,600,000		\$ 1,376,000	
9600	North Plains	Commercial	Main	Glencoe	Widen street, add parking, bike and pedestrian facilities	\$ 4,320,000	100%			\$ 4,320,000	100%	\$ 4,320,000	2022-2032
9601	North Plains	Cottage	Gordon	321st	Construct new two-lane collector	\$ 1,300,000	100%			\$ 1,300,000	100%	\$ 1,300,000	2025-2039
9602	North Plains	Main	Commercial	Pacific	Widen street, add parking, bike and pedestrian facilities	\$ 1,250,000	100%			\$ 1,250,000	100%	\$ 1,250,000	2014-2024
9603	North Plains	Pacific	Glencoe		Add new signal	\$ 297,102	75%			\$ 222,827	100%	\$ 222,827	2025-2039
9604	North Plains	West Union	Glencoe	Jackson School	Widen existing travel lanes to standard and add pedestrian and bicycle trails	\$ 2,365,000	50%			\$ 1,182,500	100%	\$ 1,182,500	2025-2039
9605	North Plains	Glencoe	RR Tracks	North UGB	Add bike and pedestrian facilities and planter strip	\$ 865,000	100%			\$ 865,000	100%	\$ 865,000	2018-2024
9606	North Plains	North	Shadybrook	Gordon	Full urban upgrade on both sides of street, including ADA, sidewalks, crossings, bike lanes, parking, landscape strip, etc.	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2018-2026
9607	North Plains	Glencoe	Commercial		Add traffic signal or roundabout	\$ 7,000,000	100%	MSTIP	\$ 6,000,000	\$ 1,000,000	100%	\$ 1,000,000	2023-2028
9608	North Plains	322nd Ave	Pacific	Cottage	New north-south collector street	\$ 400,000	100%			\$ 400,000	100%	\$ 400,000	2019-2025
9609	North Plains	Gordon	Commercial	North	Add sidewalks and bike lanes	\$ 2,125,000	100%			\$ 2,125,000	100%	\$ 2,125,000	2023-2028
9610	North Plains	313th	Commercial	Highland Ct	Add sidewalks, bike lanes and planter strips	\$ 1,305,000	100%			\$ 1,305,000	100%	\$ 1,305,000	2019-2025
9611	North Plains	Pacific	Glencoe	322nd	Add sidewalks, bike lanes, planter strips, on-street parking, intersection bulb-outs	\$ 3,695,000	100%			\$ 3,695,000	100%	\$ 3,695,000	2019-2025
9612	North Plains	Glencoe	North		Roundabout or signalization and left-turn lane	\$ 750,000	100%			\$ 750,000	100%	\$ 750,000	2019-2025
North Plains TOTAL						\$ 28,672,102				\$ 21,415,327		\$ 21,415,327	
4001	Sherwood	OR 99W	Ice Age Tonquin Trail		Install Hwy 99W pedestrian regional trail undercrossing, includes stream and animal corridor sections	\$ 21,000,000	100%			\$ 21,000,000	100%	\$ 21,000,000	2025-2035
4002	Sherwood	Arrow	Langer Farms	Gerda	Construct new 2-lane road to collector standards	\$ 7,427,562	100%			\$ 7,427,562	100%	\$ 7,427,562	2025-2039
4003	Sherwood	Arrow/Galbreath	Gerda	Cipole	Construct 2-lane collector road	\$ 2,317,399	100%			\$ 2,317,399	100%	\$ 2,317,399	2014-2024
4004	Sherwood	Baker	Sunset	UGB south	Upgrade road to 2-lane arterial with bike lanes, sidewalks, and planter strips.	\$ 779,000	100%			\$ 779,000	100%	\$ 779,000	2014-2024
4005	Sherwood	Baler	Tualatin-Sherwood	Langer Farms	Construct 2-lane collector status road with bike lanes, sidewalks, and planter strips	\$ 3,802,000	100%			\$ 3,802,000	100%	\$ 3,802,000	2025-2039
4006	Sherwood	Brookman	OR 99W		Realign Brookman Road to intersection with Hwy 99W north of existing location, install signalized intersection on Hwy 99W, install grade seperated railroad crossing	\$ 21,400,000	100%			\$ 21,400,000	100%	\$ 21,400,000	2014-2024
4007	Sherwood	Brookman	OR 99W	Ladd Hill	Add turn lanes and center median	\$ 13,440,917	100%			\$ 13,440,917	100%	\$ 13,440,917	2014-2024

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4008	Sherwood	Brookman	Middleton		Traffic control improvements; add turn lane and relocate stop signage	\$ 250,000	75%			\$ 187,500	100%	\$ 187,500	2025-2039
4009	Sherwood	Cedar Brook	Elwert	Handley	Construct 2-lane collector road	\$ 13,000,000	100%			\$ 13,000,000	100%	\$ 13,000,000	2025-2039
4010	Sherwood	Edy	Borchers		Improve 3-leg intersection, possible roundabout	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2025-2039
4011	Sherwood	Edy	City limit west	Borchers	Widen to a 3-lane collector status with bike lanes, sidewalks, and planter strips.	\$ 8,600,000	100%			\$ 8,600,000	100%	\$ 8,600,000	2014-2024
4012	Sherwood	Edy/Sherwood	Borchers	3rd	Add turn lanes and center median	\$ 7,427,562	100%			\$ 7,427,562	100%	\$ 7,427,562	2014-2024
4013	Sherwood	Edy	OR 99W		Capacity improvements include adding turn lanes, eliminating split phase timing, and adding Hwy 99W crossing on south approach	\$ 1,070,000	100%			\$ 1,070,000	100%	\$ 1,070,000	2014-2024
4014	Sherwood	Edy to Roy Rogers Connector	Edy	Roy Rogers	Construct 2-lane collector status road located between Lynny Way and Cedarview Way	\$ 3,400,000	100%			\$ 3,400,000	100%	\$ 3,400,000	2025-2039
4015	Sherwood	Elwert	Edy	SW Haide	Widen to 3-lane arterial status with turn lanes, bike lanes, sidewalks, and planter strip.	\$ 10,500,000	100%			\$ 10,500,000	100%	\$ 10,500,000	2014-2024
4017	Sherwood	Elwert	Edy		Intersection improvement	\$ 5,500,000	100%			\$ 5,500,000	100%	\$ 5,500,000	2014-2024
4018	Sherwood	Herman	Langer Farms	Cipole	Construct collector status road to connect Cipole Road to Langer Farms Parkway North, includes bike lanes, sidewalks, and planter strips	\$ 8,190,000	100%			\$ 8,190,000	100%	\$ 8,190,000	2025-2039
4019	Sherwood	Ladd Hill	Sunset	UGB south	Widen to 3-lane arterial status with bike lanes, sidewalks, and planter strips.	\$ 6,340,000	100%			\$ 6,340,000	100%	\$ 6,340,000	2014-2024
4020	Sherwood	Langer	Baler	Sherwood	Construct improvements consistent with Town Center Plan; buffered bike lanes, on-street parking, wider sidewalks, narrower travel lanes, removal of center turn lane, landscaping	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2014-2024
4021	Sherwood	Langer Farms	North and west of intersection with OR 99W	OR 99W	Construct 2-lane collector status road.	\$ 3,243,000	100%			\$ 3,243,000	100%	\$ 3,243,000	2025-2039
4022	Sherwood	Oregon	Railroad crossing	Murdock	Upgrade Oregon Street to 3-lane collector with sidewalk (south side), multi-use path (north side), bike lanes, and planter strips	\$ 8,400,000	100%			\$ 8,400,000	100%	\$ 8,400,000	2014-2024
4023	Sherwood	Oregon	Tonquin		Construct roundabout north of Oregon St/Murdock Roundabout	\$ 2,940,000	100%			\$ 2,940,000	100%	\$ 2,940,000	2014-2024
4024	Sherwood	Pine	Division	Sunset	New road extension across railroad tracks from Railroad Street to Willamette Street, existing County road to be widened. Phase 2: upgrade road to collector standards.	\$ 2,800,000	100%			\$ 2,800,000	100%	\$ 2,800,000	2014-2024

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4025	Sherwood	Sherwood	Langer		Remove traffic signal. Allow left-in turns only (no lefts from Langer to Sherwood Blvd); capacity issues related to queuing at Hwy 99W	\$ 900,000	25%			\$ 225,000	100%	\$ 225,000	2014-2024
4026	Sherwood	Sherwood	Century		Improve intersection, possible roundabout in conjunction with 1050-30 (roundabout at Edy and Borchers); capacity issues related to queuing at Hwy 99W	\$ 386,233	100%			\$ 386,233	100%	\$ 386,233	2025-2039
4027	Sherwood	Sunset	Main		Install Traffic Signal	\$ 250,000	100%			\$ 250,000	100%	\$ 250,000	2025-2039
4028	Sherwood	Sunset	Eucalyptus	Aldergrove	Upgrade road to 3-lane arterial with bike lanes, sidewalks, planter strips. Address vertical sight distance issue near Pine Street.	\$ 8,316,000	100%			\$ 8,316,000	100%	\$ 8,316,000	2014-2024
4029	Sherwood	Sunset	Timbrel		Install single lane roundabout	\$ 300,000	100%			\$ 300,000	100%	\$ 300,000	2025-2039
4030	Sherwood	Tonquin Employment Area East/West Collector	Oregon	124th	Construct collector status road to serve Tonquin Employment Area and connect Oregon Street to SW 124th Avenue	\$ 13,000,000	100%			\$ 13,000,000	100%	\$ 13,000,000	2025-2039
4031	Sherwood	Hwy 99W	Sunset		Construct a 630 foot long 12 foot wide pedestrian bridge across 99W, Elwert and Kruger	\$ 22,500,000	100%			\$ 22,500,000	100%	\$ 22,500,000	2020-2025
Sherwood TOTAL						\$ 201,479,673				\$ 200,742,173		\$ 200,742,173	
5000	Tigard	68th	OR 99W		Intersection improvement	\$ 2,394,646	100%			\$ 2,394,646	100%	\$ 2,394,646	2025-2039
5001	Tigard	68th	Atlanta	Haines	Intersection improvement	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2025-2039
5002	Tigard	72nd	OR 99W		Turn lanes	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2025-2039
5003	Tigard	72nd	OR 99W	Hampton	Complete Street, consistent with adopted plan up to 5-lanes	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2014-2024
5004	Tigard	72nd	Hampton	Hunziker	Add southbound right turn & protected left turn phasing	\$ 386,233	100%			\$ 386,233	100%	\$ 386,233	2025-2039
5005	Tigard	72nd	Hampton	Hunziker	Expand the 217 overpass at 72nd Ave. to accommodate all modes up to 5 lanes	\$ 30,000,000	100%			\$ 30,000,000	100%	\$ 30,000,000	2014-2024
5006	Tigard	72nd	Hunziker	Bonita	Complete missing sidewalks and bike lanes	\$ 7,261,185	100%			\$ 7,261,185	100%	\$ 7,261,185	2014-2024
5007	Tigard	72nd	Bonita		Intersection improvement	\$ 1,114,134	100%			\$ 1,114,134	90%	\$ 998,380	2025-2039
5008	Tigard	72nd	Bonita	Durham	Complete Street, consistent with adopted plan up to 5-lanes	\$ 9,269,598	100%			\$ 9,269,598	100%	\$ 9,269,598	2014-2024
5009	Tigard	72nd	Carman		NB right turn lane	\$ 308,987	100%			\$ 308,987	100%	\$ 308,987	2025-2039
5010	Tigard	72nd	Upper Boones Ferry		Intersection improvement & signal upgrade	\$ 1,544,933	100%			\$ 1,544,933	89%	\$ 1,368,928	2025-2039
5011	Tigard	OR 99W	Walnut		Intersection improvements	\$ 5,000,000	100%			\$ 5,000,000	84%	\$ 4,220,000	2014-2024
5013	Tigard	OR 99W	Durham		Intersection improvements	\$ 10,000,000	100%			\$ 10,000,000	99%	\$ 9,860,000	2014-2024
5014	Tigard	121st	North Dakota		New signal system	\$ 231,740	100%			\$ 231,740	100%	\$ 231,740	2025-2039
5015	Tigard	121st	North Dakota	Walnut	Widen to 3 lanes with sidewalks & bikelanes	\$ 7,647,418	100%			\$ 7,647,418	100%	\$ 7,647,418	2025-2039
5016	Tigard	121st	Whistler	Tippit	Widen with sidewalks and bike lanes	\$ 4,325,812	100%			\$ 4,325,812	100%	\$ 4,325,812	2025-2039
5017	Tigard	Bonita	Hall	I-5	Widen to 4 lanes	\$ 6,179,732	100%			\$ 6,179,732	85%	\$ 5,272,615	2014-2024

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5018	Tigard	Bonita	Sequoia		New traffic signal and turn lanes	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2014-2024
5019	Tigard	Carman	I-5		Turn lanes	\$ 1,081,453	100%			\$ 1,081,453	100%	\$ 1,081,453	2025-2039
5020	Tigard	Dartmouth	OR 99W		Intersection Improvements	\$ 6,000,000	100%			\$ 6,000,000	100%	\$ 6,000,000	2025-2039
5021	Tigard	Dartmouth	72nd	68th	Widen to 4 lanes	\$ 1,853,920	100%			\$ 1,853,920	100%	\$ 1,853,920	2014-2024
5022	Tigard	Durham	Upper Boones Ferry		Intersection improvement	\$ 1,544,933	100%			\$ 1,544,933	89%	\$ 1,368,928	2025-2039
5023	Tigard	Greenburg	Olsen	Hall	Intersection improvement	\$ 849,713	100%			\$ 849,713	93%	\$ 791,613	2014-2024
5024	Tigard	Greenburg	Shady	Tiedeman	Widen to 5 lanes	\$ 8,000,000	100%			\$ 8,000,000	84%	\$ 6,745,098	2014-2024
5026	Tigard	Greenburg	Tiedeman	OR 99W	Complete street up to 5 lanes	\$ 14,900,000	100%			\$ 14,900,000	100%	\$ 14,900,000	2014-2024
5027	Tigard	Hall	Pfaffle		New traffic signal and turn lanes	\$ 1,260,000	100%			\$ 1,260,000	100%	\$ 1,260,000	2014-2024
5028	Tigard	Hall	McDonald	Bonita	Turn lanes at both intersections; aux lanes between intersections; bike lanes and sidewalks	\$ 8,900,000	100%			\$ 8,900,000	93%	\$ 8,277,000	2014-2024
5029	Tigard	Highway 217 Overcrossing	Hunziker	Tigard Triangle (Beveland)	Construct new complete street overcrossing of Hwy 217	\$ 30,000,000	100%			\$ 30,000,000	100%	\$ 30,000,000	2014-2024
5030	Tigard	Locust	Greenburg	Hall	Complete street improvement	\$ 2,471,893	100%			\$ 2,471,893	100%	\$ 2,471,893	2025-2039
5031	Tigard	McDonald	Hall		Right turn lane from Hall to McDonald & signal system upgrade	\$ 772,466	100%			\$ 772,466	99%	\$ 766,702	2025-2039
5032	Tigard	Nimbus	Scholls Ferry		Intersection improvement	\$ 1,776,673	100%			\$ 1,776,673	100%	\$ 1,776,673	2025-2039
5033	Tigard	Nimbus extension	Scholls Ferry	Greenburg	3-lane extension	\$ 23,173,994	100%			\$ 23,173,994	100%	\$ 23,173,994	2014-2024
5034	Tigard	Scoffins	Hunziker	Hall	Reconfigure Scoffins to intersect Hall at Hunziker & modify to 4-way signal	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2025-2039
5035	Tigard	Tiedeman / North Dakota	Tigard	Greenburg	Realign one or both streets so they intersect west of the railroad	\$ 10,000,000	75%			\$ 7,500,000	89%	\$ 6,675,000	2014-2024
5036	Tigard	Upper Boones Ferry	Durham	I-5	Widen to 5 lanes	\$ 6,000,000	100%			\$ 6,000,000	89%	\$ 5,340,000	2014-2024
5037	Tigard	Walnut	121st	Tiedeman	Widen to 3 lanes	\$ 4,325,812	100%			\$ 4,325,812	100%	\$ 4,325,812	2025-2039
5038	Tigard	Walnut	Tiedeman	OR 99W	Widen to 3 lanes	\$ 3,862,332	100%			\$ 3,862,332	100%	\$ 3,862,332	2025-2039
5039	Tigard	Walnut	OR 99W		Intersection improvement	\$ 1,776,673	100%			\$ 1,776,673	100%	\$ 1,776,673	2025-2039
5040	Tigard	Walnut extension	OR 99W	Scoffins	New 3-lane collector	\$ 29,353,726	100%			\$ 29,353,726	100%	\$ 29,353,726	2014-2024
5041	Tigard	Washington Square Overcrossing (South)	Nimbus	South mall area (Locust St.)	2-lane overcrossing of Hwy. 217 with sidewalks & bikelanes	\$ 39,781,536	100%			\$ 39,781,536	100%	\$ 39,781,536	2025-2039
5042	Tigard	Roy Rogers	Scholls Ferry	UGB	Widen to 5 lanes	\$ 39,400,000	100%	RT TSDC		\$ 39,400,000	74%	\$ 29,156,000	2014-2024
5044	Tigard	Atlanta	68th	74th	Extend collector roadway	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2025-2039
5045	Tigard	74th	99W	Hermoso/Beveland	Extend collector roadway	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2025-2039
5046	Tigard	McDonald	Hall	99W	Complete street improvement	\$ 10,100,000	100%			\$ 10,100,000	96%	\$ 9,696,000	2014-2024
5047	Tigard	Hunziker	72nd	Hall	Sidewalk infill and bike lanes	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2014-2024
5049	Tigard	Wall St Ext	Wall	Tech Center Dr	New Street from Hunziker to Tech Center Dr	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2019-2030
5050	Tigard	Durham/Upper Boones Ferry	Upper Boones Ferry	92nd Ave	Install traffic signal coordination on Durham and Upper Boones Ferry	\$ 1,000,000	100%			\$ 1,000,000	56%	\$ 560,000	2014-2024
5051	Tigard	OR 99W	Hall Blvd		Intersection Improvements	\$ 6,500,000	100%			\$ 6,500,000	100%	\$ 6,500,000	2019-2029
Tigard TOTAL						\$ 402,349,541				\$ 399,849,541		\$ 383,039,894	

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6000	Tualatin	65th	Nyberg Lane	I-205	Multi-use path along 65th and northbound turn lane at Borland	\$ 9,734,000	100%			\$ 9,734,000	82%	\$ 8,023,973	2025-2039
6001	Tualatin	95th	Tualatin-Sherwood	Avery	Bike lanes	\$ 2,920,000	100%			\$ 2,920,000	100%	\$ 2,920,000	2014-2024
6003	Tualatin	115th	Blake	124th	New street - major collector	\$ 31,446,000	100%			\$ 31,446,000	100%	\$ 31,446,000	2025-2039
6004	Tualatin	124th/Basalt Creek	Tualatin-Sherwood	Grahams Ferry	Widen to 5 lanes, pedestrian & bicycle facilities, signal at Tonquin/124th	\$ 14,000,000	100%			\$ 14,000,000	100%	\$ 14,000,000	2014-2024
6005	Tualatin	Avery	Tualatin-Sherwood	Teton	Widen to 3 lanes	\$ 3,600,000	100%			\$ 3,600,000	100%	\$ 3,600,000	2025-2039
6006	Tualatin	Avery	105th		Signal - new	\$ 254,914	75%			\$ 191,185	100%	\$ 191,185	2025-2039
6007	Tualatin	Avery	Teton		Signal - new	\$ 339,885	75%			\$ 254,914	100%	\$ 254,914	2025-2039
6008	Tualatin	Basalt Creek East-West Arterial	Boones Ferry	I-5	Extend 4/5-lane arterial to I-5.	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2040+
6009	Tualatin	Blake	124th	115th	New street - minor collector	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2025-2039
6010	Tualatin	Boones Ferry	Lower Boones Ferry		Fill sidewalk gaps	\$ 50,000	100%			\$ 50,000	100%	\$ 50,000	2014-2024
6011	Tualatin	Boones Ferry	Lower Boones Ferry	Martinazzi	Widen to 5 lanes and bridge	\$ 13,579,200	100%			\$ 13,579,200	90%	\$ 12,265,084	2014-2024
6012	Tualatin	Boones Ferry	Tualatin-Sherwood	lbach	Widen to 3 lanes	\$ 5,098,279	100%			\$ 5,098,279	92%	\$ 4,690,416	2014-2024
6013	Tualatin	Boones Ferry	lbach	South City Limits	Complete Street with capacity improvements for traffic growth.	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2025-2039
6015	Tualatin	Cipole	OR 99W	Tualatin-Sherwood	Add left turn lane & bike lanes	\$ 20,000,000	100%			\$ 20,000,000	100%	\$ 20,000,000	2025-2039
6016	Tualatin	Cipole	Cummins		Signal - new	\$ 339,885	75%			\$ 254,914	100%	\$ 254,914	2025-2039
6017	Tualatin	Cipole	Herman		Realign intersection - Signal or Roundabout	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2014-2024
6018	Tualatin	Grahams Ferry	lbach	Helenius	Widen to 3 lanes, fill sidewalk gaps	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2014-2024
6019	Tualatin	Grahams Ferry	Helenius		Signal - new	\$ 1,000,000	75%			\$ 750,000	100%	\$ 750,000	2025-2039
6020	Tualatin	Hazelbrook	OR 99W	Jurgens	Widen to 3 lanes	\$ 3,543,000	100%			\$ 3,543,000	100%	\$ 3,543,000	2025-2039
6021	Tualatin	Helenius	109th	Grahams Ferry	Widen to 3 lanes	\$ 1,403,000	100%			\$ 1,403,000	100%	\$ 1,403,000	2025-2039
6022	Tualatin	Herman	124th	Tualatin	Fill sidewalk & bike lane gaps	\$ 3,393,000	100%			\$ 3,393,000	100%	\$ 3,393,000	2014-2024
6023	Tualatin	Herman	Cipole	124th	Add sidewalk, bike lanes, and center turn lane	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2014-2024
6024	Tualatin	Leveton	108th		Signal - new	\$ 750,000	75%			\$ 562,500	100%	\$ 562,500	2025-2039
6026	Tualatin	Martinazzi	Boones Ferry	Warm Springs	Bike lane	\$ 2,403,000	100%			\$ 2,403,000	100%	\$ 2,403,000	2014-2024
6028	Tualatin	McEwan	65th	Lake Oswego city limit	Urban Upgrade to complete street with sidewalks, bike lanes, and center turn lane.	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2025-2039
6029	Tualatin	Myslony	124th	112th	Widen to 3 lanes, add bridge	\$ 7,000,000	100%			\$ 7,000,000	100%	\$ 7,000,000	2014-2024
6030	Tualatin	Norwood	Boones Ferry	East city limits	Widen to 3 lanes, add sidewalks & bike lanes	\$ 3,129,000	100%			\$ 3,129,000	100%	\$ 3,129,000	2014-2024
6031	Tualatin	Sagert	I-5 overpass	72nd	Bike lanes & sidewalks; Includes signal at Boones Ferry/Norwood	\$ 3,282,000	100%			\$ 3,282,000	100%	\$ 3,282,000	2028-2040
6033	Tualatin	Teton	Tualatin		Signal - new	\$ 1,000,000	75%			\$ 750,000	100%	\$ 750,000	2014-2024
6034	Tualatin	Teton	Herman	Tualatin-Sherwood	Widen to 3 lanes	\$ 2,464,000	100%			\$ 2,464,000	100%	\$ 2,464,000	2025-2039
6035	Tualatin	Teton	Tualatin-Sherwood		Add SB right turn lane	\$ 890,000	100%			\$ 890,000	100%	\$ 890,000	2014-2024

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6036	Tualatin	Tualatin	115th		Signal - new	\$ 1,000,000	75%			\$ 750,000	100%	\$ 750,000	2025-2039
6037	Tualatin	Tualatin-Sherwood	Boones Ferry		Intersection Improvement - additional turn or through lanes	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2014-2024
6038	Tualatin	Nyberg	I-5		Additional on-ramp lane from westbound Nyberg to northbound I-5 (NE quadrant of interchange)	\$ 792,000	100%			\$ 792,000	100%	\$ 792,000	2014-2024
6039	Tualatin	Boones Ferry	Salinan		Intersection improvements including traffic signal, ADA	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2020-2035
Tualatin TOTAL						\$ 204,411,163				\$ 203,239,992		\$ 199,807,987	
1000	Wash Co	80th	Oleson	Oak	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 13,000,000	90%			\$ 11,700,000	100%	\$ 11,700,000	2040+
1001	Wash Co	92nd/Allen	Scholls Ferry	Garden Home	Widen to 3 lanes	\$ 3,922,000	100%			\$ 3,922,000	85%	\$ 3,325,673	2025-2039
1002	Wash Co	113th	McDaniel	Rainmont	New 2-lane collector road	\$ 6,000,000	100%			\$ 6,000,000	100%	\$ 6,000,000	2025-2039
1003	Wash Co	113th	Rainmont	Cornell	Sidewalk infill	\$ 6,300,000	90%			\$ 5,670,000	100%	\$ 5,670,000	2025-2039
1004	Wash Co	119th	McDaniel	Cornell	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 12,000,000	90%			\$ 10,800,000	100%	\$ 10,800,000	2040+
1005	Wash Co	160th	TV Hwy	Farmington	Widen to 3 lanes	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2025-2039
1006	Wash Co	170th	Merlo	Alexander	Widen to 4/5 lanes with enhanced bicycle & pedestrian facilities; replace bridge over Beaverton Creek	\$ 15,277,000	100%			\$ 15,277,000	84%	\$ 12,839,181	2014-2024
1007	Wash Co	173rd	Bronson	Cornell	Extend 173rd Ave under or over US 26 connecting to 174th Ave	\$ 58,640,000	100%			\$ 58,640,000	100%	\$ 58,640,000	2025-2039
1008	Wash Co	174th	Meadowgrass	Bronson	Widen to 3 lanes	\$ 16,230,000	100%			\$ 16,230,000	100%	\$ 16,230,000	2025-2039
1009	Wash Co	175th	Rigert	Weir	Widen to 3 lanes	\$ 13,950,000	100%			\$ 13,950,000	100%	\$ 13,950,000	2014-2024
1010	Wash Co	175th	Kemmer		Intersection improvement	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2014-2024
1011	Wash Co	175th	Outlook	Horse Tale	Realign roadway, improve to standard	\$ 6,000,000	25%			\$ 1,500,000	100%	\$ 1,500,000	2025-2039
1012	Wash Co	185th	UGB	Springville	Widen to 3 lanes	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2025-2039
1013	Wash Co	185th	Springville	West Union	Widen to 5 lanes	\$ 5,100,000	100%			\$ 5,100,000	97%	\$ 4,948,515	2014-2024
1014	Wash Co	185th	Blanton	Farmington	Widen to 5 lanes	\$ 12,163,000	100%			\$ 12,163,000	100%	\$ 12,163,000	2025-2039
1015	Wash Co	185th	Farmington	Bany	Widen to 3 lanes	\$ 14,522,370	100%			\$ 14,522,370	100%	\$ 14,522,370	2025-2039
1016	Wash Co	197th/198th	Baseline	Alexander	Add sidewalks and bike lanes; add turn lanes at appropriate intersections; eliminate offset	\$ 18,000,000	90%			\$ 16,200,000	100%	\$ 16,200,000	2040+
1017	Wash Co	198th	Alexander	Blanton	Widen to 5 lanes; add 2nd WB and EB left turn lanes on TV Hwy	\$ 10,450,000	100%			\$ 10,450,000	100%	\$ 10,450,000	2014-2024
1018	Wash Co	198th	Blanton	Farmington	Widen to 3 lanes	\$ 27,900,000	100%			\$ 27,900,000	100%	\$ 27,900,000	2014-2024
1019	Wash Co	205th/206th	Quatama	Baseline	Widen to 5 lanes; replace bridge over Beaverton Creek	\$ 31,000,000	100%			\$ 31,000,000	100%	\$ 31,000,000	2025-2039
1020	Wash Co	209th	TV Hwy	Farmington	Widen to 5 lanes; reconstruct rail crossing and signal, add EB right turn lane at TV Hwy; widen Butternut Creek bridge	\$ 44,396,000	100%			\$ 44,396,000	100%	\$ 44,396,000	2014-2024
1021	Wash Co	Alexander	192nd	178th	Add sidewalks, streetscape features, bicycle facilities, signal at 185th Ave, turn lanes at major intersections	\$ 9,293,000	90%			\$ 8,363,700	100%	\$ 8,363,700	2014-2024
1022	Wash Co	Barnes	119th	Cedar Hills	Widen to 5 lanes	\$ 4,000,000	100%			\$ 4,000,000	77%	\$ 3,072,464	2014-2024

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1023	Wash Co	Barnes	Catlin Gabel entrance	Miller	Widen to 5 lanes	\$ 18,000,000	100%			\$ 18,000,000	88%	\$ 15,824,176	2014-2024
1024	Wash Co	Barnes	Miller	County line	Widen to 3 lanes	\$ 8,800,000	100%			\$ 8,800,000	100%	\$ 8,800,000	2025-2039
1025	Wash Co	Basalt Creek East-West Arterial	Grahams Ferry	Boones Ferry	Construct new 4/5-lane arterial	\$ 30,000,000	100%			\$ 30,000,000	100%	\$ 30,000,000	2025-2039
1026	Wash Co	Beef Bend	150th	131st	Widen to 3 lanes	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2040+
1027	Wash Co	Bull Mountain	Roy Rogers	OR 99W	Widen to 3 lanes	\$ 34,000,000	100%			\$ 34,000,000	84%	\$ 28,697,248	2040+
1028	Wash Co	Butner	Murray	Cedar Hills	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 12,730,247	90%			\$ 11,457,223	100%	\$ 11,457,223	2040+
1029	Wash Co	Clutter/Ridder	Grahams Ferry	Garden Acres	Widen to 3 lanes	\$ 2,100,000	40%			\$ 840,000	100%	\$ 840,000	2025-2039
1030	Wash Co	Cornelius Pass	Frances	TV Highway	Widen to 5 lanes	\$ 11,307,000	100%			\$ 11,307,000	100%	\$ 11,307,000	2014-2024
1031	Wash Co	Cornell	US 26	Murray	Widen to 5 lanes	\$ 40,620,000	100%			\$ 40,620,000	100%	\$ 40,620,000	2025-2039
1032	Wash Co	Cornell	143rd / Science Park		Reconfigure intersection	\$ 12,400,000	100%			\$ 12,400,000	100%	\$ 12,400,000	2025-2039
1033	Wash Co	Cornell	102nd	County line	Widen to 3 lanes	\$ 18,000,000	100%			\$ 18,000,000	100%	\$ 18,000,000	2040+
1034	Wash Co	Elligsen	Wilsonville city limit	65th	Widen to 3 lanes, add turn pockets & signal at 65th	\$ 5,000,000	60%			\$ 3,000,000	100%	\$ 3,000,000	2025-2039
1035	Wash Co	Evergreen	East of 25th	West of 253rd	Multi-modal improvements	\$ 1,800,000	100%			\$ 1,800,000	100%	\$ 1,800,000	2008-2017
1036	Wash Co	Farmington	209th	185th	Widen to 5 lanes	\$ 42,000,000	100%			\$ 42,000,000	85%	\$ 35,853,659	2025-2039
1037	Wash Co	Farmington	185th	Kinnaman	Widen to 5 lanes	\$ 27,299,000	100%			\$ 27,299,000	99%	\$ 26,944,468	2025-2039
1038	Wash Co	Fischer	131st	OR 99W	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 4,580,000	90%			\$ 4,122,000	100%	\$ 4,122,000	2025-2039
1039	Wash Co	Garden Home	92nd	Oleson	Widen to 3 lanes	\$ 9,000,000	100%			\$ 9,000,000	100%	\$ 9,000,000	2025-2039
1040	Wash Co	Germantown	Cornelius Pass		Intersection improvement	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2025-2039
1041	Wash Co	Germantown	185th		Intersection improvement	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2025-2039
1042	Wash Co	Glencoe/1st	Harewood	Jackson	Widen to 3 lanes	\$ 10,700,000	100%			\$ 10,700,000	100%	\$ 10,700,000	2025-2039
1043	Wash Co	Grahams Ferry	Helenius	Clay	Widen to 3 lanes; add signal and improve geometry at Tonquin Rd	\$ 11,100,000	100%			\$ 11,100,000	100%	\$ 11,100,000	2025-2039
1044	Wash Co	Grahams Ferry	Cahalin	County line	Widen to 3 lanes; upgrade railroad crossing; add signal at Clutter Rd	\$ 9,700,000	100%			\$ 9,700,000	100%	\$ 9,700,000	2025-2039
1045	Wash Co	Greenburg	Hall	Locust	Widen to 5 lanes	\$ 23,019,501	100%			\$ 23,019,501	93%	\$ 21,445,518	2025-2039
1046	Wash Co	Hall	Scholls Ferry	Oleson	Widen to 5 lanes	\$ 2,401,000	100%			\$ 2,401,000	100%	\$ 2,401,000	2025-2039
1047	Wash Co	Hall	Oleson	OR 99W	Widen to 3 lanes	\$ 13,800,000	100%			\$ 13,800,000	95%	\$ 13,164,474	2025-2039
1048	Wash Co	Hall	OR 99W	Durham	Widen up to 5 lanes	\$ 42,500,000	100%			\$ 42,500,000	92%	\$ 39,022,727	2025-2039
1049	Wash Co	Jenkins	158th	Murray	Widen to 5 lanes	\$ 15,530,000	100%			\$ 15,530,000	79%	\$ 12,253,028	2014-2024
1050	Wash Co	Johnson	Cornelius Pass	185th	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 24,333,000	90%			\$ 21,899,700	100%	\$ 21,899,700	2025-2039
1051	Wash Co	Johnson	185th	170th	Add sidewalks and bike lanes; add turn lanes at appropriate intersections; complete missing section over drainage	\$ 14,027,000	95%			\$ 13,325,650	100%	\$ 13,325,650	2025-2039
1052	Wash Co	Kaiser/143rd	Bethany	Cornell	Widen to 3 lanes	\$ 38,357,000	100%			\$ 38,357,000	100%	\$ 38,357,000	2025-2039
1053	Wash Co	Kinnaman	209th	Farmington	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 26,810,000	90%			\$ 24,129,000	100%	\$ 24,129,000	2025-2039
1054	Wash Co	Kinnaman	198th		Realign offset intersection, signalize or add roundabout	\$ 4,971,000	100%			\$ 4,971,000	100%	\$ 4,971,000	2014-2024

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1055	Wash Co	Laidlaw	Skycrest	Lakeview	Straighten curves; add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 10,000,000	90%			\$ 9,000,000	100%	\$ 9,000,000	2025-2039
1056	Wash Co	Laidlaw	Saltzman	County line	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 22,000,000	90%			\$ 19,800,000	100%	\$ 19,800,000	2025-2039
1057	Wash Co	Leahy/90th/107th	Cornell	Barnes	Add sidewalks and bike lanes; add turn lanes at Cornell and at Barnes	\$ 10,000,000	90%			\$ 9,000,000	100%	\$ 9,000,000	2040+
1058	Wash Co	McDaniel	119th	County line	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 21,000,000	90%			\$ 18,900,000	100%	\$ 18,900,000	2040+
1059	Wash Co	Merlo	170th	MAX Light Rail	Widen to 5 lanes	\$ 16,635,000	100%			\$ 16,635,000	100%	\$ 16,635,000	2014-2024
1060	Wash Co	Miller Hill	Farmington	Gassner	Add sidewalks and bike lanes; add turn lanes at appropriate intersections	\$ 9,000,000	90%			\$ 8,100,000	100%	\$ 8,100,000	2025-2039
1061	Wash Co	Oleson	Scholls Ferry	Fanno Creek bridge	Realign Oleson Rd and reconfigure intersections with Scholls Ferry Rd and B-H Hwy	\$ 34,200,000	100%			\$ 34,200,000	100%	\$ 34,200,000	2014-2024
1062	Wash Co	River	Farmington		Intersection improvement	\$ 3,000,000	100%			\$ 3,000,000	100%	\$ 3,000,000	2025-2039
1063	Wash Co	Saltzman	Laidlaw	Bayonne	Realign 2/3-lane collector road, including bridge over Bronson Creek	\$ 11,100,000	100%			\$ 11,100,000	100%	\$ 11,100,000	2014-2024
1064	Wash Co	Saltzman	Bayonne	Bauer Woods	Widen to 3 lanes	\$ 8,000,000	100%			\$ 8,000,000	100%	\$ 8,000,000	2025-2039
1065	Wash Co	Scholls Ferry	Beaverton-Hillsdale	Allen	Widen to 3 lanes	\$ 22,587,000	100%			\$ 22,587,000	100%	\$ 22,587,000	2025-2039
1066	Wash Co	Scholls Ferry	Hall		Intersection capacity and signal improvements	\$ 2,549,139	100%			\$ 2,549,139	100%	\$ 2,549,139	2025-2039
1067	Wash Co	Scholls Ferry	OR 217	121st	Widen to 7 lanes	\$ 20,547,608	100%			\$ 20,547,608	91%	\$ 18,745,186	2040+
1068	Wash Co	Scholls Ferry	Murray		Intersection capacity and signal improvements	\$ 1,390,440	100%			\$ 1,390,440	100%	\$ 1,390,440	2025-2039
1069	Wash Co	Springville	185th	PCC entrance	Widen to 5 lanes	\$ 11,100,000	100%			\$ 11,100,000	100%	\$ 11,100,000	2014-2024
1070	Wash Co	Springville	PCC entrance	Kaiser	Widen to 3 lanes	\$ 3,600,000	100%			\$ 3,600,000	100%	\$ 3,600,000	2014-2024
1071	Wash Co	Taylor's Ferry	Oleson	Washington	New 2/3-lane road	\$ 4,390,000	100%			\$ 4,390,000	100%	\$ 4,390,000	2025-2039
1072	Wash Co	Thompson	Saltzman	County line	Widen to 3 lanes	\$ 37,000,000	100%			\$ 37,000,000	100%	\$ 37,000,000	2040+
1073	Wash Co	Tonquin	124th	Grahams Ferry	Widen to 3 lanes, grade separate at railroad, improve geometry at Grahams Ferry Rd	\$ 10,500,000	100%			\$ 10,500,000	100%	\$ 10,500,000	2018-2025
1074	Wash Co	Tualatin-Sherwood	Langer Farms	Teton	Widen to 5 lanes	\$ 31,500,000	100%	Willamette Water Supply, MSTIP		\$ 31,500,000	93%	\$ 29,295,000	2014-2024
1075	Wash Co	Tualatin-Sherwood	Baler		Reconfigure intersection at Baler Way and construct north leg of intersection	\$ 1,000,000	100%			\$ 1,000,000	100%	\$ 1,000,000	2014-2024
1076	Wash Co	Walker	194th extension	185th	Widen to 5 lanes, right-of-way for turn/auxiliary lanes	\$ 20,000,000	100%			\$ 20,000,000	100%	\$ 20,000,000	2025-2039
1077	Wash Co	Walker	185th	173rd	Widen to 5 lanes	\$ 13,570,000	100%			\$ 13,570,000	68%	\$ 9,277,449	2014-2024
1078	Wash Co	Walker	158th		Intersection capacity and signal improvements	\$ 2,549,139	100%			\$ 2,549,139	100%	\$ 2,549,139	2014-2024
1079	Wash Co	Walker	Murray	OR 217	Widen to 5 lanes	\$ 33,000,000	100%			\$ 33,000,000	90%	\$ 29,758,929	2014-2024
1080	Wash Co	West Union	Cornelius Pass	185th	Widen to 5 lanes	\$ 26,192,000	100%			\$ 26,192,000	100%	\$ 26,192,000	2014-2024
1081	Wash Co	West Union	185th	143rd	Widen to 3 lanes	\$ 34,870,000	100%			\$ 34,870,000	100%	\$ 34,870,000	2025-2039

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Project ID	Jurisdiction	Facility	From	To	Project	Project Cost	Proportion of Project Related to Capacity (%)	Other Primary Funding Source	Other Primary Funding Revenue	Eligible Capacity Amount	Growth Share	Eligible SDC Amount	Estimated Project Completion Timeframe
1082	Wash Co	158th	Walker	MAX Light Rail	Widen to 5 lanes	\$ 8,100,000	100%			\$ 8,100,000	100%	\$ 8,100,000	2014-2024
1083	Wash Co	Murray	Walker		Additional turn lanes and auxiliary lanes	\$ 15,000,000	100%			\$ 15,000,000	100%	\$ 15,000,000	2014-2024
1084	Wash Co	Thompson	Circle A	Saltzman	Realign 3-lane arterial	\$ 6,000,000	100%			\$ 6,000,000	100%	\$ 6,000,000	2014-2024
1085	Wash Co	Walker	158th	Murray	Widen to 5 lanes	\$ 10,200,000	100%			\$ 10,200,000	70%	\$ 7,140,000	2014-2024
1086	Wash Co	Roy Rogers	Borchers	Sherwood UGB	Widen to 5 lanes	\$ 12,000,000	100%			\$ 12,000,000	95%	\$ 11,400,000	2014-2024
1087	Wash Co	Roy Rogers	Sherwood UGB	Tigard UGB	Widen to 4/5 lanes	\$ 30,000,000	100%			\$ 30,000,000	70%	\$ 21,000,000	2025-2039
1088	Wash Co	Cornelius Pass	Rosedale	Farmington	New 3-lane road extension	\$ 31,800,000	100%			\$ 31,800,000	100%	\$ 31,800,000	2018-2030
1089	Wash Co	Tile Flat	Scholls Ferry	Bull Mountain	New 3-lane road extension	\$ 72,900,000	100%			\$ 72,900,000	100%	\$ 72,900,000	2018-2030
1090	Wash Co	Tile Flat	Bull Mountain	Beef Bend	New 3-lane road extension	\$ 48,500,000	100%			\$ 48,500,000	100%	\$ 48,500,000	2018-2030
1091	Wash Co	Grabhorn	Farmington	UGB	Realign curves; widen to 3-lanes	\$ 5,300,000	100%			\$ 5,300,000	100%	\$ 5,300,000	2025-2039
1092	Wash Co	Kaiser	Springville	County line	Widen to 3 lanes	\$ 12,000,000	100%			\$ 12,000,000	100%	\$ 12,000,000	2018-2030
1093	Wash Co	All arterials and collectors	Countywide	Countywide	ADA facilities (including ramps, actuators, signal modifications, equipment, etc.)	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2018-2030
1094	Wash Co	Science Park Dr	Murray	Cornell	Complete streets, pedestrian crossing, safety	\$ 7,000,000	100%			\$ 7,000,000	100%	\$ 7,000,000	2019-2030
1095	Wash Co	Hall Blvd	Scholls Ferry	Nimbus	Bike lanes and sidewalks	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2019-2030
1096	Wash Co	Cornelius Pass	West Union	County line	Shoulder widening, bridge replacement at Rock Creek, traffic signal at Germantown, turn lanes and intersection improvements at West Union	\$ 12,000,000	100%			\$ 12,000,000	100%	\$ 12,000,000	2019-2030
1097	Wash Co	Roy Rogers	Borchers	Chicken Creek	Widening, bicycle and pedestrian facilities	\$ 20,000,000	100%	Willamette Water Supply, MSTIP		\$ 20,000,000	100%	\$ 20,000,000	2019-2030
1098	Wash Co	Tualatin-Sherwood	Langer Farms	OR 99W	Widening, turn lanes, bike lanes	\$ 17,000,000	100%	Willamette Water Supply, MSTIP		\$ 17,000,000	100%	\$ 17,000,000	2019-2030
1099	Wash Co	Cornell	129th	Saltzman	Add eastbound right-turn/bus bypass lane on Cornell at Barnes, ADA curbs, modify traffic signal	\$ 1,500,000	100%			\$ 1,500,000	100%	\$ 1,500,000	2020-2030
1100	Wash Co	Terman	Murray	Hocken	Widen to 3 lanes	\$ 10,000,000	100%			\$ 10,000,000	100%	\$ 10,000,000	2025-2039
1101	Wash Co	Shannon Pl	Light Rail Tracks	Terman	Widen to 3 lanes	\$ 2,000,000	100%			\$ 2,000,000	100%	\$ 2,000,000	2025-2039
1102	Wash Co	Jenkins	Murray	Cedar Hills	Widen to 5 lanes	\$ 13,000,000	100%			\$ 13,000,000	100%	\$ 13,000,000	2025-2039
1103	Wash Co	Blanton	209th	170th	Widening, turn lanes, bicycle and pedestrian facilities, intersection improvements at 198th Ave and 185th Ave	\$ 28,500,000	100%			\$ 28,500,000	100%	\$ 28,500,000	2025-2039
1104	Wash Co	198th	Alexander	Blanton	Widen to 5-Lane Arterial	\$ 12,800,000	100%			\$ 12,800,000	100%	\$ 12,800,000	2025-2039
1105	Wash Co	TV Hwy	198th		Add Dual WB Left-Turn Lanes	\$ 2,200,000	100%			\$ 2,200,000	100%	\$ 2,200,000	2025-2039
	Wash Co	TOTAL					\$ 1,705,608,444			\$ 1,677,242,470		\$ 1,625,985,052	
8600	Wilsonville	Boones Ferry	Basalt Creek East-West Arterial	Day	Widen to 5 lanes	\$ 1,100,000	100%			\$ 1,100,000	100%	\$ 1,100,000	2025-2039
8601	Wilsonville	Day	Grahams Ferry	Boones Ferry	Widen from 3 to 5 lanes	\$ 5,800,000	80%			\$ 4,640,000	100%	\$ 4,640,000	2025-2039

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Project ID	Jurisdiction	Facility	From	To	Project	Project Cost	Proportion of Project Related to Capacity (%)	Other Primary Funding Source	Other Primary Funding Revenue	Eligible Capacity Amount	Growth Share	Eligible SDC Amount	Estimated Project Completion Timeframe
8602	Wilsonville	Day	Garden Acres		Intersection improvements, roundabout, signal/lane modifications	\$ 8,600,000	100%			\$ 8,600,000	100%	\$ 8,600,000	2014-2024
8603	Wilsonville	Day	Boones Ferry	I-5	Extend 4/5-lane arterial to I-5	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2040+
8604	Wilsonville	Elligsen	Parkway Center	Wilsonville city limit	Widen to 3 lanes	\$ 3,000,000	60%			\$ 1,800,000	100%	\$ 1,800,000	2014-2024
8605	Wilsonville	Grahams Ferry	Day	South Washington Co. Limits	Widen to 3 lanes, urban upgrade	\$ 13,200,000	60%			\$ 7,920,000	100%	\$ 7,920,000	2014-2024
8606	Wilsonville	Garden Acres	Day	Ridder	Widen, construct 3-lane road	\$ 11,300,000	100%			\$ 11,300,000	100%	\$ 11,300,000	2014-2024
8608	Wilsonville	Boones Ferry	Basalt Creek Pkwy	Day	Widen to 5 lanes	\$ 1,200,000	100%			\$ 1,200,000	100%	\$ 1,200,000	2019-2025
8609	Wilsonville	Grahams Ferry	Basalt Creek Pkwy	Day	Widen to 3 lanes, urban upgrade	\$ 13,200,000	100%			\$ 13,200,000	100%	\$ 13,200,000	2019-2025
8610	Wilsonville	I-5 Southbound	Elligsen/Boones Ferry		Widen/Construct second southbound right-turn lane	\$ 1,063,000	100%			\$ 1,063,000	100%	\$ 1,063,000	2019-2025
8611	Wilsonville	Boones Ferry	95th		Access management	\$ 2,500,000	100%			\$ 2,500,000	100%	\$ 2,500,000	2019-2025
8612	Wilsonville	Java Rd	Boones Ferry	Grahams Ferry	Construct new road (Java Rd) with signal at Grahams Ferry intersection, disconnect Clutter Street from Grahams Ferry	\$ 1,500,000	100%			\$ 1,500,000	100%	\$ 1,500,000	2020-2035
8613	Wilsonville	Grahams Ferry	RR Undercrossing		Reconstruct existing railroad undercrossing to a 3-lane cross-section.	\$ 5,000,000	100%			\$ 5,000,000	100%	\$ 5,000,000	2020-2035
8614	Wilsonville	Basalt Creek Canyon Ridge Trail	Day	Basalt Creek Parkway	Extend ped/bike network	\$ 700,000	100%			\$ 700,000	100%	\$ 700,000	2024-2034
Wilsonville TOTAL						\$ 73,163,000				\$ 65,523,000		\$ 65,523,000	
TOTAL						\$ 3,774,264,057				\$ 3,705,345,511		\$ 3,632,267,367	

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Bus Line and Bus Stop Improvements												
100	185th / Farmington Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Line 52)	\$ 2,503,000	0%	\$ 2,503,000	100%	\$ 2,503,000	100%	\$ 2,503,000	58%	\$ 1,441,728	2014-2024
101	B-H Hwy Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Line 54)	\$ 753,000	0%	\$ 753,000	100%	\$ 753,000	100%	\$ 753,000	58%	\$ 433,728	2014-2024
102	Beaverton - Tualatin Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Lines 76/78)	\$ 2,835,000	0%	\$ 2,835,000	100%	\$ 2,835,000	100%	\$ 2,835,000	58%	\$ 1,632,960	2014-2024
103	Jones Farm - South Hillsboro Bus Line Infrastructure	Shelter and stop infrastructure for new north-south bus line along Veterans Drive, Brookwood Pkwy, Century Blvd, and Alexander St (Line 41)	\$ 1,225,000	0%	\$ 1,225,000	100%	\$ 1,225,000	100%	\$ 1,225,000	58%	\$ 705,600	2025-2039
104	Cornell Rd Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Line 48)	\$ 2,933,000	0%	\$ 2,933,000	100%	\$ 2,933,000	100%	\$ 2,933,000	58%	\$ 1,689,408	2014-2024
105	Orenco-Bethany Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Line 47)	\$ 2,425,000	0%	\$ 2,425,000	100%	\$ 2,425,000	100%	\$ 2,425,000	58%	\$ 1,396,800	2014-2024
106	Pacific Hwy Near-Term Improvements	Pacific Hwy near-term shelter, stop and other improvements leading up to SW Corridor HCT	\$ 400,000	0%	\$ 400,000	100%	\$ 400,000	100%	\$ 400,000	58%	\$ 230,400	2014-2024
107	TV Hwy Near-Term Improvements	TV Hwy near-term shelter, stop and other improvements leading up to TV Hwy HCT	\$ 4,043,000	0%	\$ 4,043,000	100%	\$ 4,043,000	100%	\$ 4,043,000	58%	\$ 2,328,768	2014-2024
108	Other Bus Stop Improvements	Other shelter, stop and street improvements to support bus service as needed throughout Washington County, including North Plains, Banks, and Gaston	\$ 3,500,000	20%	\$ 2,800,000	100%	\$ 2,800,000	100%	\$ 2,800,000	58%	\$ 1,612,800	2014-2024
109	Tigard - Transit Stop Improvements	Improve stations, stops, crossings and ADA access on Hall Blvd from Commercial St to Locust St	\$ 1,000,000	0%	\$ 1,000,000	100%	\$ 1,000,000	100%	\$ 1,000,000	58%	\$ 580,000	2014-2024
110	Cornelius - Transit Stop Improvements	Upgrade transit stop amenities (shelters, seating, landing pads, route info, bike parking, lighting)	\$ 500,000	0%	\$ 500,000	100%	\$ 500,000	100%	\$ 500,000	58%	\$ 290,000	2040+
111	Burnside/Cedar Hills Bus Line Upgrades	Shelter and stop improvements to support continued development of frequent service network (Line 20)	\$ 1,300,000	0%	\$ 1,300,000	100%	\$ 1,300,000	100%	\$ 1,300,000	58%	\$ 754,000	2018-2024
112	Cornelius Pass Road Bus Line Infrastructure	Shelter and stop infrastructure for new frequent service bus line along Cornelius Pass Road (Line 47)	\$ 400,000	0%	\$ 400,000	100%	\$ 400,000	100%	\$ 400,000	58%	\$ 232,000	2018-2024
113	Baseline/Jenkins Bus Line Infrastructure	Shelter and stop infrastructure for new bus lines along Main Street, Baseline Road and Jenkins Road (Lines 40/47)	\$ 1,400,000	0%	\$ 1,400,000	100%	\$ 1,400,000	100%	\$ 1,400,000	58%	\$ 812,000	2018-2024
114	North Hillsboro - Willow Creek Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Croeni Avenue, Jacobsen Street, Brookwood Pkwy, Shute Road, and Butler Street (Line 88)	\$ 1,150,000	0%	\$ 1,150,000	100%	\$ 1,150,000	100%	\$ 1,150,000	58%	\$ 667,000	2025-2039
115	Merlo - Tigard Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Merlo Road, 170th Avenue, 155th Avenue, Beard Road, 121st Avenue, and Gaarde Street (Line 67)	\$ 1,250,000	0%	\$ 1,250,000	100%	\$ 1,250,000	100%	\$ 1,250,000	58%	\$ 725,000	2025-2039
116	Progress Ridge Bus Line Infrastructure	Shelter and stop infrastructure for reroute or extension of bus lines along Scholls Ferry Road, Horizon Blvd, Murray Blvd, and Barrows Road (Lines 37/56/62)	\$ 625,000	0%	\$ 625,000	100%	\$ 625,000	100%	\$ 625,000	58%	\$ 362,500	2025-2039

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117	South Cooper Mountain Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Scholls Ferry Road, including bus layover in South Cooper Mountain (Line 56)	\$ 275,000	0%	\$ 275,000	100%	\$ 275,000	100%	\$ 275,000	58%	\$ 159,500	2018-2024
118	West Beaverton Bus Line Infrastructure	Shelter and stop infrastructure for bus line reroute along Oak Street-Davis Road-Allen Blvd (Line 88)	\$ 325,000	0%	\$ 325,000	100%	\$ 325,000	100%	\$ 325,000	58%	\$ 188,500	2025-2039
119	Durham Road Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Durham Road (Line 36)	\$ 425,000	0%	\$ 425,000	100%	\$ 425,000	100%	\$ 425,000	58%	\$ 246,500	2025-2039
120	141st/Terman Bus Line Infrastructure	Shelter and stop infrastructure for bus line reroute along 141st Avenue-Shannon Place and Terman Road (Line 62)	\$ 125,000	0%	\$ 125,000	100%	\$ 125,000	100%	\$ 125,000	58%	\$ 72,500	2025-2039
121	McDonald/Bonita Bus Line Infrastructure	Shelter and stop infrastructure for bus line reroute along McDonald Street and Bonita Road (Line 38)	\$ 500,000	0%	\$ 500,000	100%	\$ 500,000	100%	\$ 500,000	58%	\$ 290,000	2025-2039
122	Wilsonville Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along 95th Avenue (Line 96)	\$ 125,000	0%	\$ 125,000	100%	\$ 125,000	100%	\$ 125,000	58%	\$ 72,500	2025-2039
123	Sunset – Bethany Bus Line Infrastructure	Shelter and stop infrastructure for new north-south bus line along Saltzman Road and Laidlaw Road (Line 49)	\$ 825,000	0%	\$ 825,000	100%	\$ 825,000	100%	\$ 825,000	58%	\$ 478,500	2025-2039
124	Walnut Street Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Walnut Street (Line 37)	\$ 350,000	0%	\$ 350,000	100%	\$ 350,000	100%	\$ 350,000	58%	\$ 203,000	2025-2039
125	Oleson Road Bus Line Infrastructure	Shelter and stop infrastructure for bus line extension along Oleson Road (Line 1)	\$ 225,000	0%	\$ 225,000	100%	\$ 225,000	100%	\$ 225,000	58%	\$ 130,500	2025-2039
126	Multnomah Blvd Bus Line Infrastructure	Shelter and stop infrastructure for bus line reoute along Multnomah Blvd (Line 92)	\$ 75,000	0%	\$ 75,000	100%	\$ 75,000	100%	\$ 75,000	58%	\$ 43,500	2025-2039
127	Beaverton – Sellwood Bus Line Infrastructure	Shelter and stop infrastructure for bus line reroute along Garden Home Road, 92nd Avenue, Allen Blvd, and Western Avenue (Line 45)	\$ 500,000	0%	\$ 500,000	100%	\$ 500,000	100%	\$ 500,000	58%	\$ 290,000	2025-2039
128	Amberglen - Beaverton Bus Line Infrastructure	Shelter and stop infrastructure for bus line reroute along John Olsen Avenue, Alocek Drive, Stucki Avenue, and Walker Road (Line 59)	\$ 1,000,000	0%	\$ 1,000,000	100%	\$ 1,000,000	100%	\$ 1,000,000	58%	\$ 580,000	2025-2039
129	Basalt Creek Bus Infrastructure	Shelter and stop infrastructure for new north-south bus line along 124th Avenue, Basalt Creek Parkway (or Tonquin Rd), Grahams Ferry Road, and Day Street (Line 94)	\$ 1,125,000	0%	\$ 1,125,000	100%	\$ 1,125,000	100%	\$ 1,125,000	58%	\$ 652,500	2025-2039
Subtotal			\$ 34,117,000		\$ 33,417,000		\$ 33,417,000		\$ 33,417,000		\$ 19,302,192	
Transit Priority Treatments												
200	Streamline Bus Efficiency Improvements	Bus efficiency treatments such as signal priority, queue bypasses, dedicated bus stops and other treatments to enhance efficiency and improve or preserve service speeds for Frequent Service and key bus lines throughout county	\$ 2,750,000	0%	\$ 2,750,000	100%	\$ 2,750,000	100%	\$ 2,750,000	58%	\$ 1,584,000	2014-2024
201	Tigard - Transit Priority	Transit signal preemption at Hall Blvd and Hwy 99W intersection	\$ 5,000,000	0%	\$ 5,000,000	100%	\$ 5,000,000	100%	\$ 5,000,000	58%	\$ 2,900,000	2014-2024
Subtotal			\$ 7,750,000		\$ 7,750,000		\$ 7,750,000		\$ 7,750,000		\$ 4,484,000	

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Park & Rides / Transit Centers												
300	P&R expansion	Expand park & ride capacities in smaller lots on sites within Washington County with direct transit service to Portland and/or Washington County employment areas	\$ 15,000,000	0%	\$ 15,000,000	100%	\$ 15,000,000	100%	\$ 15,000,000	58%	\$ 8,640,000	2014-2024
301	OR 8 P&R	Cornelius - Develop OR 8 Park & Ride facilities at 10th and 26th Avenues	\$ 1,700,000	0%	\$ 1,700,000	100%	\$ 1,700,000	100%	\$ 1,700,000	100%	\$ 1,700,000	2028-2040
Subtotal			\$ 16,700,000		\$ 16,700,000		\$ 16,700,000		\$ 16,700,000		\$ 10,340,000	
Pedestrian/Bicycle Access to Transit												
400	65th Ave Multi-Use Trail	Ped/bike pathway connecting Tualatin River Greenway and multi-family neighborhoods with #76 bus service at Legacy Meridian Park Medical Center	\$ 3,796,000	0%	\$ 3,796,000	100%	\$ 3,796,000	90%	\$ 3,416,400	100%	\$ 3,416,400	2025-2039
401	95th Ave Ped/Bike Connection	Ped/bike pathway connecting Springcrest Drive with Sunset Transit Center, including grade-separated ped/bike crossing of Barnes Rd	\$ 11,546,000	0%	\$ 11,546,000	100%	\$ 11,546,000	90%	\$ 10,391,400	100%	\$ 10,391,400	2014-2024
402	Crescent Connection: Cedar Hills to Lombard	Construct a multi-use use path along Beaverton Creek from Cedar Hills Blvd to Beaverton Transit Center, providing access to Beaverton Central MAX station and Beaverton Transit Center	\$ 1,230,000	0%	\$ 1,230,000	100%	\$ 1,230,000	75%	\$ 922,500	100%	\$ 922,500	2014-2024
403	TV Hwy Access to Transit	Enhanced bikeway facilities, sidewalks, pedestrian crossings, multi-use trail	\$ 11,667,500	0%	\$ 11,667,500	100%	\$ 11,667,500	90%	\$ 10,500,750	100%	\$ 10,500,750	2014-2024
404	Washington Square Overcrossing (North)	Pedestrian/bicycle overcrossing of Hwy 217 and Scholls Ferry Rd between Nimbus Dr and north mall area, connecting to Hall/Nimbus WES commuter rail station	\$ 39,781,536	0%	\$ 39,781,536	100%	\$ 39,781,536	90%	\$ 35,803,382	100%	\$ 35,803,382	2025-2039
405	Westside Trail: Cornell to Walker	Multi-use trail connecting employment and residential areas to bus transit lines on Cornell Rd, Walker Rd and 158th Ave, including grade-separated overcrossing of US 26	\$ 9,450,000	0%	\$ 9,450,000	100%	\$ 9,450,000	90%	\$ 8,505,000	100%	\$ 8,505,000	2014-2024
406	Bike & Rides	Enclosed, key card accessed bicycle parking at high capacity transit or frequent service bus stops	\$ 1,000,000	0%	\$ 1,000,000	100%	\$ 1,000,000	100%	\$ 1,000,000	100%	\$ 1,000,000	2014-2024
407	Other Access to Transit Improvements	Other pedestrian and bicycle improvements to support access to transit in Washington County, including sidewalks, pedestrian crossings, bike lanes, multi-use paths and bike parking.	\$ 3,500,000	20%	\$ 2,800,000	100%	\$ 2,800,000	90%	\$ 2,520,000	100%	\$ 2,520,000	2014-2024
408	Basalt Creek Canyon Trail	North/south trail connection within Basalt Creek making connections to east/west roadways. Includes grade separation of Basalt Creek Pkwy	\$ 450,000	0%	\$ 450,000	100%	\$ 450,000	90%	\$ 405,000	100%	\$ 405,000	2019-2029
409	I-5 Easement Trail	Trail parallel to I-5 providing north/south connection to existing bike and pedestrian facilities	\$ 750,000	0%	\$ 750,000	100%	\$ 750,000	90%	\$ 675,000	100%	\$ 675,000	2019-2029
410	Council Creek Regional Trail	Multi-use trail on railroad right-of-way connecting employment and residential areas to downtown Forest Grove, Cornelius, and Hillsboro Transit Center/Hatfield Government Station MAX.	\$ 26,500,000	80%	\$ 5,300,000	100%	\$ 5,300,000	100%	\$ 5,300,000	100%	\$ 5,300,000	2025-2040
Subtotal			\$ 109,671,036		\$ 87,771,036		\$ 87,771,036		\$ 79,439,432		\$ 79,439,432	

**Transportation Development Tax
Transit Project List Amended**

Project ID	Project Name	Project Description	Total Cost	Expected Federal/State Share	Total Non-Federal/State Cost	% within Washington Co.	Total Non-Federal/State Cost within Wash. Co.	Capacity %	Total Non-Federal/State Cost within Wash. Co. Capacity Related	Future Growth Share	Eligible SDC Amount (Total Non-Federal/State Cost within Wash. Co. Future Capacity Related)	Estimated Project Completion Timeframe
Transit System Requirements												
500	Merlo Bus Operating Base Expansion	Long-term expansion of bus service in Washington County requires additional capacity at bus storage and maintenance shops.	\$ 1,001,000	0%	\$ 1,001,000	100%	\$ 1,001,000	100%	\$ 1,001,000	58%	\$ 576,576	2014-2024
501	Elmonica LRV Expansion	Expansion of light rail vehicle yard and maintenance facility for increased service.	\$ 4,000,000	0%	\$ 4,000,000	100%	\$ 4,000,000	100%	\$ 4,000,000	58%	\$ 2,304,000	2025-2039
502	Electric Bus Supportive Capital Improvements	Capital improvements to support operation and maintenance of electric buses.	\$ 10,000,000	50%	\$ 5,000,000	32%	\$ 1,600,000	50%	\$ 800,000	58%	\$ 460,800	2025-2039
503	South Hillsboro Transit Improvements	Bus pullouts, shelters, bus layover	\$ 4,830,000	0%	\$ 4,830,000	100%	\$ 4,830,000	100%	\$ 4,830,000	100%	\$ 4,830,000	2025-2039
Subtotal			\$ 19,831,000		\$ 14,831,000		\$ 11,431,000		\$ 10,631,000		\$ 8,171,376	
High Capacity Transit (HCT)												
600	Amber Glen Streetcar loop circulator or Red Line extension	Amber Glen LRT spur. (Pending development with sufficient density) Alternative would be a streetcar circulator. Lower end of estimated project cost range is shown because detailed project scoping has not been developed.	\$ 150,000,000	50%	\$ 75,000,000	100%	\$ 75,000,000	100%	\$ 75,000,000	100%	\$ 75,000,000	2025-2039
601	Red Line to Fair Complex/ Hillsboro Airport	Add a third track and switches and upgrade signals to allow for the Red Line MAX to be extended to the Fair Complex/Hillsboro Airport MAX Station	\$ 6,000,000	50%	\$ 3,000,000	100%	\$ 3,000,000	100%	\$ 3,000,000	58%	\$ 1,728,000	2014-2024
602	Southwest Corridor HCT	Portland, Sylvania, Tigard and Tualatin high-capacity transit.	\$ 1,075,000,000	50%	\$ 537,500,000	60%	\$ 322,500,000	100%	\$ 322,500,000	58%	\$ 185,760,000	2014-2024
603	Sunset Highway HCT	East-west HCT connecting Hillsboro and Tanasbourne, STC, and St. Vincent's. Detailed project scoping has not been developed.	\$ 150,000,000	50%	\$ 75,000,000	100%	\$ 75,000,000	100%	\$ 75,000,000	58%	\$ 43,200,000	2025-2039
604	TV Highway HCT	East-west bus rapid transit linking Forest Grove, Cornelius, Hillsboro, Aloha-Reedville and Beaverton Transit Center via the TV Highway corridor. Hillsboro-Beaverton segment includes westbound Business Access & Transit Lane, eastbound bus pullouts, enhanced bikeway facilities, sidewalks, pedestrian crossings, signal modifications on TV Hwy.	\$ 150,000,000	50%	\$ 75,000,000	100%	\$ 75,000,000	100%	\$ 75,000,000	58%	\$ 43,200,000	2014-2024
605	WES Commuter Rail Upgrades	Capital improvements to allow future service upgrades including double-tracking (for improved frequency and span of service.) Detailed project scoping has not been developed.	\$ 250,000,000	50%	\$ 125,000,000	80%	\$ 100,000,000	100%	\$ 100,000,000	58%	\$ 57,600,000	2025-2039
606	185th Max Crossing	Construct Light-Rail Overcrossing and Modify Traffic Signal	\$ 85,435,000	80%	\$ 17,087,000	100%	\$ 17,087,000	100%	\$ 17,087,000	58%	\$ 9,910,460	2025-2039
Subtotal			\$ 1,866,435,000		\$ 907,587,000		\$ 667,587,000		\$ 667,587,000		\$ 416,398,460	
TOTAL			\$ 2,054,504,036		\$ 1,068,056,036		\$ 824,656,036		\$ 815,524,432		\$ 538,135,460	

TRANSPORTATION DEVELOPMENT TAX RATE SCHEDULE

Land Use Category	ITE Code	Unit*	Rates 7/1/2023 - 6/30/2024	Rates 7/1/2024 - 6/30/2025
Residential				
Single Family Detached	210	/dwelling unit	\$10,599	\$11,478
Apartment	220	/dwelling unit	\$6,935	\$7,510
Residential Condominium/Townhouse	230	/dwelling unit	\$6,340	\$6,866
Manufactured Housing (in Park)	240	/dwelling unit	\$5,304	\$5,744
Assisted Living	254	/bed	\$3,277	\$3,549
Continuing Care Retirement	255	/unit	\$3,313	\$3,588
Recreational				
Park	411	/acre	\$1,778	\$1,925
Golf Course	430	/hole	\$18,841	\$20,403
Golf Driving Range	432	/tee	\$14,907	\$16,143
Multipurpose Recreational/Arcade	435	/T.S.F.G.F.A.	\$3,319	\$3,594
Bowling Alley	437	/lane	\$1,079	\$1,168
Multiplex Movie Theater	445	/screen	\$148,871	\$161,212
Health/Fitness Club	492	/T.S.F.G.F.A.	\$10,439	\$11,304
Recreation/Community Center	495	/T.S.F.G.F.A.	\$12,311	\$13,332
Institutional/Medical				
Elementary School (Public)	520	/student	\$511	\$553
Middle/Junior High School (Public)	522	/student	\$580	\$628
High School (Public)	530	/student	\$797	\$863
Private School (K-12)	536	/student	\$592	\$641
Junior College	540	/student	\$834	\$903
University/College	550	/student	\$1,381	\$1,495
Church	560	/T.S.F.G.F.A.	\$4,390	\$4,754
Day Care Center/Preschool	565	/student	\$1,635	\$1,771
Library	590	/T.S.F.G.F.A.	\$20,596	\$22,303
Hospital	610	/bed	\$4,176	\$4,522
Nursing Home	620	/bed	\$1,435	\$1,554
Clinic	630	/T.S.F.G.F.A.	\$29,788	\$32,257
Commercial/Services				
Hotel/Motel	310	/room	\$3,010	\$3,260
Building Materials/Lumber	812	/T.S.F.G.F.A.	\$10,581	\$11,458
Free-Standing Discount Superstore with Groceries	813	/T.S.F.G.F.A.	\$20,225	\$21,902
Specialty Retail Center	814	/T.S.F.G.L.A.	\$14,065	\$15,231
Free-Standing Discount Store without Groceries	815	/T.S.F.G.F.A.	\$21,703	\$23,502
Hardware/Paint Store	816	/T.S.F.G.F.A.	\$17,659	\$19,123
Nursery/Garden Center	817	/T.S.F.G.F.A.	\$12,505	\$13,542
Shopping Center	820	/T.S.F.G.L.A.	\$14,556	\$15,763
Factory Outlet Center	823	/T.S.F.G.F.A.	\$11,417	\$12,363
New Car Sales	841	/T.S.F.G.F.A.	\$16,392	\$17,751
Automobile Parts Sales	843	/T.S.F.G.F.A.	\$15,787	\$17,096
Tire Superstore	849	/T.S.F.G.F.A.	\$12,403	\$13,431
Supermarket	850	/T.S.F.G.F.A.	\$29,343	\$31,776
Convenience Market (24-hour)	851	/T.S.F.G.F.A.	\$34,576	\$37,442
Convenience Market with Fuel Pump	853	/V.F.P.	\$33,201	\$35,953
Wholesale Market	860	/T.S.F.G.F.A.	\$8,439	\$9,139
Discount Club	861	/T.S.F.G.F.A.	\$22,785	\$24,674
Home Improvement Superstore	862	/T.S.F.G.F.A.	\$8,488	\$9,192

TRANSPORTATION DEVELOPMENT TAX RATE SCHEDULE

Land Use Category	ITE Code	Unit*	Rates 7/1/2023 - 6/30/2024	Rates 7/1/2024 - 6/30/2025
Electronics Superstore	863	/T.S.F.G.F.A.	\$11,743	\$12,716
Office Supply Superstore	867	/T.S.F.G.F.A.	\$15,787	\$17,096
Pharmacy/Drugstore without Drive-Thru Window	880	/T.S.F.G.F.A.	\$15,787	\$17,096
Pharmacy/Drugstore with Drive-Thru Window	881	/T.S.F.G.F.A.	\$15,787	\$17,096
Furniture Store	890	/T.S.F.G.F.A.	\$1,993	\$2,158
Bank/Savings: Walk-in	911	/T.S.F.G.F.A.	\$32,685	\$35,395
Bank/Savings: Drive-in	912	/T.S.F.G.F.A.	\$34,576	\$37,442
Quality Restaurant (not a chain)	931	/T.S.F.G.F.A.	\$31,382	\$33,984
High Turnover, Sit-Down Restaurant (chain or stand alone)	932	/T.S.F.G.F.A.	\$26,325	\$28,507
Fast Food Restaurant (No Drive-Thru)	933	/T.S.F.G.F.A.	\$34,576	\$37,442
Fast Food Restaurant (With Drive-Thru)	934	/T.S.F.G.F.A.	\$34,576	\$37,442
Drive-Thru Restaurant (No Seating)	935	/T.S.F.G.F.A.	\$34,576	\$37,442
Drinking Place/Bar	936	/T.S.F.G.F.A.	\$28,287	\$30,632
Quick Lubrication Vehicle Shop	941	/Service Stall	\$24,184	\$26,189
Automobile Care Center	942	/T.S.F.G.L.A.	\$16,430	\$17,792
Gasoline/Service Station (no Market or Car Wash)	944	/V.F.P.	\$20,746	\$22,466
Gasoline/Service Station (with Market and Car Wash)	946	/V.F.P.	\$20,746	\$22,466
Office				
General Office Building	710	/T.S.F.G.F.A.	\$11,125	\$12,047
Medical-Dental Office Building	720	/T.S.F.G.F.A.	\$37,692	\$40,817
Government Office Building	730	/T.S.F.G.F.A.	\$73,809	\$79,928
U.S. Post Office	732	/T.S.F.G.F.A.	\$94,622	\$102,466
Office Park	750	/T.S.F.G.F.A.	\$14,711	\$15,931
Port/Industrial				
Truck Terminal	030	/T.S.F.G.F.A.	\$5,655	\$6,124
General Light Industrial	110	/T.S.F.G.F.A.	\$7,519	\$8,142
General Heavy Industrial	120	/T.S.F.G.F.A.	\$1,618	\$1,752
Manufacturing	140	/T.S.F.G.F.A.	\$4,138	\$4,481
Warehouse	150	/T.S.F.G.F.A.	\$5,311	\$5,751
Mini-Warehouse	151	/T.S.F.G.F.A.	\$2,754	\$2,982
Utilities	170	/T.S.F.G.F.A.	\$7,147	\$7,739

* Abbreviations used in the "Unit" column:

T.S.F.G.F.A. = Thousand Square Feet Gross Floor Area

T.S.F.G.L.A. = Thousand Square Feet Gross Leasable Area

V.F.P. = Vehicle Fueling Position

Note: all index adjustments per 3.17.050F

**2018 Regional Transportation Plan
Financially Constrained List of Projects and Programs**



RTP Investment Category	County	Nominating Agency	Primary Facility Owner	RTP ID	Project Name	Start Location	End Location	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained project list
Roads and Bridges	Washington County	Cornelius	Cornelius	11918	S. Alpine Street Extension	100 feet east of S. 28th Avenue	SW 345th Avenue	Extend S. Alpine St. as a collector street to the eastern UGB boundary.	\$ 1,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	Washington County	11919	Tile Flat Rd	UGB	Scholls Ferry Rd.	Interim 3-lane and north side pedestrian/bicycle improvements. The project or a portion of the project is outside the designated urban growth boundary.	\$ 3,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	Washington County	11920	Cornelius Pass Rd Extension, Phase 2	Blanton St	Vermont St	Construct five-lane extension with bike/ped facilities; intersection improvements; new signals at Blanton, Kinnaman, McInnis, Butternut Creek, Deline, and Vermont; bridge at Butternut Creek; creek crossings at Gordon Creek and south tributary of Butternut Creek.	\$ 19,718,650	2018-2027	Yes
Roads and Bridges	Washington County	Tigard	Tigard	11995	Wall St (Hunziker to Tech Center)	Hunziker Road	Tech Center Drive	Construct new street with sidewalks and bike lanes from Hunziker Road (along Wall Street) to Tech Center Drive to improve freight access and connectivity to Tigard Triangle.	\$ 3,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Tigard	Tigard	11996	Fanno Creek Bridges Upgrades	Over Fanno Creek: Tigard St and N. Dakota	-	Existing old bridges have deteriorated and are nearing end-of-life. Replace with new bridges meeting current standards including sidewalks and bike lanes.	\$ 6,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Tigard	Tigard	11998	Tiedeman Ave Complete Street	Greenburg Rd	Fanno Creek	Build complete street with sidewalks and bike lanes on both sides of the street from Fanno Creek to Greenburg Rd. Construct traffic signal or roundabout at Tigard St / Tiedeman Ave intersection; Dual left turn lanes approaching Greenburg Road (may be build by Greenburg Rd project); Possible efficiency improvements at Tiedeman/North Dakota St intersection.	\$ 7,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Wilsonville	Wilsonville	11243	Day Road Improvements	Grahams Ferry Rd.	Boones Ferry Rd.	Widen street from 3 to 5 lanes with buffered bike lanes, sidewalks and street lighting. Improve structural integrity for increased freight traffic and provide congestion relief. Sidewalk infill and creation of Tonquin Trail multi-use path spur will reduce pedestrian and vehicle conflicts. Bike buffers will reduce bicycle and freight conflicts.	\$ 10,560,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10545	OR 10: Oleson Rd. Improvement Ph. 1	Oleson Rd. south of OR10	Oleson Rd. at Scholls Ferry	Realign Oleson Rd. 500 feet to east and reconfigure Oleson intersections with OR10 and Scholls Ferry Rd. to address safety and reduce crashes.	\$ 40,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10548	174th Ave. Improvements	Meadowgrass Ln.	Bronson Rd.	Add turn lanes, bike lanes and sidewalks	\$ 9,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10549	Cornell @ 143rd Improvements	143rd Ave.	Science Park Dr.	Realign 143rd with Science Park Dr. @ Cornell as a 4-way signalized intersection.	\$ 13,200,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10559	Cornell Improvements	Hwy. 26	Murray Blvd.	Widen Cornell from three to five lanes with bike lanes and sidewalks.	\$ 25,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10563	Kaiser/143rd Ave. Improvements	Bethany Blvd.	Cornell Rd.	Widen from two to three lanes with bike lanes and sidewalks.	\$ 20,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	Washington County	10567	Taylor's Ferry Extension	Oleson Rd.	Washington Dr.	Construct new two lane extension with bike lanes and sidewalks	\$ 4,700,000	2028-2040	Yes



APPENDIX R

2018 Regional Transportation Plan

I-5/99W connector study recommendations

December 6, 2018

oregonmetro.gov/rtp

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Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

Regional Transportation Plan website: [**oregonmetro.gov/rtp**](http://oregonmetro.gov/rtp)

The preparation of this strategy was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this strategy are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration.

I-5/99W Connector Study Recommendations and Conditions



MEMORANDUM



DATE: February 17, 2009
TO: Project Steering Committee (PSC)
FROM: Executive Management Team (EMT)
SUBJECT: I-5 to 99W Connector, Recommended Alternative for RTP Amendment

Alternative 7 Recommendation for RTP Amendment

The majority of the EMT recommends that on February 25, 2009 the PSC select Alternative 7, the Three Arterial Corridors Alternative, as the Portland metropolitan region's southwest quadrant transportation solution-concept for Metro's consideration and adoption into the Regional Transportation Plan (RTP). A conceptual representation of Alternative 7 is shown in Figure 1 and the project's elements are described in Table 1.

This recommendation is based on the following advantages of Alternative 7:

1. Alternative 7 would address the project's purpose by providing an enhanced transportation network of multi-modal improvements that can effectively serve regional and intrastate access to the area's highways while also enhancing local access and circulation in the southwest quadrant of the Metro region.
2. Alternative 7 draws from the best elements of the build alternatives studied in the Alternatives Analysis (AA) and incorporates additional actions to enhance mobility. In general, Alternative 7's performance would be most similar to Alternative 6 and generally better than Alternatives 3, 4, and 5 while having fewer adverse effects on the human and natural environment and lower overall cost than Alternatives 3, 4, 5, and 6.
3. A significant advantage of Alternative 7 over the connector Alternatives 4, 5, and 6, is it could be more easily implemented in phases over time. This would provide jurisdictions flexibility to strategically adapt to funding availability, and to protect livability and economic viability of communities as increased system capacity commensurate with development in this part of the Metro region is warranted. Smaller, more affordable individual projects may be advanced with independent utility under the integrated multi-modal framework of Alternative 7. Strategic measures to protect the affordability of right-of-way for future construction elements of Alternative 7 could also occur.

Conditions of Recommendation

As with any large-scale system of transportation improvements, a number of issues will need to be dealt with in the course of advancing a planning level transportation concept to construction projects and other implementation actions. While the corridor level alternative selected on February 25th is the final decision milestone for the PSC, additional work will continue in collaboration with stakeholder entities in advancing Alternative 7. The conditions listed below serve as a roadmap for this work.

I-5 to 99W Connector, Recommended Alternative for RTP Amendment
 February 17, 2009
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For Alternative 7, the EMT recommends the following conditions accompany the RTP recommendation of Alternative 7:

1. **Future phasing plans for implementing Alternative 7 projects must take into consideration the transportation, environmental, and economic impacts of advancing some improvements sooner than others.** The sequencing of affordable improvements should be done in a manner that does not create new transportation problems or liabilities for the vitality of affected jurisdictions.
2. **The timing and priority of an I-5 corridor study must be considered in the RTP adoption process for Alternative 7.** The connector project development process emphasized the need for a corridor study along I-5 from Portland to the Willamette River. The results of this study may affect the timing and designs of some improvements within Alternative 7.
3. **Access between I-5 and the southern arterial must be resolved.** The alternatives development and analysis process determined the general corridor location for the new southern arterial. However, additional preliminary engineering work is needed to determine the optimal access option and configuration for connecting the southern arterial to I-5. Construction of the southern arterial should be conditioned on defining the I-5 improvements needed to accommodate it. Options to be explored include modifying the I-5/North Wilsonville Interchange into a tight split-diamond interchange, or extending a new arterial over I-5 and connecting to Elligsen Road on the east side of I-5.
4. **Completion and construction of major project elements is subject to compliance with the National Environmental Policy Act (NEPA) and design refinement.** The Alternative 7 concept provides only the general locations and functional characteristics of new transportation facilities. A fully collaborative public/agency involvement and environmental analysis process must be conducted in developing the design details of any major construction element of Alternative 7. Subsequent project development work will need to define the actual alignments and designs of each of these facilities within the framework of these general parameters. On-going coordination with the Tualatin River National Wildlife Refuge must also occur to ensure optimum compatibility of Alternative 7 elements with refuge objectives.
5. **Land Use Concept Planning will have to be completed by local governments to conform to the Alternative 7 decision.** Local governments need to complete concept plans that incorporate Alternative 7 elements for lands that are: a) within the Metro UGB, and b) within the project area and are not incorporated, and c) in areas where concept planning has not yet commenced.
6. **The design of the southern arterial; must incorporate any conditions that may come out of land use goal exceptions processes (if required) by Metro, Washington County, and Clackamas County.** Portions of Alternative 7 may require exceptions under state land use goals in order to be adopted in the RTP and to achieve needed federal and jurisdictional approvals. The extent of this issue may be affected by Metro's coming decisions on rural/urban land use reserves. Portions of proposed new transportation facilities are outside Metro's jurisdictional boundaries and will require coordination of actions between Metro and other affected jurisdictions. Possible design requirements may include forms of access management and land use control measures.
7. **State highway system routing and ODOT mobility standards must be key considerations in the design and future ownership of improvements within Alternative 7.** Current RTP assumptions are that a new limited-access connector would be built between I-5 and 99W, and that this roadway would become the new state route, possibly replacing OR 99W through Tigard. Alternative 7 does not result in a limited-access connector, which may result in OR 99W remaining the designated state highway route through Sherwood, King City and Tigard.

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8. **Strategic protection of right-of-way should be considered by agencies for the Alternative 7 elements within the UGB and along potential alignments where land development could conflict with the future implementation of corridor improvements.** Protective measures could include property setbacks, dedication of right-of-way, specific acquisition(s), and/or right-of-way purchases consistent with NEPA process.

The Development of Alternative 7

The June 2008 I-5 to 99W Connector Project Alternatives Analysis (AA) evaluated a range of six alternatives including a No-Build. A series of public hearings were held following the AA document's release. Based on consideration of input from the public hearings and subsequent direction from the PSC, a seventh alternative was identified for study. This alternative (Alternative 7) is a combination of key features represented in the original five build alternatives.

The PSC direction to the project team was, in a broad sense, to look for a hybrid solution drawing from elements of the Build Alternatives considered in the AA but creating a transportation network rather than relying on a single expressway corridor to address the project purpose and need. The PSC was also concerned about the magnitude and cost of collector/distributor improvements along I-5 to support an expressway connection. The project team's response to this direction led to a strategy of creating three arterial-level corridors that would disperse regional travel between I-5 and OR 99W rather than concentrating it in one connector corridor. The distribution of traffic between these east-west arterial corridors was further enhanced by adding a new north-south arterial (124th Extension). By dispersing the east-west traffic to the three existing interchanges on I-5, the need for an extensive collector/distributor system on I-5 is no longer essential to the performance of this project.

Alternative 7 draws from the five build alternatives studied in the AA and incorporates many projects already identified in the RTP and local Transportation System Plans (TSPs). All of the Transportation Demand Management/Transportation System Management (TDM/TSM) measures contained in Alternative 2 are incorporated in Alternative 7. Many of the roadway improvements as well as the commuter rail extension between Tualatin and Sherwood in Alternative 3 and in adopted plans are also included. Although the expressway-type approaches of Alternatives 4, 5, and 6 were not included, the respective alignments of these facilities and some of their functional characteristics were adapted for use in Alternative 7.

Analysis of Alternative 7

At the direction of the PSC, Alternative 7 was analyzed to compare its transportation performance and effects on the natural and built environments with the other build alternatives studied in the AA. The results of these evaluations are summarized in the attached matrix (Table 2).

Alternatives 1 (No Build) and 2 (TDM/TSM) would not effectively address the project purpose. In general, Alternative 7 addresses the project's purpose as well or better than Alternatives 3, 4, 5, and 6 while having less adverse effects on the human and natural environment. The reduced environmental effects are generally attributed to Alternative 7's smaller area of potential impact (API) or spatial footprint. The main reasons for the reduced footprint are:

I-5 to 99W Connector, Recommended Alternative for RTP Amendment

February 17, 2009

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- Additional roadways and structures along I-5 would be minimized compared to Alternatives 4, 5, and 6 (the connector alternatives). Alternative 7 would include auxiliary lanes, built within the existing ODOT right-of-way (as modeled for Alternative 3). In contrast, the connector alternatives included an extensive collector-distributor system along I-5 as well as improvements to existing interchanges.
- The southern arterial modeled for Alternative 7 was developed under the assumption that there would be signalized, surface intersections rather than more spatially-intensive grade-separated interchanges.
- The connector alternatives were modeled under the assumption that they would be compatible with expressway design requirements. By changing to an arterial, narrower design widths may be possible.
- Alternative 7 would have a smaller total footprint than Alternative 3, which may seem counter-intuitive since it includes a southern arterial alignment. However, a majority of the 15 road extension and/or widening projects assumed for Alternative 3 are not included in Alternative 7 (e.g., Avery Street, Adams Street, Sagert Street, and OR 99W improvements) and the collective impact area of these elements would exceed that of the southern arterial.

Attachments (3)

Table 1. Alternative 7 Project Elements with Planning-Level Cost Estimates

Road	Location and General Description of Action	Conceptual Costs in \$ millions (2008 dollars)
Northern Arterial Project Elements		
Tualatin Road/Lower Boones Ferry Road	Extend Tualatin Rd. as 5-lane arterial east across the Tualatin River from Herman Rd. to Lower Boones Ferry Rd. (LBFR). Widen LBFR to 5 lanes from extension to 72nd Ave.	\$95
SW Herman Road	Construct 3-lane extension of Herman Rd. between Tualatin Rd. and OR 99W	\$30
SW Bradbury Court	Construct new east-west connection across I-5 to 72nd Ave. on Bradbury Ct. alignment	\$20
Central Arterial Project Elements		
Tualatin-Sherwood and Roy Rogers Road	• Widen Tualatin-Sherwood Rd. (TSR) to 5 lanes from OR 99W to SW 124th Ave.	\$25
	• Widen Roy Rogers Rd. between Borchers Rd. and OR 99W to 5-lanes	\$5
Tualatin-Sherwood Road	Widen TSR to 5 lanes from SW 124 th Ave. to Teton Ave.	\$20
Southern Arterial		
Southern Arterial/Interstate 5 interface	Complete either a tight split diamond N. Wilsonville Interchange or a new I-5 over-crossing with 2-lane road connecting southern arterial to Elligsen Rd. east of I-5 and associated connection improvements	\$50
Boones Ferry Road	• Widen Boones Ferry Rd. to 5-lanes between new southern arterial and Day Rd.	\$5
Southern Arterial	• Purchase ROW for 5-lane arterial (OR 99W to I-5)	\$100
	• Construct a new 2-3 lane arterial (OR 99W to I-5)	\$120
	• Widen arterial to 5-lanes (OR 99W to I-5)	\$70
	• Improve Commerce Circle/95th Ave. and Boones Ferry Rd. intersection	\$5
Other Alternative 7 Elements		
TSM / TDM	Regional Trail System, Bike Lanes, Sidewalks & Bus Stops	\$30
Commuter Rail	Commuter rail extension to Sherwood	\$40
Interstate 5	Add auxiliary lanes to I-5 between I-205 and Elligsen Interchange (assumes Norwood over-crossing replacement)	\$30
SW 124 th Avenue	• Purchase ROW for 5-lane arterial (TSR to southern arterial)	\$5
	• Extend 124th Avenue as a 2-3 lane roadway between TSR and Tonquin Road	\$45
	• Widen and extend 124th Avenue as a 4-5 lane roadway between TSR and the southern arterial	\$20
Total Costs		\$715

At their meeting on February 25, 2009, the PSC agreed on the following conditions as amended from those presented to them in the Alternative 7 Recommendation Memorandum dated February 17, 2009 to accompany the RTP recommendation of Alternative 7:

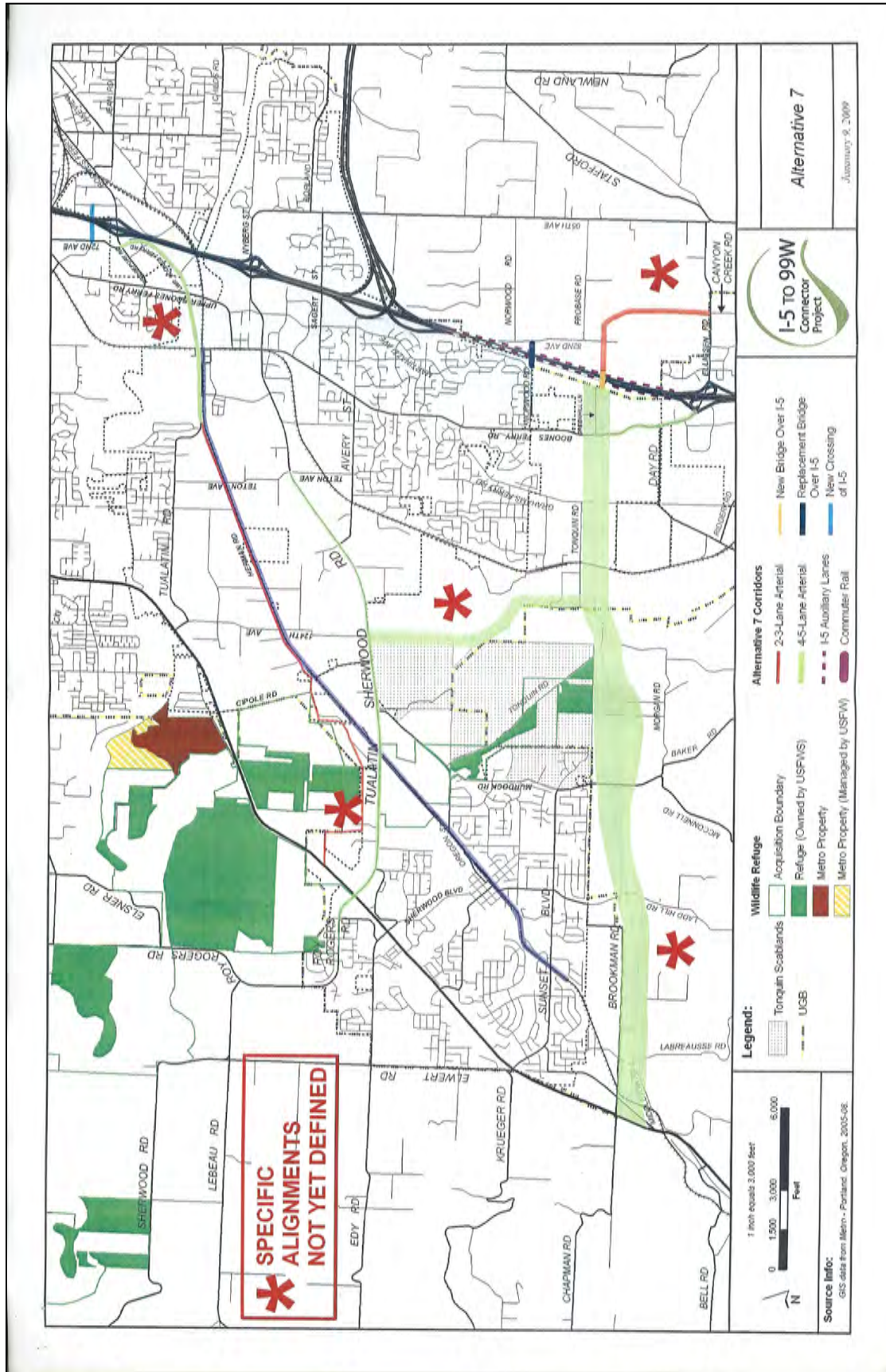
1. **Future phasing plans for implementing Alternative 7 projects must take into consideration the transportation, environmental, and economic impacts of advancing some improvements sooner than others.** The sequencing of affordable improvements should be done in a manner that does not create new transportation problems or liabilities for the vitality of affected jurisdictions.
2. **The timing and priority of an I-5 corridor study must be considered in the RTP adoption process for Alternative 7.** The connector project development process emphasized the need for a corridor study along I-5 from Portland to the Willamette River. The results of this study may affect the timing and designs of some improvements within Alternative 7.
3. **Access between I-5 and the southern arterial must be resolved.** Additional study is required to fully understand the impacts and trade offs between transportation solutions and land use, economic and environmental consequences of a new southern arterial. The impacts on rural lands are of particular importance and must be further evaluated before pursuing an exceptions process. The study area may need to be expanded to include connections to Stafford Road and additional areas along the OR 99W corridor that were not included in the alternatives analysis. The alternatives analysis process determined the general corridor location for the new southern arterial. However, additional preliminary engineering and planning work is needed to determine the optimal access option and configuration for connecting the southern arterial to I-5, OR 99W, and other arterials in the expanded study area. Construction of the southern arterial should be conditioned on defining the I-5 improvements needed to accommodate it and ensuring no negative impacts to I-5 and I-205 occur beyond the forecast No-Build condition as a result of Alternative 7. Options to be explored include modifying the I-5/North Wilsonville Interchange into a tight split-diamond interchange, or extending a new arterial connection crossing over I-5 and connecting to Stafford Road and/or Elligsen Road on the east side of I-5 for regional traffic benefits.
4. **Completion and construction of major project elements is subject to compliance with the National Environmental Policy Act (NEPA) and design refinement.** The Alternative 7 concept provides only the general locations and functional characteristics of new transportation facilities. A fully collaborative public/agency involvement and environmental analysis process must be conducted in developing the design details of any major construction element of Alternative 7. Subsequent project development work will need to define the actual alignments and designs of each of these facilities within the framework of these general parameters. On-going coordination with the Tualatin River National Wildlife Refuge must also occur to ensure optimum compatibility of Alternative 7 elements with refuge objectives.
5. **Land Use Concept Planning for UGB expansion areas should be coordinated with the refinement of these transportation recommendations.**
6. **The design of the southern arterial; must incorporate any conditions that may come out of land use goal exceptions processes (if required) by Metro, Washington County, and Clackamas County.** Portions of Alternative 7 may require exceptions under state land use goals that have not yet been studied or approved in order to be adopted in the RTP and to achieve needed federal and jurisdictional approvals. The extent of this issue may be affected by Metro's coming decisions on rural/urban land use reserves. Portions of proposed new transportation facilities are outside Metro's jurisdictional boundaries and will require coordination of actions between Metro and other affected jurisdictions. Possible design requirements may include forms of access management and land use control measures.
7. **State highway system routing and ODOT mobility standards must be key considerations in the design and future ownership of improvements within Alternative 7.** Current RTP assumptions are that a new limited-access connector would be built between I-5 and 99W, and that this roadway would become the new state route, possibly replacing OR 99W through Tigard. Alternative 7 does not result in

Page 2

a limited-access connector, which may result in OR 99W remaining the designated state highway route through Sherwood, King City and Tigard.

8. **Strategic protection of right-of-way should be considered by agencies for the Alternative 7 elements within the UGB and along potential alignments where land development could conflict with the future implementation of corridor improvements.** Protective measures could include property setbacks, dedication of right-of-way, specific acquisition(s), and/or right-of-way purchases within the UGB consistent with NEPA process.

Following agreement on the above conditions, PSC representatives of Washington County, ODOT, Metro, and the cities of Tualatin and Sherwood voted in favor of recommending Alternative 7 with the conditions as amended above. PSC representatives of the City of Wilsonville and Clackamas County voted against this recommendation.



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ACKNOWLEDGEMENTS**Project management team**

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 Clifford Higgins, communications manager
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 Ted Leybold, transportation planning manager
 Jessica Martin, administrative supervisor

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 Jeff Raker, economic development planner
 Eliot Rose, senior technology and transportation planner
 Jamie Snook, principal transportation planner
 Julie Stringham, intern
 Caleb Winter, senior transportation planner

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STAFF REPORT & RECOMMENDATION

PROCEDURE TYPE: III

CPO: 5 **COMMUNITY PLAN:**
Washington County Comprehensive Framework
Plan for the Urban Area

LAND USE DISTRICT:
FD-20 (Future Development 20 Acre District)

PROPERTY DESCRIPTION:
ASSESSOR MAP#: 2S1 34B
TAX LOT #: 500
SITE SIZE: 5.12 acres
ADDRESS: No Address Assigned

PROPOSED DEVELOPMENT ACTION: Development Review for a Contractor's Establishment in the FD-20 District.

HEARING DATE: October 18, 2012

RECOMMENDATION:

Based on the findings in this Report (Attachment C) and material in the Casefile, Staff recommends that the Hearing's Officer approve the request for Development Review for a Contractor's Establishment in the FD-20 District, subject to compliance with the Recommended Conditions of Approval (Attachment B).

ATTACHMENTS

- A. Vicinity Map
- B. **RECOMMENDED CONDITIONS OF APPROVAL**
- C. Staff Report

CASEFILE: 12-292-D

APPLICANT:
Bob & Donna Albertson
PO Box 1329
Sherwood, OR 97140

APPLICANT'S REPRESENTATIVE:
AKS Engineering & Forestry, LLC
Attn: Monty Hurley/Chris Goodell
13910 SW Galbreath Drive, Suite 100
Portland, OR 97219

OWNER:
Albertson Trucking, Inc.
PO Box 1329
Sherwood, OR 97140

LOCATION:
On the northeast side of SW McCamant Drive,
Approximately 1,000 feet northwest of the
Intersection of SW Tonquin Loop Road and
First Street

RECOMMENDED CONDITIONS OF APPROVAL

I. **PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES, THE APPLICANT SHALL:**

Obtain a Grading Permit from the Washington County Building Services Division.

NOTE: *The Grading Permit application must follow the grading submittal package checklist from the Building Services Division.*

II. **PRIOR TO FINAL DEVELOPMENT REVIEW APPROVAL AND ISSUANCE OF BUILDING PERMITS FOR THE SHOP BUILDING, THE APPLICANT SHALL (WITHIN TWO YEARS):**

A. **Submit a Final Approval Application to Current Planning Services, Project Planner (Wayne Hayson, 503-846-3867), including the following:**

1. Final Approval form (Type I procedure; two copies).

NOTE: *The final approval application shall contain a written statement and complete evidence/documentation that all Conditions of Approval have been met.*

2. Final Approval fee.
3. Final landscaping plans showing that no less than 15% of the total site area consists of landscaping, including a minimum of 4 canopy trees per 100 lineal feet located within the "Additional Landscaping" area shown on Preliminary Landscape Plan P5, and located within the Casefile.
4. Evidence that the landscaping plan described above has been implemented. Landscaping shall be maintained at all times.
4. Written certification from an engineer that SW McCamant Drive has been improved to include the following:
 - a) A minimum 12 foot gravel drivable surface width with a 20 foot unobstructed width, and a 13 foot 6 inch vertical clearance; and
 - b) A minimum surface of 12 inches of crushed rock capable of supporting a 12,500 pound point load (wheel load) and a 75,000 pound live load (gross vehicle weight);

SW McCamant Drive shall be maintained to ensure fire apparatus access at all times.

5. Written certification from an engineer that the employee parking area has been constructed in accordance with the requirements of Section 413-5.1.
6. Written certification from an engineer that the heavy equipment/truck parking area has been constructed in accordance with the requirements of Section 413-5.4..

B. **Pay the Transportation Development Tax.**

Casefile 12-292-D

Attachment B - Recommended Conditions of Approval

Page 2

III. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

This approval is limited to the vehicles, equipment, and operation by Bob and Donna Albertson/Albertson Trucking, Inc, as outlined in the Staff Report. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. (Section 207-5)

IV. ADDITIONAL CONDITIONS:

- A.** This development shall be constructed in accordance with the conditions of this decision, the approved final plans and the standards of the Community Development Code (Section 207-5).
- B.** All conditions of approval shall be binding upon all heirs, successors and assigns (Section 207-5).
- C.** Transferability of this Development Permit shall be in accordance with Section 201-8.
- D.** No disposal of chemicals (pesticides, herbicides, fertilizers, etc.) is permitted on the subject property in conjunction with the contractor's establishment (Section 207-5).
- E.** The vehicles associated with the contractor's establishment shall not be fueled on the subject parcel (Sections 207-5 & 423).
- F.** A site evaluation approval/permit to construct from the appropriate agency (Washington County Dept. of Health & Human Services, 503-846-8881) shall be required prior to locating any on-site septic treatment system on the property. If no site evaluation approval/permit to construct is obtained, site utilities such as water service and on-site septic disposal shall not be allowed.
- G.** This approval shall automatically expire two years from the date of this approval, unless development has commenced, an application for an extension is filed, or this approval is revoked or invalidated (Section 201-4).

Attachment C STAFF REPORT

I. APPLICABLE STANDARDS:

- A. Washington County Comprehensive Framework Plan for the Urban Area
- B. Washington County Community Development Code:
 - 1. Article II, Procedures:
 - Section 202-3 Type III Procedure
 - Section 207-5 Conditions of Approval
 - 2. Article III, Land Use Districts:
 - Section 308 FD-20 District
 - Section 379 Mineral and Aggregate Overlay District
 - 3. Article IV, Development Standards:
 - Section 403 Applicability
 - Section 406 Building, Siting and Architectural Design
 - Section 407 Landscape Design
 - Section 408 Neighborhood Circulation
 - Section 409 Private Streets
 - Section 410 Grading and Drainage
 - Section 411 Screening and Buffering
 - Section 413 Parking and Loading
 - Section 414 Signs
 - Section 415 Lighting
 - Section 423 Environmental Performance Standards
 - Section 426 Erosion Control
 - 4. Article V, Public Facilities and Services
 - Section 501 Public Facility and Service Requirements
- D. Transportation Plan
- E. Ordinance No. 691-A – Washington County Transportation Development Tax
- F. Resolution and Order No. 86-95 – Determining Traffic Safety Improvements Under the Traffic Impact Fee Ordinance
- G. Ordinance No. 738 – Road Design and Construction Standards

II. AFFECTED JURISDICTIONS

Streets: Washington County Dept. of Land Use and Transportation
Fire Protection: Tualatin Valley Fire and Rescue
Police Protection: Washington County Sheriff

III. FINDINGS

Background

1. The applicant is requesting development review approval for a contractor's establishment in the FD-20 District, located on Tax Lot 2S134B000500. The site is also identified as being located within Mineral and Aggregate Overlay District B. The subject site is approximately 5.12 acres, and is surrounded by other properties in the FD-20 District to the north, west, and south, and property in the FD-10 District to the east.
2. According to the applicant the proposed contractor's establishment involves the storage of contractor's equipment including trucks, trailers, heavy machinery, and construction equipment, and the storage of materials including rock, gravel, piping, and concrete blocks. Although the site is primarily proposed as an unmanned facility, a small shop building of less than 3,600 square feet is proposed. The site will not be open to the public/customers, only to the applicant's employees. Access to the site will continue from SW McCamant Drive, an unmaintained gravel county road.

3. The applicant has requested an exception to the critical and essential service standards of Section 501-8 of the Community Development Code, as urban water, sanitary sewer, and surface water management services are not presently available at the site, and access to the site via SW McCamant Drive is not to County standard. Staff finds that granting the exception for these services will not interfere with the ability to later provide these services to anticipated uses in the vicinity of the subject property, nor will granting the exception cause a danger to the public or residents in the vicinity of the subject property.
4. Staff notes that if the Hearings Officer approves this application, the approval will be based on evidence in the record for this use. Transfer of the property or business to another owner could result in changes in use that are not consistent with the use as described in this application. Therefore, Staff has included a recommended condition of approval in Attachment B, limiting approval to the vehicles, equipment, and operation of the contractor's establishment as described in this application. The addition of other uses, features, vehicles, or heavy equipment may require subsequent approval through the land use application process.
5. The County mailed a public notice to all property owners within 500 feet of the site. As of the writing of this Staff Report, staff had not received any written comments in response to the public notice. Any written comments received prior to or during the hearing will be provided to the Hearings Officer.

A. Comprehensive Framework Plan for the Urban Area

STAFF: The goals and policies which relate to the development of land are implemented by the Washington County Community Development Code (the Code). The applicant is not required to address, consider or implement any goal, policy or strategy of the Plan except where required by the Code. In accordance with Section 308-3 of the Code, the proposed use is subject to Policy 41 of the Comprehensive Framework Plan for the Urban Area.

The subject site is located within Area of Special Concern No. 3, as designated on Map C of Policy 41. Area of Special Concern No. 3 is subject to the following:

3. *Area of Special Concern 3 is comprised of approximately 63 acres of land located between Tualatin-Sherwood Road and Tonquin Road, west of the railroad tracks. The properties located in this Area of Special Concern are illustrated on the Future Development Areas Map (Map A). These properties were added to the UGB by Metro Ordinance 02-969B in December 2002. This area is designated as a Regionally Significant Industrial Area by Metro.*

Title 11 planning and FD-20 development applications within this Area of Special Concern are subject to the following criteria:

- a) *Future lot/parcel reconfigurations shall result in the largest practicable parcel. Reconfiguration of all remaining lots/parcels in this Area of Special Concern shall be in accordance with Section 3.07.420 of Metro's Urban Growth Management Functional Plan.*
- b) *New commercial retail uses are prohibited.*

Title 11 planning has not been completed or adopted for Area of Special Concern No.3. As such, the application remains subject to the requirements of Section 308 of the Code. The application does not involve the reconfiguration of the existing parcel, and does not constitute a commercial retail use.

According to the Rural/Natural Resource Plan Map, the site is located within Mineral and Aggregate Overlay District B.

B. Washington County Community Development Code:

1. Article II, Procedure:

Section 202-3 Type III

202-3.1 Type III actions involve development or uses which may be approved or denied, thus requiring the exercise of discretion and judgment when applying the development criteria contained in this Code or the applicable Community Plan. Impacts may be significant and the development issues complex. Extensive conditions of approval may be imposed to mitigate impacts or ensure compliance with this Code and the Comprehensive Plan.

STAFF: This request is being processed through the Type III procedure of the Community Development Code, pursuant to Section 308-4.6 of the Code. In accordance with the Type III procedural requirements, public notice was sent to surrounding property owners 20 days prior to the hearing. No letters of comment were received regarding this request prior to the writing of this report.

Section 207-5 Conditions of Approval:

207-5.1 The Review Authority may impose conditions on any Type II or III development approval. Such conditions shall be designed to protect the public from potential adverse impacts of the proposed use or development or to fulfill an identified need for public services within the impact area of the proposed development. Conditions shall not restrict densities to less than that authorized by the development standards of this code.

STAFF: Conditions of approval may be imposed to ensure compliance with the standards of the Code and other County regulations and to mitigate any adverse impacts the use may have on the surrounding area. Attachment "B" contains the Conditions of Approval as recommended by Staff. The applicant shall comply with all of the applicable Code regulations and Departmental conditions, if this request is approved.

2. Article III, Land Use District:

Section 308 FD-20 District:

Section 308-4 Uses Which May Be Permitted Through a Type III Procedure

The following uses may be permitted unless specified otherwise by the applicable Community Plan or Policy 41 of the Comprehensive Framework Plan for the Urban Area. These uses may be permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5.

308-4.6 Contractor's Establishment.

STAFF: The applicant has proposed to operate a contractor's establishment from the subject site. As described by the applicant, the contractor's establishment will involve the storage and maintenance of contractor's equipment including trucks, trailers, heavy machinery, and construction equipment. On-site storage of materials used in the contracting business is also proposed on the site, including the storage of rock, gravel, piping, and concrete blocks.

Although the site is primarily intended to be unmanned, a small shop building is proposed to be constructed near the south western boundary of the site. The shop building is proposed to be less than 3,600 square feet in area, and is not proposed at this time to be provided with water or sewer service.

The proposed facility is not intended to be open to the public/customers, only to employees. Access to the site will continue to be provided from SW McCamant Drive, an unmaintained public local street. A small paved parking area is located to the west of the proposed shop structure to provide employee parking for up to 3 vehicles, including 1 ADA space.. As shown on site plans submitted with the application, the applicant has proposed to gravel a large part of the site in order to provide for heavy vehicle maneuvering and materials storage.

Section 308-5 Prohibited Uses

308-5.9 Any parking or storage of tractor-trailers, semi-trucks, or heavy equipment, except in conjunction with an approved development or with a farm or forest use.

STAFF:

As part of the proposed contractor's establishment, the applicant proposes storing trucks, trailers, heavy machinery, and construction equipment on the site. Approval of this request constitutes development approval, thereby permitting the storage of the above heavy equipment on the site, as specified in this application.

Section 308-6 Dimensional Requirements

308-6.2 Yard Requirements:

The minimum yard requirements shall be:

- A. Thirty (30) foot front yard;*
- B. Ten (10) foot side yard;*
- C. Thirty (30) foot street side yard;*
- D. Twenty-five (25) foot rear yard;*
- E. Additional setbacks may be required as specified in Sections 411 and 418; and*
- F. Required yards shall be horizontally unobstructed except as provided by Section 418.*

STAFF:

The only structure proposed for the site is a shop building located towards the south western corner of the site. Site plans show the shop building with a floor area of no more than 3,600 square feet, and located approximately 45 feet from the nearest (southern) property line. The setback meets or exceeds all setback requirements of the District.

308-6.3 Height:

- A. The maximum height for structures shall be thirty-five (35) feet, except as modified by other Sections of this Code.*
- B. The maximum height for accessory structures shall be fifteen (15) feet except as modified by other Sections of this Code.*

- C. *Normal building appurtenances and projections such as spires, belfries, cupolas, chimneys, ventilators, elevator housings or other structures placed on or extending above roof level may exceed the thirty-five (35) foot building height limit to a maximum height of sixty (60) feet.*

STAFF: The applicant states that the proposed structure will meet the height requirements of the District. Final compliance shall be determined through the building permit process, as Conditioned in Attachment B.

308-6.4 Lot Dimensions:

- A. *The minimum lot width at the street shall be forty (40) feet;*
- B. *The minimum lot width at the building line shall be seventy (70) feet; and*
- C. *The minimum lot depth shall be one-hundred (100) feet.*

STAFF: The proposed site meets the applicable requirements of this section.

Section 308-7 Additional Standards

- 308-7.1 All new permitted uses shall be constructed in a manner which does not interfere with future conversion of the land to planned urban densities and/or uses.*
- 308-7.3 Property in an Area of Special Concern on the Future Development Areas Map in the Comprehensive Framework Plan for the Urban Area is subject to the applicable Area of Special Concern provisions in Plan Policy 41.*

STAFF: The only new construction proposed with this development is for a shop building to support the operation of the site as a contractor's establishment. Staff finds that the development does not interfere with future conversion of the land to planned urban densities and/or uses, and is consistent with the applicable requirements of Policy 41 of the Comprehensive Framework Plan for the Urban Area.

Section 379 Mineral and Aggregate Overlay District

Section 379-3 Elements of the Mineral and Aggregate Overlay District

379-3.2 District B:

Mineral and Aggregate Overlay District B shall be applied to properties or portions of properties adjacent to or within one thousand (1000) feet of all District A sites except when District A sites are located inside of or within one-half mile of the Regional Urban Growth Boundary, in which case District B shall also include all those properties designated as urban within one-half mile of a District A site except where the County has no jurisdiction. The extent and location of District B shall be directly dependent upon the extent and location of District A and shall be determined at the time a District A site is proposed and designated.

STAFF: The subject site is designated as District B on the Washington County Rural Natural Resources Plan, and is therefore subject to the requirements of this section.

Section 379-11 Uses Which May be Permitted Through a Type III Procedure in District B

379-11.1 Uses which may be permitted through a Type III procedure in the Primary Land Use District, subject to the applicable standards as set forth in Article IV and Section 379-14, and as may be conditioned by the Review Authority.

STAFF: A contractor's establishment is permitted through a Type III procedure in accordance with Section 308-4.6, and is therefore a use permitted in District B through a Type III procedure. Recommended Conditions of Approval are included in Attachment B of this report.

379-11.2 The affected quarry operator and quarry owner shall be notified of Type III actions pursuant to Section 204-4.

STAFF: Notice of the application was sent as required and in accordance with the requirements of Section 204-4.

Section 379-14 Development Standards - District B

In addition to the development standards required by the primary land use district, the establishment of noise sensitive uses and the creation of new parcels that are eligible for a dwelling within Mineral and Aggregate Overlay District B shall be subject to the following:

379-14.1 Setbacks

The location of new noise and dust sensitive uses, constructed after the establishment of District B, shall be situated on the parcel to minimize potential adverse effects of noise and dust. The location of new noise and dust sensitive uses shall take into consideration the surrounding topography and transportation system and, if necessary, setbacks greater than those required by the primary land use district may be imposed by the Review Authority.

379-14.2 Noise Reduction Measures

Noise reduction measures may be required of the owners of new noise sensitive uses constructed after the establishment of District B when determined by the Review Authority to be necessary to ensure compliance by the District A use with applicable noise regulations. Noise reduction measures may include, but not be limited to, vegetative buffers, berms, walls, insulation and orientation of windows, and shall be determined by the Review Authority.

379-14.3 Waiver of Remonstrance

Prior to issuance of any building permits for new noise sensitive uses after establishment of this District, the owner shall sign and record, in agreement form, in the Deed and Mortgage Records of the County, a waiver of remonstrance that the occupant of the property will not object to

mineral and aggregate resource extraction and processing activities as provided for in District A.

379-14.4 Creation of New Lots or Parcels

A notation shall be placed on the instrument creating a new lot or parcel which states the lot or parcel is within Mineral and Aggregate District B and is subject to the standards of Section 379, Mineral and Aggregate Overlay District.

STAFF: Noise sensitive uses are defined in Section 106-139 as a structure or use normally used for sleeping, or normally used as a school, church, hospital or public library. Structures or property used in industrial or agricultural activities are not considered “noise sensitive” unless they meet the above criteria in more than an incidental manner. Accordingly, the proposed contractor’s establishment is not considered a noise sensitive use, nor is it considered a dust sensitive use. As such the above requirements for additional setbacks, noise reduction measures, and the recording of a waiver of remonstrance are not required as part of this application. No new lots or parcels are proposed as part of this application.

3. Article IV, Development Standards:

Section 403 Applicability

STAFF: The applicant has provided a site plan and written information to address the Development Review standards of Article IV.

Section 406 Building, Siting and Architectural Design

STAFF: The site is currently vacant. The only structure proposed as part of this application is a shop building, with a maximum floor area of no more than 3,600 square feet. For information regarding compliance with height and setback requirements, please see Section 308 of this report.

Section 407 Landscape Design:

STAFF: The subject site is predominantly clear of vegetation, with small patches of landscaping remaining around the north, east and south boundary lines of the site. The Code has no specific provisions for landscaping of a contractor’s establishment, except subsection 407-1.4 B.(1), which states 15% of the site shall be landscaped in industrial districts. The applicant has indicated that approximately 0.99 acres of the site, or 19%, is proposed to be landscaped following this application. Section 407-4 requires the applicant to submit a landscape plan, which has been included as Sheet P5 of the applicant’s submittal, while Section 411 allows the Review Authority to determine the extent of screening and buffering on the site.

The applicant has shown additional landscaping as part of the preliminary site plans submitted with the application, primarily along the northern property line, the south eastern corner of the site, and a small patch to the south western corner of the site. Prior to final approval, the applicant shall be required to provide a revised landscaping plan to reflect a requirement for additional canopy trees to be provided in the south eastern corner of the site for screening and buffering purposes. For further discussion of screening and buffering between the site and neighboring uses, please see Section 411 of this report. As part of the Recommended Conditions of Approval, the applicant shall be required to demonstrate implementation of the landscaping plan consistent with the requirements of Section 407-4 of the Code, and confirming that no less than 15% of the total site area consists of landscaping.

Section 408 Neighborhood Circulation

STAFF: This Section requires the applicant to provide a circulation plan for the area based on the proposed development. Additionally this Section requires the applicant to design the proposed land use in a fashion that either provides for neighborhood circulation or does not preclude it. The proposed project is not identified as a Local Street Connectivity Area; therefore, this project is subject to the requirements of Section 408-5.

Staff finds that the applicant shall be granted a modification to the requirements of Section 408-5.4, based on the existing development patterns in the project vicinity (408-5.5). It is considered that the provision of through streets and pedestrian and bicycle accessways connecting to SW McCamant Drive, an unmaintained public street, are currently neither required nor feasible to provide for improved circulation in the vicinity of the subject site.

Section 410 Grading and Drainage

STAFF: The applicant submitted preliminary details as required by this section, including preliminary grading and drainage plans. Washington County Building Engineers have reviewed the preliminary details and determined the plans meet the requirements of Section 410-1.1. However, during that review Washington County Building Engineers have highlighted that a DEQ 1200-C permit will be required for this development. A Grading Permit meeting the requirements of Section 410 and Washington County Grading Ordinance 689 shall be obtained prior to any on-site work, and shall comply with the Conditions of Approval of this Casefile.

Section 411 Screening and Buffering

STAFF: The applicant has proposed a contractor's establishment on the site, which has a land use designation of FD-20. The Code includes no specific provisions for screening and buffering on FD-20 uses, with screening and buffering to be determined as required by the review authority. However, inside the UGB, Code provisions specifically require screening and buffering when commercial and industrial uses adjoin residential uses. In this case, the site is bordered on all sides by other industrial uses and users, located in the FD-20 or FD-10 District. The nearest residence is located approximately 400 feet east of the proposed work areas on the site, and is separated from the site by property in the FD-10 District, and public railroad right-of-way. Staff finds that this provides a substantial buffer area between the proposed contractors establishment and residential uses, particularly given the site does not physically adjoin those residential uses.

However, staff finds that due to the existing elevation difference between the neighboring residences and the subject site, additional screening is warranted in this instance in accordance with Section 207-5, in order to avoid adverse impacts from the development. Accordingly, as a Recommended Condition of Approval included in Attachment B, prior to Final Approval the applicant shall be required to plant 4 canopy trees per 100 lineal feet within the additional landscape area identified in the south east corner of the site on Sheet P5 of the submitted site plans. The requirement for 4 canopy trees per 100 lineal feet is consistent with a Type 3 screening and buffering standard between industrial and R5/6 land uses.

Section 413 Parking and Loading

STAFF: Section 413 does not contain specific parking requirements for a contractor's establishment. The applicant has indicated that 3 parking spaces are to be provided for employee parking on a paved pad, including 1 ADA parking space. No customers are proposed to visit the site, and the site is closed to the general public. In accordance with Section 413-5.1, the 3 parking spaces are proposed to be paved. Prior to Final Approval, it is a Recommended Condition of Approval that the applicant provides written certification from an engineer that the employee parking area has been constructed in accordance with the requirements of Section 413-5.1.

In accordance with Section 413-5.6, the proposed parking spaces need not be striped, except as required to comply with ADA requirements.

In accordance with Section 413-5.4 of the Code, and based upon approval of a grading plan pursuant to Section 410, parking areas for the storage of heavy equipment or vehicles in the Industrial District may consist of a gravel surface with a minimum four (4) inches of base rock with two (2) inches of three-quarter (3/4) inch minus leveling course. While the FD-20 district is not generally considered an industrial district, the applicant proposes an industrial use in an area identified in Policy 41 of the Comprehensive Framework Plan for the Urban Area as a future industrial area. Accordingly, prior to Final Approval, it is a Recommended Condition of Approval that the applicant provides written certification from an engineer that the heavy equipment/truck parking area has been constructed in accordance with the requirements of Section 413-5.4.

Section 414 Signs

STAFF: The applicant has not proposed a sign at this time. If the applicant proposes to erect or otherwise locate any signs on the subject site at a later time, a sign permit shall be required to be obtained from Washington County Current Planning Services.

Section 415 Lighting

STAFF: The applicant has not proposed any lighting of the contractor's establishment at this time.

Section 423 Environmental Performance Standards

Section 423-4 Air Quality

All development shall comply with the State Department of Environmental Quality Air Quality Standards.

STAFF: The State Department of Environmental Quality (DEQ) standards pertaining to air quality apply to all land uses. No unusual air quality problems are anticipated as a result of the proposed development. However, the applicant shall comply with DEQ requirements at all times.

Section 423-5 Odor

All development shall comply with the State Department of Environmental Quality Standards pertaining to odor.

STAFF: The applicant states that none of the uses proposed for the site are associated with the release of odorous gases past the property line.

Section 423-6 Noise

All development shall comply with the State Department of Environmental Quality Standards relating to noise. Demonstration of compliance may be required by the Review Authority.

Section 423-7 Vibration

No development shall generate ground vibration which is perceptible by the Director beyond the property line of origin without use of instruments. Ground vibrations

caused by motor vehicles, trains, aircraft, or temporary construction work are exempt from strict application of these standards, but good faith efforts to control such vibrations shall be made by the originator.

STAFF: No unusual problems with noise or vibration are anticipated with the proposed development. The applicant shall be required to comply with the Washington County Noise Ordinance at all times.

Section 423-8 Heat and Glare

Heat and glare shall be limited as follows:

- 423-8.1 *Except for exterior lighting, operations producing heat or glare shall be conducted entirely within an enclosed building.*
- 423-8.2 *Exterior lighting shall be directed entirely away from adjacent properties.*

STAFF: According to the applicant, no heat and/or glare causing activities will be undertaken on-site.

Section 423-9 Storage

- 423-9.1 *All materials, including wastes, shall be stored and all grounds maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard.*
- 423-9.2 *No open storage of materials and equipment shall be permitted unless contained by a site obscuring fence or landscaped screening.*

STAFF: As described by the applicant and shown on site plans submitted with the application, the northern, southern, and eastern perimeters of the site will be landscaped, and will provide adequate screening of the site. The applicant states that grounds will be maintained and materials stored in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard.

423-9.4 *Storage of Hazardous Materials*

Developments which store hazardous materials must comply with State standards, OAR Chapter 340 Division 63, and the Federal standards, 40 CFR Part 262 and 264 and shall demonstrate such compliance. All hazardous materials must be stored above ground. Transport of and disposal of such materials shall be in conformance with all applicable local, State and Federal regulations with such compliance demonstrated.

STAFF: No Hazardous materials are proposed to be stored on site as part of this application.

Section 423-10 Drainage and Waste Water

All development shall comply with the State Department of Environmental Quality Water Quality Standards for all runoff, drainage and waste water.

STAFF: The applicant has stated that the only new impervious surface will be the paved parking area, however the new shop building will also provide additional impervious surface. Evidence of a DEQ 1200-C permit will be required as part of the Washington County Grading Permit process.

Section 423-11 Adequate Water Supply

All development shall be required to have an adequate water supply. Adequacy shall include:

423-11.1 Adequate supply for the use prior to issuance of a building permit (see Section 501-5.1, Critical Services).

STAFF: According to the Watermaster, the subject property is within the Sherwood, Damisch-Wilsonville Limited Groundwater Area. Therefore, the site is classified for the exempt use of up to 5,000 gallons per day. The applicant has stated, however, that the site has no need for water service.

Section 423-12 Radioactive Materials

The handling and storage of radioactive materials, the discharge of radioactive materials into air or water, and the disposal of radioactive waste in connection with all uses shall be in conformance with all applicable local, State, and Federal regulations with such compliance demonstrated.

Section 423-13 Toxic or Noxious Matter

All development shall comply with the State Department of Environmental Quality standards pertaining to omission of toxic or noxious matter and such compliance shall be demonstrated.

STAFF: The applicant states that no radioactive, toxic or noxious materials shall be created or disposed of on-site.

Section 426 Erosion Control

STAFF: As conditioned in Attachment B, the applicant/property owner shall submit sedimentation/erosion control plans prior to any site disturbances and issuance of a building permit. The applicant will be required to submit plans showing compliance with Section 426 and all grading shall be conducted using erosion control which meets the standards of the Washington County Erosion Control Plans Technical Guidance Book (January, 1991).

3. Article V, Public Facilities and Services:

Section 501 Public Facility and Service Requirements

Section 501-6 Exceptions for Critical and Essential Services

501-6.1 Development proposals that cannot ensure critical and essential services within the required time frames shall be denied unless all of the following findings can be made:

A. The particular inadequate facility(ies) or service(s) is not necessary for the particular proposal within the time period identified by the service provider;

STAFF: In accordance with Section 501-8.1 of the Code, the following facilities and services are considered critical:

- Water;
- Sewer;

Casefile 12-292-D

Attachment C - Staff Report

Page 12

- Fire protection;
- An adequate level of access to the proposed development;
- Adequate drainage and adequate provisions for storm water, surface water and water quality management; and
- No development shall be approved on property that is located outside of the Washington County Urban Road Maintenance District;

The applicant has provided a service provider letter from Tualatin Valley Fire and Rescue indicating that service for fire protection is available to the site.

With regard to sewer and surface water management, the subject site is currently outside of the Clean Water Services service district. Timeframes for the provision of sewer and surface water management services are unknown, as Title 11 Planning for the area has yet to be undertaken. Currently the applicant states that the site will not be connected to a water service, and that no septic fixtures will be installed on the site. The applicant states that should septic fixtures be desired at a later date, the applicant could install a subsurface sanitary sewer disposal (septic) system. Accordingly, to demonstrate the feasibility of on-site disposal, evidence shall be required demonstrating that the applicant has obtained a valid Site Evaluation approval from Washington County Health and Human Services Department for a future on-site septic treatment system, prior to the issuance of plumbing permits. Additionally, the State DEQ has advised Staff that the applicant may be required to obtain permits for surface water management and drainage prior to commencing operation, including a 1200-C permit. As such, evidence shall also be required through the grading permit process that a 1200-C permit has been obtained, or that no State DEQ permits are required. Subject to the above Recommended Conditions of Approval, it is considered that the particular inadequate services are not necessary for the particular proposal.

With regard to water services the site is currently located outside an established water district, and according to the Watermaster the subject property is within the Sherwood, Damisch-Wilsonville Limited Groundwater Area. Therefore, the site is classified for the exempt use of up to 5,000 gallons per day. The applicant has stated, however, that the site has no need for water service at this time. Timeframes for the provision of urban water services to the site are unknown, as Title 11 Planning has yet to be undertaken for the area.

In accordance with Section 501-8.2 of the Code, the following facilities and services are considered essential:

- Schools
- Police or Sheriff protection
- Transit agency service
- Adequate Level of Arterial and Collector Roads
- Street Lighting
- Gravel roads are unacceptable for development within the Urban Growth Boundary
- Future alignments of Collectors or Arterials
- Half street improvements

An adequate level of school service is not considered applicable to this development application for a contractor's establishment. The applicant has provided a service provider letter from the Washington County Sheriffs Department establishing that police protection is available to the site. The site is not required to annex into the Sheriffs Enhanced Patrol District, as per Policy 41 of the Washington County Comprehensive Framework Plan for the Urban Area.

As described by the applicant, SW McCamant Drive is an existing 30-foot right-of-way that is improved with an existing gravel surface; however it is not maintained by Washington County.

It does not extend physically beyond the property to the north, and portions of the right-of-way have previously been vacated in that direction. The road does not provide access to any other properties north of the subject site, and provides access to only two properties to the south, one of which is in the same ownership as the subject site. There are no sidewalks or other similar frontage improvements existing in the vicinity of the subject site. The applicant states that the proposed contractor's establishment will create zero pedestrian traffic (as it is accessed almost exclusively by heavy trucks and trailers) and only a very small amount of vehicular traffic on SW McCamant Drive.

The applicant states that they met with Tualatin Valley Fire and Rescue staff at the property to discuss emergency services to the site. Based on this meeting, TVF&R issued a letter supporting the proposal. A copy of this letter is included in the Casefile. TVF&R staff has also reviewed the application, and have advised staff that the department has no further comments with regard to the application.

The applicant met with Washington County Planning staff in a pre-application conference, along with County Engineering staff to discuss the proposal and requirement for access to and use of SW McCamant Drive. Following these discussions, the applicant requested and was approved a Design Exception from the County Engineer, permitting use of SW McCamant Drive in its current form with certain stipulations described in response to CDC Section 501-6.1. A copy of the approved Design Exception is included in the Casefile. The Design Exception requires that the applicant improve SW McCamant drive to include the following:

- A 12 foot gravel drivable surface width, a 20 foot unobstructed width, and a 13 foot 6 inch vertical clearance;
- A minimum surface of 12 inches of crushed rock capable of supporting a 12,500 pound point load (wheel load) and a 75,000 pound live load (gross vehicle weight); and
- The road shall be maintained to ensure fire apparatus access.

B. The approval of the development application will not substantially interfere with the ability to later provide the particular inadequate facility(ies) or service(s) to anticipated uses in the vicinity of the subject property;

STAFF: The applicant requires an exception to the critical services standards of Section 501-8.1 of the Code for sewer, water, and storm water, surface water and water quality management. Staff does not consider that anything in this application serves to interfere with the ability to later provide these services to anticipated uses in the vicinity of the subject property.

C. The approval of the development application without the assurance of the particular inadequate facility(ies) and service(s) will not cause a danger to the public or residents in the vicinity of the subject property; and

STAFF: Water use on the site is currently subject to the restrictions on the Sherwood, Damisch-Wilsonville Limited Groundwater Area, as administered by the Washington County Watermaster, and the applicant is required to provide evidence relating to compliance with appropriate on-site septic treatment and surface water management and drainage. As such, it is considered that use of the site without the provision of urban water, sewer, and surface water management services will not cause a danger to the public or residents in the vicinity of the subject property.

D. It is shown that the applicant has exhausted all practical methods within the ability of the applicant to ensure the provisions of the unacceptable facility(ies) and service(s).

STAFF: As described above, timeframes for the provision of urban water, sewer, and surface water management services to the site are unknown, as Title 11 Planning has yet to be undertaken for the area. As such, the applicant is unable to practically ensure the provisions of the unacceptable services.

501-6.2 All exceptions to the Public Facility and Service Standards identified above will be reviewed through a Type III process.

STAFF: The request for exceptions to the Public Facility and Service Standards identified above is being reviewed through the Type III process.

501-6.3 Development proposals that cannot ensure improvements required by Sections 501-8.1 B. (4) or 501-8.2 G. [Half-street improvements] within the required time frames shall be denied unless the Review Authority determines that the findings required under Sections 501-6.1 B. and C. plus the findings required by at least one of Sections 501-6.3 A. through C. below can be made.

C. The County Engineer makes a written determination that there are technical feasibility constraints that preclude construction of the required improvements with the proposed development, including but not limited to one or more of the following:

- (1) The ultimate alignment and grade for the roadway cannot be established;*
- (2) Construction of the required improvements would be inconsistent with the ultimate alignment and grade for the roadway, due to existing conditions in the vicinity of the proposed development site;*
- (3) Topographic or environmental features make construction physically impracticable; or*
- (4) Construction of the subject improvements would cause substantial negative effects on adjacent properties or on natural resources, provided that the negative effects could be avoided with a comprehensive public roadway improvement project on the subject road, designed and constructed in accordance with the Washington County Transportation Plan and Uniform Road Improvement Design Standards.*

STAFF: As stated above, the County Engineer has issued a written Design Exception for improvements to SW McCamant Drive, excepting the applicant from improvements to SW McCamant Drive otherwise required under Section 501 of the Community Development Code, and Section 130, Page 9, Road Requirements, and Section 320, Road Design, of the Washington County Road Design and Construction Standards. The Design Exception and supporting documentation are located in the Casefile.

501-6.4 Requests for exceptions to the requirements of Sections 501-8.1 B. (4) or 501-8.2 G. [Half-street improvements] as provided under Section 501-6.3 shall be reviewed through the same procedure type otherwise required

for the proposed development action(s), separate from or in conjunction with other required development hearings.

STAFF: The request for exceptions to the Public Facility and Service Standards identified above is being reviewed through the Type III process.

501-6.5 If an exception to Sections 501-8.1 B. (4) or 501-8.2 G. [Half-street improvements] is granted pursuant to Section 501-6.3, the applicant shall:

- A. Be required to provide improvements necessary to mitigate the impact of the proposed development on the road system; and*
- B. Assure the following, with said assurance provided prior to issuance of a building permit:*
 - (1) All other applicable requirements of Sections 501-8.1 and 501-8.2, as determined by the Review Authority, shall be satisfied prior to occupancy of the development;*
 - (2) All identified safety improvements, both on-site and within the impact and analysis area (pursuant to Resolution and Order No. 86-95 "Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance – Process Documentation" as modified or updated), shall be constructed prior to occupancy of the development; and*
 - (3) Sidewalks must be constructed adjacent to any road directly abutting the development site as otherwise required by this Article prior to occupancy of the development.*

STAFF: As stated above, the County Engineer has issued a written Design Exception for improvements to SW McCamant Drive, excepting the applicant from improvements to SW McCamant Drive otherwise required under Section 501 of the Community Development Code, and Section 130, Page 9, Road Requirements, and Section 320, Road Design, of the Washington County Road Design and Construction Standards. The Design Exception and supporting documentation are located in the Casefile.

The Design Exception requires that the applicant improve SW McCamant drive to include the following, which shall be completed prior to Final Approval of the application:

- A 12 foot gravel drivable surface width, a 20 foot unobstructed width, and a 13 foot 6 inch vertical clearance;
- A minimum surface of 12 inches of crushed rock capable of supporting a 12,500 pound point load (wheel load) and a 75,000 pound live load (gross vehicle weight); and
 - The road shall be maintained to ensure fire apparatus access.

501-6.6 Notwithstanding the provisions of this Section 501-6, all new construction and expansion of the existing structures shall pay the Transportation Development Tax, except as provided in the Transportation Development Tax Ordinance (Ordinance 691). No exception to the Transportation Development Tax shall be granted except as provided in the Transportation Development Tax Ordinance.

STAFF: The applicant shall pay the TDT as required for a contractor's establishment.

D. Transportation Plan

STAFF: The findings and recommendations for transportation standards are found in the body of this report.

E. Ordinance No. 691-A; Transportation Development Tax

STAFF: The Transportation Development Tax (TDT) is required of all new development and constitutes an assurance to satisfy a development's requirement to provide additional capacity to Collectors and Arterial streets needed for development. This tax is based on the number of daily vehicle trips a site generates and is due at issuance of a building permit.

F. Resolution and Order No. 86-95 - Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance

STAFF: The findings and recommendations for transportation standards are found in the body of this report.

G. Ordinance No. 738 – Road Design and Construction Standards

STAFF: The findings and recommendations for transportation standards are found in the body of this report.

VI. SUMMARY AND RECOMMENDATION

The applicant has requested Development Review approval for a Contractor's Establishment on the subject property for the contracting business operating as Albertson Trucking, Inc. The required findings have been made for the applicable Code sections. When implemented in accordance with the Recommended Conditions of Approval and the approved final plans, staff believes that the project will be in compliance with the Washington County Comprehensive Framework Plan for the Urban Area and the Washington County Community Development Code.

Staff recommends the Hearing's Officer approve the applicant's request, subject to the Conditions of Approval set forth in Attachment "B" of this report.



Washington County
Department of Land Use and Transportation
Current Planning Services
155 N First Ave, Suite 350
Hillsboro, OR 97124

NOTICE OF DECISION OF THE HEARINGS OFFICER

PROCEDURE TYPE: III

CPO: 5 **COMMUNITY PLAN:**
Washington County Comprehensive Framework Plan for the Urban Area

LAND USE DISTRICT:
FD-20 (Future Development 20 Acre District)

PROPERTY DESCRIPTION:
ASSESSOR MAP#: 2S1 34B
TAX LOT #: 500
SITE SIZE: 5.12 acres
ADDRESS: No Address Assigned

CASEFILE: 12-292-D

APPLICANT:
Bob & Donna Albertson
PO Box 1329
Sherwood, OR 97140

APPLICANT'S REPRESENTATIVE:
AKS Engineering & Forestry, LLC
Attn: Monty Hurley/Chris Goodell
13910 SW Galbreath Drive, Suite 100
Portland, OR 97219

OWNER:
Albertson Trucking, Inc.
PO Box 1329
Sherwood, OR 97140

LOCATION:
On the northeast side of SW McCamant Drive,
Approximately 1,000 feet northwest of the
Intersection of SW Tonquin Loop Road and
First Street

PROPOSED DEVELOPMENT ACTION: Development Review for a Contractor's Establishment in the FD-20 District.

DATE OF DECISION:

October 22, 2012

A summary of the decision of the Hearings Officer and supplemental findings are attached.

This decision may be appealed to the Land Use Board of Appeals (LUBA) by filing a notice of Intent to Appeal with LUBA within 21 days of the date of this decision. Contact your attorney if you have any questions in this regard.

For further information contact the Land Use Board of Appeals at 503-373-1265.

The complete casefile, including Notice of Decision, Application, Staff Report, Findings and Conclusions, and Conditions of Approval, if any, are available for review at no cost at the Department of Land Use and Transportation. Copies of this material will be provided at reasonable cost.

Notice to Mortgagee, Lien Holder, Vendor or Seller: ORS Chapter 215 requires that if you receive this notice it must promptly be forwarded to the purchaser.

CASEFILE NUMBER: 12-292-D

SUMMARY OF DECISION:

On October 22, 2012, the Washington County Hearings Officer issued a written decision (Attachment "C") for Washington County Casefile No. 12-292-D. The decision of the Hearings Officer is as follows:

ORDER:

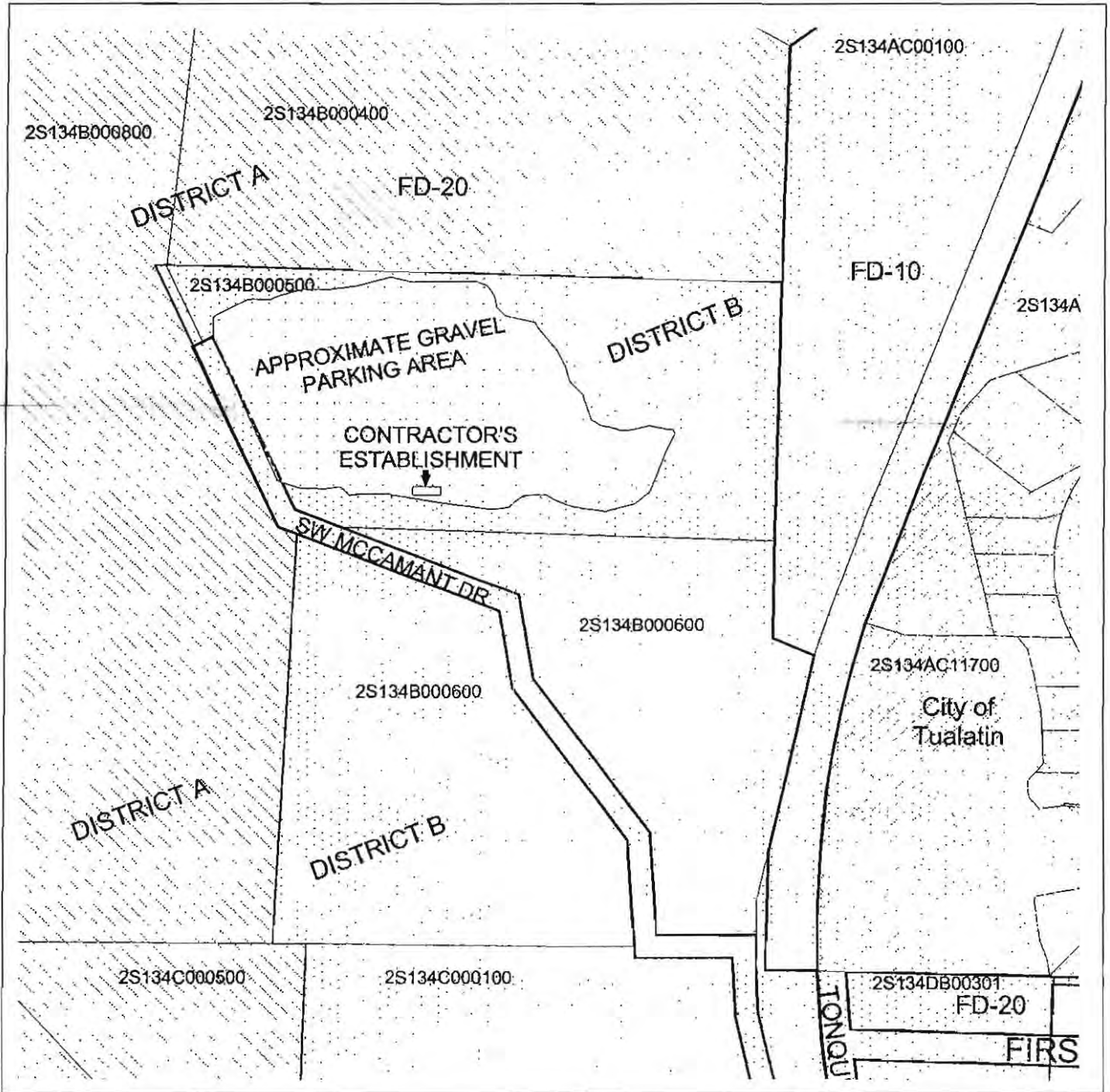
The Development Review for a Contractor's Establishment is **approved**, subject to the Conditions of Approval included in Attachment B.

Attachments:

- A. Vicinity Map**
- B. Conditions of Approval**
- C. Hearings Officer's Findings, Conclusions, and Order**

ATTACHMENT A VICINITY MAP

TAX MAP/LOT NO. 2S1 34 B0 00500 CASE FILE NO. 12-292-D



↑ NORTH □ AREA OF CONSIDERATION

SCALE: 1" = 200'

SITE & SURROUNDING LAND USE DISTRICTS:

- FD-20 (Future Development 20-Acre District)
- EFU District (Exclusive Farm Use)
- FD-10 (Future Development, 10-Acre District)
- City of Tualatin

REVIEW STANDARDS FROM CURRENT OR APPLICABLE ORDINANCE OR PLAN

- A. Washington County Comprehensive Plan
- B. Applicable Community Plan (See Front of Notice)
- C. Transportation Plan
- D. Washington County Community Development Code:
 - ARTICLE I, Introduction & General Provisions
 - ARTICLE II, Procedures
 - ARTICLE III, Land Use Districts
 - ARTICLE IV, Development Standards
 - ARTICLE V, Public Facilities and Services
 - ARTICLE VI, Land Divisions & Lot Line Adjustments
 - ARTICLE VII, Public Transportation Facilities
- E. R & O 86-95 Traffic Safety Improvements
- F. ORD. NO. 738, Design and Construction Standards
- G. ORD. NO. 691-A & 729, Transportation and Development Tax

Attachment B CONDITIONS OF APPROVAL

I. **PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES, THE APPLICANT SHALL:**

Obtain a Grading Permit from the Washington County Building Services Division.

NOTE: *The Grading Permit application must follow the grading submittal package checklist from the Building Services Division.*

II. **PRIOR TO FINAL DEVELOPMENT REVIEW APPROVAL AND ISSUANCE OF BUILDING PERMITS FOR THE SHOP BUILDING, THE APPLICANT SHALL (WITHIN TWO YEARS):**

A. **Submit a Final Approval Application to Current Planning Services, Project Planner (Wayne Hayson, 503-846-3867), including the following:**

1. Final Approval form (Type I procedure; two copies).

NOTE: *The final approval application shall contain a written statement and complete evidence/documentation that all Conditions of Approval have been met.*

2. Final Approval fee.
3. Final landscaping plans showing that no less than 15% of the total site area consists of landscaping, including a minimum of 4 canopy trees per 100 lineal feet located within the "Additional Landscaping" area shown on Preliminary Landscape Plan P5, and located within the Casefile.
4. Evidence that the landscaping plan described above has been implemented. Landscaping shall be maintained at all times.
5. Written certification from an engineer that SW McCamant Drive has been improved to include the following:
 - a) A minimum 12 foot gravel drivable surface width with a 20 foot unobstructed width, and a 13 foot 6 inch vertical clearance; and
 - b) A minimum surface of 12 inches of crushed rock capable of supporting a 12,500 pound point load (wheel load) and a 75,000 pound live load (gross vehicle weight);

SW McCamant Drive shall be maintained to ensure fire apparatus access at all times.

6. Written certification from an engineer that the employee parking area has been constructed in accordance with the requirements of Section 413-5.1.
7. Written certification from an engineer that the heavy equipment/truck parking area has been constructed in accordance with the requirements of Section 413-5.4..

B. Pay the Transportation Development Tax.

III. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

This approval is limited to the vehicles, equipment, and operation described in the Casefile, and as outlined in the Staff Report. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. (Section 207-5)

IV. ADDITIONAL CONDITIONS:

- A.** This development shall be constructed in accordance with the conditions of this decision, the approved final plans and the standards of the Community Development Code (Section 207-5).
- B.** All conditions of approval shall be binding upon all heirs, successors and assigns (Section 207-5).
- C.** Transferability of this Development Permit shall be in accordance with Section 201-8.
- D.** No disposal of chemicals (pesticides, herbicides, fertilizers, etc.) is permitted on the subject property in conjunction with the contractor's establishment (Section 207-5).
- E.** The vehicles associated with the contractor's establishment shall not be fueled on the subject parcel (Sections 207-5 & 423).
- F.** A site evaluation approval/permit to construct from the appropriate agency (Washington County Dept. of Health & Human Services, 503-846-8881) shall be required prior to locating any on-site septic treatment system on the property. If no site evaluation approval/permit to construct is obtained, site utilities such as water service and on-site septic disposal shall not be allowed.
- G.** This approval shall automatically expire two years from the date of this approval, unless development has commenced, an application for an extension is filed, or this approval is revoked or invalidated (Section 201-4).

BEFORE THE LAND USE HEARINGS OFFICER
OF WASHINGTON COUNTY, OREGON

**HEARINGS OFFICER'S
FINDINGS, CONCLUSIONS AND FINAL ORDER**

**Casefile: 12-292-D
Applicant: Bob & Donna Albertson
Hearing Date: October 18, 2012**

I. SUMMARY

The Applicant requests Development Review for a Contractor's Establishment in the FD-20 District.

II. ORDER

The Development Review for a Contractor's Establishment is approved, subject to the conditions in Attachment B of the Staff Report, with the following modification:

Recommended Condition III is amended to read:

**III. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S
ESTABLISHMENT:**

This approval is limited to the vehicles, equipment, and operation described in the Casefile, and as outlined in the Staff Report. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. (Section 207-5)

III. HEARING AND RECORD HIGHLIGHTS

- A. The Hearings Officer received testimony on this application, Casefile No. 12-292-D at the public hearing on October 18, 2012. The application, Staff Report and all exhibits, were present at the hearing and have been received without objection and reviewed by the Hearings Officer. All Exhibits and records of testimony regarding this application are filed with and maintained by Washington County Department of Land Use and Transportation ("DLUT"). The Hearings Officer made the statements required by ORS 197.763 and disclaimed any bias, conflicts of interest, or *ex parte* contacts with interested persons.

- B. Wayne Hayson, Current Planning, identified the applicable criteria and summarized the Staff Report and recommendation. Mr. Hayson proposed that recommended Condition III be modified to clarify that it does not limit the ability of the current applicant to transfer the permit to another party. He submitted a modified condition to reflect that intent. See Exhibit H-2.
- C. Chris Goodell, AKS Engineering & Forestry, LLC, representing the Applicant, reported that the Applicant agrees with the findings and conclusions in the Staff Report and the recommended conditions of approval as modified in Exhibit H-2.
- D. The Hearings Officer approved the application, subject to the conditions of approval recommended in the Staff Report, with the modification in Exhibit H-2.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

The findings and conclusions of the Staff Report are adopted and incorporated into this Final Order.

Planning Staff pointed out that the recommended Condition III, as written in Attachment B of the Staff Report, could prevent the Applicant from transferring the permit to another party. As that was not the intent of Planning Staff, a modification was presented in Exhibit H-2, which clarifies that the condition is intended to ensure that the use of the property remains as specified in the application. The approved use is for the storage of contractor's equipment, including trucks, trailers, heavy machinery, and construction equipment; and the storage of materials, including rock, gravel, piping, and concrete blocks. The site is not open to the public.

The City of Tualatin submitted a letter, Exhibit H-3, outlining the understanding of the application reached by the City through a telephone conversation with Planning Staff. County Planning Staff explained the screening that would be required by the conditions of approval, pointing out that the northerly half of the east property boundary has existing vegetation, including trees approximately 100 to 120 feet deep from the boundary, while the southerly half is open. For that reason, Planning Staff recommended conditions of approval requiring a more detailed landscape plan for the southern portion of the site that will include 5-6 canopy trees. Over time, the growth of the canopy of the trees will establish reasonable screening between the site and adjacent residential development.

The City of Tualatin also asked that the Applicant observe the Oregon State Department of Environmental Quality standards relating to noise. Planning Staff did not include a condition requiring compliance with noise standards. Those standards are state law that applies to the approved use without a condition being imposed through this approval.

Casefile 12-292-D Contractor's Establishment
Attachment C - Hearing Officer's Findings, Conclusions and Final Order

Based on the findings and conclusions of the Staff Report and those above, the Applicant has provided substantial evidence that all applicable criteria are met or will be met with compliance with the recommended conditions of approval, as modified in Exhibit H-2.

V. DECISION

The Development Review for a Contractor's Establishment must be approved, subject to the conditions in Attachment B of the Staff Report, as modified in Exhibit H-2.

DATED this 22nd day of October, 2012.

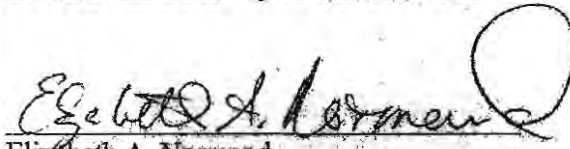
Elizabeth A. Normand
Washington County Land Use Hearings Officer

Based on the findings and conclusions of the Staff Report and those above, the Applicant has provided substantial evidence that all applicable criteria are met or will be met with compliance with the recommended conditions of approval, as modified in Exhibit H-2.

V. DECISION

The Development Review for a Contractor's Establishment must be approved, subject to the conditions in Attachment B of the Staff Report, as modified in Exhibit H-2.

DATED this 22nd day of October, 2012.

A handwritten signature in black ink, appearing to read "Elizabeth A. Normand", with a large, stylized circular flourish at the end.

Elizabeth A. Normand
Washington County Land Use Hearings Officer



Washington County
Department of Land Use and Transportation
Current Planning Services
155 N First Ave, Suite 350
Hillsboro, OR 97124

NOTICE OF DECISION OF THE HEARINGS OFFICER

PROCEDURE TYPE: III

CPO: 5 COMMUNITY PLAN:
Washington County Comprehensive Framework
Plan for the Urban Area

LAND USE DISTRICT:
FD-20 (Future Development 20 Acre District)

PROPERTY DESCRIPTION:
ASSESSOR MAP#: 1N2 20D
TAX LOT #: 101 & 102
SITE SIZE: 1.94 & 5.41 acres
ADDRESS: 5100 NW Sewell Road

CASEFILE: 13-225-D

APPLICANT:
Bernhardt Golf
Attn: Darryl Bernhardt
7340 SW Miller Hill Road
Beaverton, OR 97007

APPLICANT'S REPRESENTATIVE:
AKS Engineering & Forestry, LLC
Attn: Monty Hurley/Chris Goodell
13910 SW Galbreath Drive, Suite 100
Portland, OR 97219

OWNER TAX LOT 101:
Randy Olsen
5100 NW Sewell Road
Hillsboro, OR 97124

OWNER TAX LOT 102:
Bernhardt Industries, Inc.
7340 SW Miller Hill Road
Beaverton, OR 97007

LOCATION:
On the east side of NW Sewell Road,
approximately 2,000 feet north of its intersection
with NW Evergreen Road

PROPOSED DEVELOPMENT ACTION: Development Review for a Contractor's Establishment
(Bernhardt Golf) in the FD-20 District.

DATE OF DECISION:

October 25, 2013

A summary of the decision of the Hearings Officer and supplemental findings are attached.

This decision may be appealed to the Land Use Board of Appeals (LUBA) by filing a notice of Intent to Appeal with LUBA within 21 days of the date of this decision. Contact your attorney if you have any questions in this regard.

For further information contact the Land Use Board of Appeals at 503-373-1265.

The complete casefile, including Notice of Decision, Application, Staff Report, Findings and Conclusions, and Conditions of Approval, if any, are available for review at no cost at the Department of Land Use and Transportation. Copies of this material will be provided at reasonable cost.

Notice to Mortgagee, Lien Holder, Vendor or Seller: ORS Chapter 215 requires that if you receive this notice it must promptly be forwarded to the purchaser.

CASEFILE NUMBER: 13-225-D

SUMMARY OF DECISION:

On October 25, 2013, the Washington County Hearings Officer issued a written decision (Attachment "C") for Washington County Casefile No. 13-225-D. The decision of the Hearings Officer is as follows:

ORDER:

The Development Review for a Contractor's Establishment is **approved**, subject to the Conditions of Approval found in Exhibit 1 of the Hearings Officer's Final Order [Attachment B].

Attachments:

- A. Vicinity Map
- B. Conditions of Approval
- C. Hearings Officer's Final Order

Attachment B CONDITIONS OF APPROVAL

I. **PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES, THE APPLICANT SHALL:**

Obtain a Grading Permit from the Washington County Building Services Division, as applicable.

NOTE: *Grading Permit applications must follow the grading submittal package checklist from the Building Services Division.*

II. **PRIOR TO FINAL DEVELOPMENT REVIEW APPROVAL AND COMMENCEMENT OF OPERATION, THE APPLICANT SHALL (WITHIN FOUR YEARS):**

A. **Submit a Final Approval Application to Current Planning Services, Project Planner (Wayne Hayson, 503-846-3841), including the following:**

1. Final Approval form (Type I procedure; two copies).

NOTE: *The final approval application shall contain a written statement and complete evidence/documentation that all Conditions of Approval have been met.*

2. Final Approval fee.
3. Evidence of a final right-of-way permit to improve the existing driveway to current standards and that sufficient vegetation in the right-of-way has been removed to meet the sight-distance requirements of Section 501-8.5 F. providing for 250 feet of sight distance in either direction for the existing driveway.
4. Written certification from an engineer that the employee parking area has been constructed to meet or exceed the requirements of Section 413-5.1.
5. Written certification from an engineer that all heavy equipment parking areas have been constructed to meet or exceed the requirements of Section 413-5.4.
6. Evidence that the following document has been executed (Survey Division, Scott Young, 503-846-7933):
 - a. Dedication of additional right-of-way to provide 37 feet from centerline along the NW Sewell Road frontage.

III. **PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROPOSED FUELING FACILITIES COMPLETE THE FOLLOWING:**

- A. Obtain Final Approval.
- B. Meet with commercial plans examiner, if required to do so by the Building Services Division.

- C. Submit the building plans to Building Services (503-846-3470).
- D. Submit evidence that the applicant has obtained all applicable local (Tualatin Valley Fire and Rescue), State (Department of Environmental Quality) and Federal permits for the installation of a fuel tank and fueling facility.
- E. Pay the Transportation Development Tax.

IV. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

This approval is limited to the vehicles, equipment, and operation outlined in the Staff Report and application. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. This specifically includes the "proposed future outbuilding" shown on the plans, which requires separate future approval.

V. ADDITIONAL CONDITIONS:

- A. This development shall be constructed in accordance with the conditions of this decision, the approved final plans and the standards of the Community Development Code (Section 207-5).
- B. All conditions of approval shall be binding upon all heirs, successors and assigns (Section 207-5).
- C. Transferability of this Development Permit shall be in accordance with Section 201-8.
- D. No disposal of chemicals (pesticides, herbicides, fertilizers, etc.) is permitted on the subject property in conjunction with the contractor's establishment (Section 207-5).
- E. This approval shall automatically expire four years from the date of this approval, unless development has commenced, an application for an extension is filed, or this approval is revoked or invalidated (Section 201-4).

BEFORE THE LAND USE HEARINGS OFFICER
OF WASHINGTON COUNTY, OREGON

In the Matter of an Application for
Development Review for a Contractor's
Establishment in the FD-20 District

Applicant: Bernhardt Golf, Darryl
Bernhardt

Applicant's Representative: AKS
Engineering & Forestry, LLC, Attn:
Chris Goodell

FINAL ORDER

Casefile No. 13-225-D

**APPLICATION APPROVED
With CONDITIONS**

I. Application Summary and Background Information

The applicant is requesting development review approval for a contractor's establishment in the FD-20 District, located on Tax Lots 1S220D000101 and 102. Combined, the subject site is approximately 7.35 acres, and is surrounded by other properties in the FD-20 District to the north, east, and south, and the NW Sewell Road right-of-way to the west. The surrounding area along NW Sewell Road supports a number of similar uses, including contractors' establishments approved via Casefiles 02-369-M(CONTR) and 03-509-D, and a nursery.

According to the applicant the proposed contractor's establishment will involve the storage and maintenance of landscaping contractor's equipment including trucks, tractors, and other miscellaneous landscaping equipment. On-site storage of materials used in the contracting business is also proposed on the site, including the storage of gravel, piping, grass seed, and turf. The proposed facility is not intended to be open to the public/customers, only to employees. Access to the site will continue to be provided from NW Sewell Road. Tax Lot 101 supports an existing residence and several accessory structures, while Tax Lot 102 is currently vacant. The applicant proposes to utilize the existing residence for the business office, while the accessory structures will be used as storage and shop areas. The applicant has proposed one new structure on the property, to provide fuel tanks and pumps. The proposed tanks and pumps will be located in the center of the property approximately 50 feet or more from any property line thereby complying with the setback requirements of the District. Staff noted in its report that installation of the tanks and pumps will require building permits and the applicant is required to comply with all state and federal permitting requirements for this type of facility. The fuel tanks and pumps are considered accessory to the primary use of the site as a contractor's establishment.

The applicant has requested an exception to the critical and essential service standards of Section 501-8 of the Community Development Code, as urban water, sanitary sewer, and surface water management services are not presently available at the site, and access to the site via NW Sewell Road is not to County standard. Staff testified that it believes that granting the exception for these services will not interfere with the ability to later provide these services to anticipated uses in the vicinity of the subject property, nor will granting the exception cause a danger to the public or residents in the vicinity of the subject property.

Transfer of the property or business to another owner could result in changes in use that are not consistent with the use as described in this application. As such, a Condition of Approval (attached hereto as Exhibit 1) limits approval to the vehicles, equipment, and operation of the contractor's establishment as described in this application. The addition of other uses, features, vehicles, or heavy equipment may require subsequent approval through the land use application process.

The County mailed a public notice to all property owners within 500 feet of the site. Prior to the Hearing, staff had received one letter of comment in response to the public notice. The letter writer requested additional noise abatement, which is discussed in response to Section 423.

II. Procedural Summary

A duly-noticed public hearing was conducted on October 17, 2013. The Hearings Officer read the statements required by ORS 197.763 and 197.796. She then offered hearing participants the opportunity to object to the Hearings Officer's jurisdiction or impartiality with respect to the application or to any procedural matter. There were no objections. Staff summarized the applicable criteria and the application. The applicant described the proposed development.

There were no comments in support or opposition from any member of the community, and no requests to leave the record open. The Hearings Officer issued a verbal decision approving the application following the close of the hearing, and noted that a written decision would be provided by October 25, 2013. No further materials were received from the applicant, staff, or the public in the time between the hearing and the issuance of this Final Order.

Following are findings related to all applicable approval criteria which demonstrate that this application meets those criteria. As such, the application is approved with this order, subject to the conditions set forth in Exhibit 1, attached hereto.

III. Applicable Criteria and Affected Jurisdictions

Applicable Standards

- A. Washington County Comprehensive Framework Plan for the Urban Area
- B. East Hillsboro Community Plan
- C. Washington County Community Development Code:
 - 1. Article II, Procedures:
 - Section 202-3 Type III Procedure
 - Section 207-5 Conditions of Approval
 - 2. Article III, Land Use Districts:
 - Section 308 FD-20 District
 - 3. Article IV, Development Standards:
 - Section 403 Applicability
 - Section 406 Building, Siting and Architectural Design
 - Section 407 Landscape Design
 - Section 408 Neighborhood Circulation
 - Section 409 Private Streets
 - Section 410 Grading and Drainage
 - Section 411 Screening and Buffering
 - Section 413 Parking and Loading
 - Section 414 Signs
 - Section 415 Lighting
 - Section 423 Environmental Performance Standards
 - 4. Article V, Public Facilities and Services
 - Section 501 Public Facility and Service Requirements
- D. Transportation Plan
- E. Ordinance No. 691-A – Washington County Transportation Development Tax
- F. Resolution and Order No. 86-95 – Determining Traffic Safety Improvements Under the Traffic Impact Fee Ordinance
- G. Ordinance No. 738 – Road Design and Construction Standards

Affected Jurisdictions

Streets:	Washington County Dept. of Land Use and Transportation
Fire Protection:	Washington County Fire District #2
Police Protection:	Washington County Sheriff

IV. Findings

A. Washington County Comprehensive Framework Plan for Urban Areas

The goals and policies which relate to the development of land are implemented by the Washington County Community Development Code (the Code). The applicant is not required to address, consider or implement any goal, policy or strategy of the Plan except where required by the Code. In accordance with Section 308-3 of the Code, the proposed use is subject to Policy 41 of the Comprehensive Framework Plan for the Urban Area. By demonstrating in this Order that the request complies with the standards of the Code and the Community Plan, this Plan requirement will be satisfied.

B. East Hillsboro Community Plan:

The site is located in the Evergreen Subarea.

The site is located in Area of Special Concern 7.

The site does not include any Significant Natural Resource Areas

The site is not designated as a street connectivity area.

The following Evergreen Subarea Design Elements are applicable to the project:

Area of Special Concern 7: This area consists of approximately 300 acres located north of Evergreen Road, west of Area of Special Concern 6 and generally east of NW 273rd Avenue. The planning of this area is to be coordinated with the planning for Area of Special Concern 1 on the West Union Community Plan ("Helvetia Area").

Title 11 planning and FD-20 development applications within this Area of Special Concern are subject to the following criteria:

a) Until the effective date of new regulations adopted pursuant to Title 11, development applications within this Area of Special Concern shall be subject to Community Development Code Section 308, except as otherwise provided below:

- 1) Day care facilities, cemeteries, churches and schools are prohibited due to the area's designation as an Industrial Area.
- 2) The creation or reconfiguration of lots or parcels shall comply with the requirements of Section 3.07.430 of Metro's Urban Growth Management Functional Plan.

Title 11 planning has not been completed for Area of Special Concern 7; therefore the application is subject to the requirements of Section 308 (FD-20 District). A contractor's establishment is a permitted use in the FD-20 District in accordance with Section 308-4.6. The application does not involve day care facilities, cemeteries, churches or schools, nor does it involve the creation or reconfiguration of parcels.

- b) The Title 11 planning required by Metro shall:
 - 1) Adopt provisions – such as setbacks, buffers and designated lanes for movement of slow-moving farm machinery – to enhance compatibility between industrial uses in the Evergreen area and agricultural practices on adjacent land outside the UGB zoned for farm or forest use.

As described above, Title 11 planning has not been completed for Area of Special Concern 7. The applicant will, however, dedicate additional right-of-way in order to provide for future road widening and improvements, consistent with the requirement above.

C. Washington County Community Development Code

1. Article II: Procedure

Section 202-3 relates to Type III procedures. Section 202-3.1 states that Type III actions involve development or uses which may be approved or denied, thus requiring the exercise of discretion and judgment when applying the development criteria contained in the Code or the applicable Community Plan. Impacts may be significant and the development issues complex. Extensive conditions of approval may be imposed to mitigate impacts or ensure compliance with the Code and the Comprehensive Plan.

This request was processed through the Type III procedure of the Community Development Code, pursuant to Section 308-4.6. In accordance with the Type III procedural requirements, public notice was sent to surrounding property owners 20 days prior to the hearing. One letter of comment was received regarding this request prior to the Hearing.

Staff noted in its submittal that the hearing for this application was originally scheduled for September 19, 2013. However, due to a possible County error in the distribution of the original hearing notice, the applicant elected to postpone the hearing to the October 17 hearing schedule, in order to allow a new notice to be issued.

Section 207-5 relates to Conditions of Approval. Specifically, Section 207 5.1 states that the Review Authority may impose conditions on any Type II or III development approval. Such conditions shall be designed to protect the public from potential adverse impacts of the proposed use or development or to fulfill an identified need for public services within the impact area of the proposed development. Conditions shall not restrict densities to less than that authorized by the development standards of this code.

Conditions of approval may be imposed to ensure compliance with the standards of the Code and other County regulations and to mitigate any adverse impacts the use may

have on the surrounding area. Exhibit 1 to this Final Order contains the Conditions of Approval. The applicant is required to comply with all of the applicable Code regulations and Departmental conditions.

2. Article III: Land Use District

Section 308 relates to the FD-20 District. Section 308-4 specifies Uses Which May Be Permitted Through a Type III Procedure, and states that (according to Section 308-4.6) a Contractor's Establishment may be permitted unless specified otherwise by the applicable Community Plan or Policy 41 of the Comprehensive Framework Plan for the Urban Area. These uses may be permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5.

The applicant has proposed to operate a contractor's establishment from the subject site. As described by the applicant, the contractor's establishment will involve the storage and maintenance of landscaping contractor's equipment including trucks, tractors, and other miscellaneous landscaping equipment. On-site storage of materials used in the contracting business is also proposed on the site, including the storage of gravel, piping, grass seed, and turf. The applicant further notes that the surrounding area along NW Sewell Road supports a number of similar uses, including contractors' establishments approved via Casefile 02-369-M(CONTR) and 03-509-D.

The proposed facility is not intended to be open to the public/customers, only to employees. Access to the site will continue to be provided from NW Sewell Road. Tax Lot 101 supports an existing residence and several accessory structures, while Tax Lot 102 is currently vacant. The applicant proposes to utilize the existing residence for the business office, while the accessory structures will be used as storage and shop areas.

Section 308-5 relates to Prohibited Uses. Section 308-5.9 specifies that any parking or storage of tractor-trailers, semi-trucks, or heavy equipment, except in conjunction with an approved development or with a farm or forest use is prohibited.

As part of the proposed contractor's establishment, the applicant proposes storing trucks, tractors, and other miscellaneous landscaping equipment. Approval of this request constitutes development approval, thereby permitting the storage of the above heavy equipment on the site, as specified in this application.

Section 308-6 sets forth Dimensional Requirements. Section 308-6.2 details minimum Yard Requirements as follows:

- A. Thirty (30) foot front yard;
- B. Ten (10) foot side yard;

- C. Thirty (30) foot street side yard;
- D. Twenty-five (25) foot rear yard;
- E. Additional setbacks may be required as specified in Sections 411 and 418; and;
- F. Required yards shall be horizontally unobstructed except as provided by Section 418.

The Existing Conditions Plan (Sheet P2) submitted with the application demonstrates that the existing structures and proposed fuel tanks meet the dimensional standards listed above.

Section 308-7 sets forth Additional Standards. Relevant sections include Section 308-7.1, which states that all new permitted uses shall be constructed in a manner which does not interfere with future conversion of the land to planned urban densities and/or uses, and Section 308-7.3 which states that property in an Area of Special Concern on the Future Development Areas Map in the Comprehensive Framework Plan for the Urban Area is subject to the applicable Area of Special Concern provisions in Plan Policy 41.

While the applicant has identified a potential future outbuilding on the Preliminary Site/Landscape Plan (Sheet P4), no immediate new construction is proposed as part of this application, with the exception of the installation of the proposed fuel tanks. The Hearings Officer finds that the development does not interfere with future conversion of the land to planned urban densities and/or uses, and is consistent with the applicable requirements of Policy 41 of the Comprehensive Framework Plan for the Urban Area. The Hearings Officer finds that the proposed use is consistent with a future industrial designation of the site, as it involves installation of minimal improvements, and existing structures on the site will remain unchanged as they are put to the use as proposed.

3. Article IV: Development Standards

Section 403 concerns Applicability. As required, the applicant provided a site plan and written information to address the Development Review standards of Article IV. The Hearings Officer finds this standard has been met.

Section 406 addresses requirements relating to Building, Siting and Architectural Design. The site is currently occupied by an existing residence and two accessory structures. While the applicant has identified a potential future outbuilding on the Preliminary Site/Landscape Plan (Sheet P4 of the applicant's submittal), no immediate new construction is proposed as part of this application.

Section 407 sets forth requirements for Landscape Design. The subject site is predominantly vegetated, with several large stands of trees within the property. The Code identifies no specific provisions for landscaping of a contractor's establishment, except subsection 407-1.4 B.(1), which states 15% of the site is to be landscaped in

industrial districts. The applicant states that in excess of 15% of the site is currently landscaped. Section 407-4 requires the applicant to submit a landscape plan, which has been included as Sheet P4 of the applicant's submittal, while Section 411 allows the Review Authority to determine the extent of screening and buffering on the site. Further discussion of screening and buffering between the site and neighboring uses is found in Section 411 of this Order. No tree removal has been indicated as part of this application, however staff noted in its report that tree removal is exempt from permitting requirements on the site in accordance with Section 201-2. The Hearings Officer finds the existing landscaping on the site to be sufficient.

Section 408 addresses requirements for Neighborhood Circulation.

This Section requires the applicant to provide a circulation plan for the area based on the proposed development. Additionally this Section requires the applicant to design the proposed land use in a fashion that either provides for neighborhood circulation or does not preclude it. The proposed project is not identified as a Local Street Connectivity Area; therefore, this project is subject to the requirements of Section 408-5.

The applicant requested and has been granted a modification to the requirements of Section 408-5.4, based on the existing development patterns in the project vicinity (408-5.5). The Hearings Officer finds that the provision of through streets and pedestrian and bicycle accessways are currently neither required nor feasible to provide for improved circulation in the vicinity of the subject site.

Section 410 relates to Grading and Drainage. The applicant submitted preliminary site details as required by this section, including preliminary grading and drainage plans. Washington County Building Engineers reviewed the preliminary details and determined the plans meet the requirements of Section 410-1.1. No grading is proposed as part of this application. The Hearings Officer finds the standards of this Section to be met.

Section 411 sets forth requirements pertaining to Screening and Buffering.

The applicant has proposed a contractor's establishment on the site, which has a land use designation of FD-20. The Code includes no specific provisions for screening and buffering on FD-20 lands, with screening and buffering to be determined as required by the review authority. However, inside the UGB, Code provisions specifically require screening and buffering when commercial and industrial uses adjoin residential uses. In this case, the site is bordered to the north by a vacant 19.73 acre parcel, and to the south by two parcels including a nursery and a residential dwelling, and a residential dwelling. Staff noted in its report that the dwellings are located over 150 feet and 300 feet respectively from proposed work areas on the site, and are screened from the existing accessory structures by a large stand of trees. Farmland lies to the east of the site, while the NW Sewell Road right-of-way is to the west. As such, while the Hearings Officer acknowledges the letter of comment from the owners of the existing nursery

requesting additional screening and buffering for noise abatement, the Hearings Officer finds that additional screening is not required in this instance.

Section 413 relates to Parking and Loading standards.

Section 413 does not contain specific parking requirements for a contractor's establishment. The applicant has indicated that sufficient employee parking is available adjacent to the existing residence for the purposes of office use. No customers are proposed to visit the site, and the site is closed to the general public. A Condition of Approval (Exhibit 1) has been included which requires that the applicant to provide written certification from an engineer that the employee parking area has been constructed to meet or exceed the requirements of Section 413-5.1. In accordance with Section 413-5.6, the proposed parking spaces need not be striped, except as required to comply with ADA requirements.

In accordance with Section 413-5.4 of the Code, parking areas for the storage of heavy equipment or vehicles in the Industrial District may consist of a gravel surface with a minimum four (4) inches of base rock with two (2) inches of three-quarter (3/4) inch minus leveling course. While the FD-20 district is not generally considered an industrial district, the applicant proposes a use similar to an industrial use in an area identified in Policy 41 of the Comprehensive Framework Plan for the Urban Area as a future industrial area. Accordingly, a Condition of Approval has been included which states that prior to Final Approval the applicant must provide written certification from an engineer that parking areas have been constructed to meet or exceed the requirements of Section 413-5.4.

Section 414 relates to Signs. The applicant has not proposed a sign at this time. If the applicant proposes to erect or otherwise locate any signs on the subject site at a later time, a sign permit shall be required to be obtained from Washington County Current Planning Services.

Section 415 addresses Lighting, but since the applicant has not proposed any lighting of the contractor's establishment at this time, the Hearings Officer finds this Section inapplicable.

Section 423 sets forth Environmental Performance Standards. All developments are required to comply with State Department of Environmental Quality Standards, as analyzed further below.

Section 423-4 addresses Air Quality requirements. The State Department of Environmental Quality (DEQ) standards pertaining to air quality apply to all land uses. No unusual air quality problems are anticipated as a result of the proposed development. However, the applicant is required to comply with DEQ requirements at all times.

Section 423-5 relates to Odor, and states that all development must comply with the State Department of Environmental Quality Standards pertaining to odor. The applicant indicated in its submittal that none of the uses proposed for the site are associated with the release of odorous gases past the property line.

Section 423-6 pertains to Noise. All development is required to comply with the State Department of Environmental Quality Standards relating to noise. Demonstration of compliance may be required by the Review Authority. The applicant's site plans indicate that the site is shielded by large stands of trees and permanent vegetation. As noted above, the Hearings Officer does not find that requiring additional buffering for sound mitigation is necessary or required for this project. Any future noise concerns are within the jurisdiction of the state DEQ.

Section 423-7 pertains to Vibration, and states that no development is allowed to generate ground vibration which is perceptible by the Director beyond the property line of origin without use of instruments. Ground vibrations caused by motor vehicles, trains, aircraft, or temporary construction work are exempt from strict application of these standards, but good faith efforts to control such vibrations shall be made by the originator.

No unusual problems with noise or vibration are anticipated with the proposed development. While the letter of comment received by Staff requested limited hours of operation and screening of the site, the applicant testified at the hearing that the contractor's establishment will operate in compliance with the Washington County Noise Ordinance, which limits the making and creating of loud, unnecessary or unusual noises within the boundaries of the county. The applicant is already required to comply with the Washington County Noise Ordinance at all times, which is the appropriate mechanism to address noise issues on the site. Explicit restrictions on hours of operation consistent with the Code are noted in Conditions of Approval, found in Exhibit 1 of this Final Order.

Section 423-8 addresses Heat and Glare, and states that heat and glare is to be limited to enclosed buildings. The exception is for exterior lighting, which must be directed away from adjacent properties. According to the applicant, no heat and/or glare-causing activities will be undertaken on-site.

Section 423-9 sets forth requirements pertaining to Storage. Sections 423-9.1 and 423-9.2 detail the requirements, and state that all materials, including wastes, must be stored and all grounds maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard. Additionally, no open storage of materials and equipment is permitted unless contained by a site-obscuring fence or landscaped screening.

As described by the applicant and shown on site plans submitted with the application, significant vegetation exists which will provide adequate screening of the site. The applicant states that the grounds will be maintained and materials stored in a manner

which will not attract or aid the propagation of insects or rodents or create a health hazard.

423-9.4 addresses the Storage of Hazardous Materials, and states that developments which store hazardous materials must comply with State standards, OAR Chapter 340 Division 63, and the Federal standards, 40 CFR Part 262 and 264 and are required to demonstrate such compliance. All hazardous materials must be stored above ground. Transport of and disposal of such materials must be in conformance with all applicable local, State and Federal regulations with such compliance demonstrated.

As noted previously in this Order, the applicant has proposed the installation of fuel tanks and pump for refueling vehicles associated with the business. A Condition of Approval has been included in Exhibit 1 requiring the applicant to obtain all applicable local, State and Federal permits prior to installing the new fuel tanks.

Section 423-10 relates to Drainage and Waste Water, and states that all development must comply with the State Department of Environmental Quality Water Quality Standards for all runoff, drainage and waste water. The applicant has stated that no new impervious surface will be constructed as part of the contractor's establishment, and as such, this section is not applicable.

Section 423-11 relates to Adequate Water Supply, and states that all development is required to have an adequate water supply. Adequate supply must be demonstrated for the use prior to issuance of a building permit (see Section 501-5.1, Critical Services).

The subject site is classified for the exempt use of up to 5,000 gallons per day from the onsite well. The applicant has stated that water demand for the site is and will be less than the allowed 5,000 gallons per day.

Section 423-12 addresses standards pertaining to Radioactive Materials, and states that the handling and storage of radioactive materials, the discharge of radioactive materials into air or water, and the disposal of radioactive waste in connection with all uses shall be in conformance with all applicable local, State, and Federal regulations with such compliance demonstrated. Section 423-13 sets forth standards relating to Toxic or Noxious Matter. Per that section, all development is required to comply with the State Department of Environmental Quality standards pertaining to omission of toxic or noxious matter and such compliance must be demonstrated.

The applicant states that no radioactive, toxic or noxious materials shall be created or disposed of on-site, and the Hearings Officer finds that these sections are not applicable. Similarly, based upon the forgoing, the Hearings Officer finds that the applicable standards and requirements set forth in this section are all met or are inapplicable.

3. Article V: Public Facilities and Services

Section 501 sets forth Public Facility and Service Requirements. In particular, Section 501-6 details Exceptions for Critical and Essential Services. Section 501-6.1 states that development proposals that cannot ensure critical and essential services within the required time frames will be denied unless all of the following findings can be made:

- A. The particular inadequate facility(ies) or service(s) is not necessary for the particular proposal within the time period identified by the service provider;

In accordance with Section 501-8.1 of the Code, the following facilities and services are considered critical:

- o Water;
- o Sewer;
- o Fire protection;
- o An adequate level of access to the proposed development;
- o Adequate drainage and adequate provisions for storm water, surface water and water quality management; and
- o No development shall be approved on property that is located outside of the Washington County Urban Road Maintenance District;

The applicant has provided a service provider letter from Washington County Fire District #2 indicating that service for fire protection is available to the site.

With regard to sewer and surface water management, the subject site is currently outside of the Clean Water Services district boundary. Timeframes for the provision of sewer and surface water management services are unknown, as Title 11 Planning for the area has yet to be undertaken. Currently, the existing facilities on the site are served by an on-site wastewater disposal system. Both Clean Water Services and the City of Hillsboro have confirmed that public storm and sanitary sewer services are not available to the site.

With regard to water services, the site is currently located outside an established water district, and is classified for the exempt use of up to 5,000 gallons per day from the on-site well. As noted above, timeframes for the provision of urban water services to the site are unknown, as Title 11 Planning has yet to be undertaken for the area.

In accordance with Policy 41 of the Washington County Framework Plan for the Urban Area, the FD-20 District will be maintained on new urban areas until the Title 11 requirements of Metro's UGMFP have been completed and adopted. Properties designated FD-20 are not required to annex into the Urban Road Maintenance District (URMD), the Enhanced Sheriff Patrol District (ESPD) and the Tualatin Hills Park and Recreation District (THPRD).

In accordance with Section 501-8.2 of the Code, the following facilities and services are considered essential:

- Schools
- Police or Sheriff protection
- Transit agency service
- Adequate Level of Arterial and Collector Roads
- Street Lighting
- Gravel roads are unacceptable for development within the Urban Growth Boundary
- Future alignments of Collectors or Arterials
- Half street improvements

An adequate level of school service is not applicable to this development application for a contractor's establishment. The applicant has provided a service provider letter from the Washington County Sheriffs' Department establishing that police protection is available to the site. As described above, the site is not required to annex into the Sheriffs Enhanced Patrol District, as per Policy 41 of the Washington County Comprehensive Framework Plan for the Urban Area.

NW Sewell Road is designated as a local street on the Washington County Transportation Plan. However, it is anticipated that the ultimate designation following Title 11 planning for the area will be a City of Hillsboro Commercial Collector section. Nonetheless, the time period between this application and the ultimate designation is uncertain, and no additional ½ street improvements exist within 2,000 feet of the site to either the north or the south. As such, the applicant has requested an exception to the provision of ½ street improvements on NW Sewell Road. The County Engineer has issued a determination that a ½ street improvement is not prudent at this time. A Condition of Approval has been made to provide additional right-of-way dedication to a county commercial street section standard, to provide for the future construction of ½ street improvements along the site frontage.

- B. The approval of the development application will not substantially interfere with the ability to later provide the particular inadequate facility(ies) or service(s) to anticipated uses in the vicinity of the subject property;

The applicant requires an exception to the critical services standards of Section 501-8.1 of the Code for sewer, water, and storm water, surface water and water quality management, and the provision of ½ street improvements. Staff testified in its written materials that it does not believe that anything in this application precludes the ability to later provide these services for anticipated uses in the vicinity of the subject property.

- C. The approval of the development application without the assurance of the particular inadequate facility(ies) and service(s) will not cause a danger to the public or residents in the vicinity of the subject property; and

Water use on the site is currently administered by the Washington County Watermaster, and the applicant is required to provide evidence relating to compliance with appropriate on-site septic treatment and surface water management and drainage. As such, the Hearings Officer finds that use of the site without the provision of urban water, sewer, and surface water management services will not cause a danger to the public or residents in the vicinity of the subject property.

- D. It is shown that the applicant has exhausted all practical methods within the ability of the applicant to ensure the provision of the unacceptable facility(ies) and service(s).

As described above, timeframes for the provision of urban water, sewer, and surface water management services and a commercial road section designation to the site are unknown, as Title 11 Planning has yet to be undertaken for the area. As such, the applicant is unable to ensure the provision of the unacceptable services as required by this Section.

Section 501-6.2 states that all exceptions to the Public Facility and Service Standards identified above will be reviewed through a Type III process. The request for exceptions to the Public Facility and Service Standards identified above was reviewed through the Type III process, as required.

Section 501-6.3 states that development proposals that cannot ensure improvements required by Sections 501-8.1 B. (4) or 501-8.2 G. within the required time frames shall be denied unless the Review Authority determines that the findings required under Sections 501-6.1 B. and C. plus the findings required by at least one of Sections 501-6.3 A. through C. below can be made.

- C. The County Engineer makes a written determination that there are technical feasibility constraints that preclude construction of the required improvements with the proposed development, including but not limited to one or more of the following:
- (1) The ultimate alignment and grade for the roadway cannot be established;
 - (2) Construction of the required improvements would be inconsistent with the ultimate alignment and grade for the roadway, due to existing conditions in the vicinity of the proposed development site;
 - (3) Topographic or environmental features make construction physically impracticable; or

- (4) Construction of the subject improvements would cause substantial negative effects on adjacent properties or on natural resources, provided that the negative effects could be avoided with a comprehensive public roadway improvement project on the subject road, designed and constructed in accordance with the Washington County Transportation Plan and Uniform Road Improvement Design Standards.

As noted above, the County Engineer has issued a written determination excepting the applicant from improvements to NW Sewell Road, otherwise required under Section 501 of the Community Development Code. Specifically, the County Engineer stated in a memo to Staff dated June 28, 2013,

"I recommend that this project dedicate right-of-way to the public for road purposes which meet or exceed the requirement of the county's C-1 road classification.

A requirement of a C-1 half street construction is not prudent at this time. The area in which the property is situated will, one day, be annexed into the City of Hillsboro and become subject to their land use and transportation planning. Construction of the half street, or any component of the half street, will create an anomalous distraction to the travelling public with the new curb line around 15' east of the existing edge of pavement for 120'."

Section 501-6.4 states that requests for exceptions to the requirements of Sections 501-8.1 B. (4) or 501-8.2 G. as provided under Section 501-6.3 are to be reviewed through the same procedure type otherwise required for the proposed development action(s), separate from or in conjunction with other required development hearings. The request for exceptions to the Public Facility and Service Standards identified above is being reviewed through the Type III process, as required.

Section 501-6.5 states that if an exception to Sections 501-8.1 B. (4) or 501-8.2 G. is granted pursuant to Section 501-6.3, the applicant must:

- A. Be required to provide improvements necessary to mitigate the impact of the proposed development on the road system; and
- B. Assure the following, with said assurance provided prior to issuance of a building permit:
 - (1) All other applicable requirements of Sections 501-8.1 and 501-8.2, as determined by the Review Authority, shall be satisfied prior to occupancy of the development;

- (2) All identified safety improvements, both on-site and within the impact and analysis area (pursuant to Resolution and Order No. 86-95 "Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance – Process Documentation" as modified or updated), shall be constructed prior to occupancy of the development; and
- (3) Sidewalks must be constructed adjacent to any road directly abutting the development site as otherwise required by this Article prior to occupancy of the development.

As stated above, the County Engineer has issued a written determination excepting the applicant from improvements to NW Sewell Road otherwise required under Section 501 of the Community Development Code, and Section 130, Page 9, Road Requirements, and Section 320, Road Design, of the Washington County Road Design and Construction Standards, with the exception of right-of-way dedication for access. The determination is located in the record. It is noted, however, that Section 130.020 of the Washington County Road Design and Construction standards states that a Right-of-Way permit is required to establish the location or to construct an access within the road right-of-way. As no Right-of-Way Permit (or Access Permit) currently exists for the site, the applicant is required to obtain a Right-of-Way Permit prior to obtaining a building permit. Additionally, Sidewalks are not required for the development, in accordance with the exemption standards of Section 502-14.2.

Section 501-6.6 states that notwithstanding the provisions of this Section 501-6, all new construction and expansion of the existing structures shall pay the Transportation Development Tax, except as provided in the Transportation Development Tax Ordinance (Ordinance 691). No exception to the Transportation Development Tax will be granted except as provided in the Transportation Development Tax Ordinance.

The applicant is required to pay the TDT as required for a contractor's establishment. This is made a Condition of Approval (attached hereto as Exhibit 1).

D. Washington County Transportation Plan

With regard to this application, the policies of the Transportation Plan element of the Washington County Comprehensive Plan are limited to the classification of SW Scholls Ferry Road as state highway facility and SW Pleasant Valley Road as a local county road. As noted by the County Engineer, and documented during the hearing by the applicant, the traffic to be generated by the proposed contractor's establishments is minimal and will not impact either of these facilities.

E. Ordinance 691, Transportation Development Tax

The Transportation Development Tax (TDT) is required of all new development and constitutes an assurance to satisfy a development's requirement to provide additional capacity to Collectors and Arterial streets needed for development. This tax is based on the number of daily vehicle trips a site generates and is due at issuance of a building permit. Payment of the Tax is made a condition of this Final Order.

F. Resolution and Order No. 86-95 Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance

The transportation standards are analyzed earlier in this Order and those findings are incorporated herein.

G. Ordinance No. 738 – Road Design and Construction Standards

The transportation standards are analyzed earlier in this Order and those findings are incorporated herein.

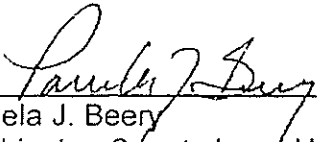
IV. Summary and Conclusion

When implemented in accordance with the Conditions of Approval and the approved final plans, the Hearings Officer concludes that the project will be in compliance with the Community Development Code based upon the above findings. As such, the applicant's request for Development Review for a Contractor's Establishment in the FD-20 District is approved, subject to the Conditions of Approval set forth in Exhibit 1 of this Final Order.

V. Decision

The Hearings Officer APPROVES the proposal subject to the Conditions of Approval found in Exhibit 1.

DATED this 25th day of October, 2013



Pamela J. Beery
Washington County Land Use Hearings Officer

Exhibit 1
Conditions of Approval
Bernhardt Golf Contractor's Establishment

I. PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES, THE APPLICANT SHALL:

Obtain a Grading Permit from the Washington County Building Services Division, as applicable.

***NOTE:** Grading Permit applications must follow the grading submittal package checklist from the Building Services Division.*

II. PRIOR TO FINAL DEVELOPMENT REVIEW APPROVAL AND COMMENCEMENT OF OPERATION, THE APPLICANT SHALL (WITHIN FOUR YEARS):

A. Submit a Final Approval Application to Current Planning Services, Project Planner (Wayne Hayson, 503-846-3841), including the following:

1. Final Approval form (Type I procedure; two copies).

***NOTE:** The final approval application shall contain a written statement and complete evidence/documentation that all Conditions of Approval have been met.*

2. Final Approval fee.
3. Evidence of a final right-of-way permit to improve the existing driveway to current standards and that sufficient vegetation in the right-of-way has been removed to meet the sight-distance requirements of Section 501-8.5 F. providing for 250 feet of sight distance in either direction for the existing driveway.
4. Written certification from an engineer that the employee parking area has been constructed to meet or exceed the requirements of Section 413-5.1.
5. Written certification from an engineer that all heavy equipment parking areas have been constructed to meet or exceed the requirements of Section 413-5.4.

6. Evidence that the following document has been executed (Survey Division, Scott Young, 503-846-7933):
 - a. Dedication of additional right-of-way to provide 37 feet from centerline along the NW Sewell Road frontage.

III. PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROPOSED FUELING FACILITIES COMPLETE THE FOLLOWING:

- A. Obtain Final Approval.
- B. Meet with commercial plans examiner, if required to do so by the Building Services Division.
- C. Submit the building plans to Building Services (503-846-3470).
- D. Submit evidence that the applicant has obtained all applicable local (Tualatin Valley Fire and Rescue), State (Department of Environmental Quality) and Federal permits for the installation of a fuel tank and fueling facility.
- E. Pay the Transportation Development Tax.

IV. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

This approval is limited to the vehicles, equipment, and operation outlined in the Staff Report and application. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. This specifically includes the "proposed future outbuilding" shown on the plans, which requires separate future approval.

V. ADDITIONAL CONDITIONS:

- A. This development shall be constructed in accordance with the conditions of this decision, the approved final plans and the standards of the Community Development Code (Section 207-5).
- B. All conditions of approval shall be binding upon all heirs, successors and assigns (Section 207-5).
- C. Transferability of this Development Permit shall be in accordance with Section 201-8.

- D. No disposal of chemicals (pesticides, herbicides, fertilizers, etc.) is permitted on the subject property in conjunction with the contractor's establishment (Section 207-5).
- E. This approval shall automatically expire four years from the date of this approval, unless development has commenced, an application for an extension is filed, or this approval is revoked or invalidated (Section 201-4).



WASHINGTON COUNTY
Department of Land Use & Transportation
Current Planning Services
155 North First Avenue, Suite #350-13
Hillsboro, Oregon 97124-3072
phone: (503) 846-8761 fax: (503) 846-2908
www.co.washington.or.us

NOTICE OF DECISION OF THE HEARINGS OFFICER

PROCEDURE TYPE: III

CPO: 5 **COMMUNITY PLAN:**
Washington County Comprehensive Framework
Plan for the Urban Area

LAND USE DISTRICT:
FD-20 (Future Development 20 Acre District)

PROPERTY DESCRIPTION:
ASSESSOR MAP#: 3S1 03AB
TAX LOT#: 300
SITE SIZE: 7.00 acres
ADDRESS: 11277 SW Clay Street

CASEFILE: 08-428-RC/MOD

APPLICANT:
Clopton Excavating, Inc.
Attn: Brian Clopton
PO Box 509
Wilsonville, OR 97070

APPLICANT'S REPRESENTATIVE:
AKS Engineering & Forestry, LLC
Attn: Chris Goodell
13910 SW Galbreath Drive, Suite 100
Sherwood, OR 97140

OWNER:
Brix Properties LLC & Clay Street Properties LLC
PO BOX 509
Wilsonville, OR 97070

LOCATION: On the north side of SW Clay
Street, approximately 2000 feet west of its
intersection with SW Grahams Ferry Road

PROPOSED DEVELOPMENT ACTION: Review of Conditions of Approval, and Modification of
Conditions V.B.1, VI.A.1 and 2, VI.C., VI.D., VI.E. & VI.G. of
Casefile 01-442-D (Contractors Establishment)

DATE OF DECISION:

March 23, 2009

A summary of the decision of the Hearings Officer and supplemental findings are attached.

This decision may be appealed to the Land Use Board of Appeals (LUBA) by filing a notice of Intent to Appeal with LUBA within 21 days of the date of this decision. Contact your attorney if you have any questions in this regard.

For further information contact the Land Use Board of Appeals at 503-373-1265.

The complete case, including Notice of Decision, Application, Staff Report, Findings and Conclusions, and Conditions of Approval, if any, are available for review at no cost at the Department of Land Use and Transportation. Copies of this material will be provided at reasonable cost.

Notice to Mortgagee, Lien Holder, Vendor or Seller: ORS Chapter 215 requires that if you receive this notice it must promptly be forwarded to the purchaser.

CASEFILE NUMBER: 08-428-RC/MOD

SUMMARY OF DECISION:

On March 23, 2009 the Washington County Hearings Officer issued a written decision (Attachment "C") for Washington County Casefile No. 08-428-RC/MOD for property described as Tax Lot 3S1 03AB 300. The decision of the Hearings Officer is as follows:

ORDER:

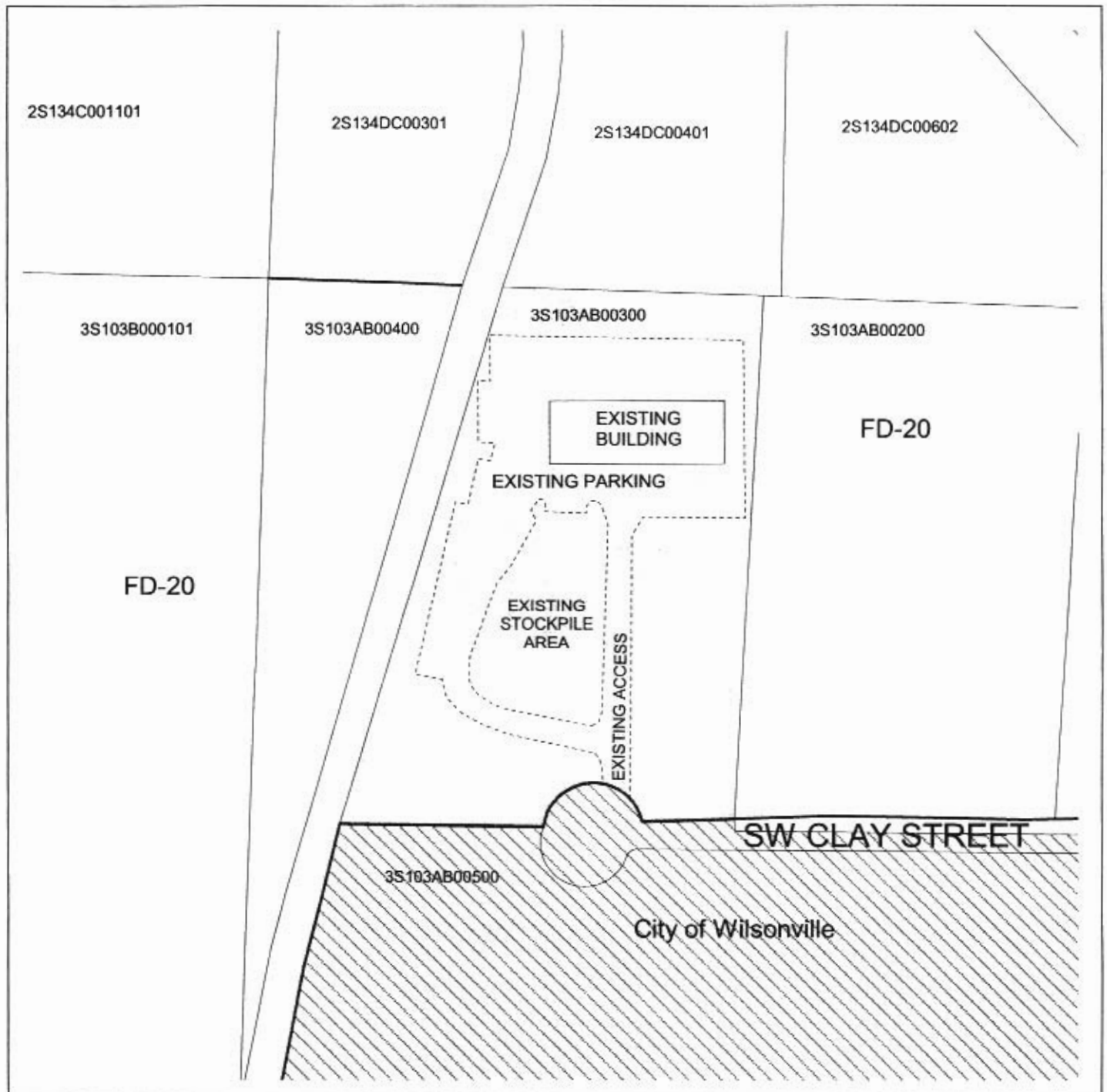
The application can be approved, subject to the original conditions of approval in Casefile 01-442-D, except that Conditions V.B.1; VI.A.1 and 2; VI.C; VI.D.; VI.E. and VI.G. are removed, as set out Attachment B of the Staff Report. In addition, Condition VI.A. 3 is removed as discussed in the Findings in the Final Order; and the typo in Attachment B of the Staff Report can be corrected.

Attachments:

- A. Vicinity Map
- B. CONDITIONS OF APPROVAL
- C. Final Order

ATTACHMENT A VICINITY MAP

TAX MAP/LOT NO. 3S1 03 AB 00300 CASE FILE NO. 08-428-RC/MOD



NORTH



AREA OF CONSIDERATION

SCALE: 1" TO 200'

SITE & SURROUNDING LAND USE DISTRICTS:

FD-20 (Future Development 20-Acre District)
City of Wilsonville

REVIEW STANDARDS FROM CURRENT OR APPLICABLE ORDINANCE OR PLAN

- A. WASHINGTON COUNTY COMPREHENSIVE PLAN
- B. APPLICABLE COMMUNITY PLAN (See Front of Notice)
- C. TRANSPORTATION PLAN
- D. WASHINGTON COUNTY COMMUNITY DEVELOPMENT CODE:
 - ARTICLE I, INTRODUCTION & GENERAL PROVISIONS
 - ARTICLE II, PROCEDURES
 - ARTICLE III, LAND USE DISTRICTS
 - ARTICLE IV, DEVELOPMENT STANDARDS
 - ARTICLE V, PUBLIC FACILITIES AND SERVICES
 - ARTICLE VI, LAND DIV. & LOT LINE ADJUSTMENTS
 - ARTICLE VII, PUBLIC TRANSPORTATION FACILITIES
- E. R & O 86-95 TRAFFIC SAFETY IMPROVEMENTS
- F. ORD. NO. 524 UNIFORM ROAD IMPROVEMENT STANDARDS
- G. ORD. NO. 379 TRAFFIC IMPACT FEE
- H. R & O 07-20 DESIGN AND CONSTRUCTION STANDARDS

Attachment B

CONDITIONS OF APPROVAL

The Conditions of Approval of Casefile 01-442-D shall continue to apply, except as modified by Casefile 08-428-RC/MOD as indicated below.

- I. The applicant shall obtain Final Approval within two (2) years of the date of mailing this Preliminary Approval, and prior to obtaining any Building Permits. Development shall commence and all Building Permits shall be obtained within two (2) years of the date of Final Approval of this development request or this approval shall be considered to have expired, unless: the permit is revoked as provided by Section 201-7, an application for permit extension is filed pursuant to Section 201-5; or, development has commenced as provided in Section 201-6.

- II. Prior to Final Approval:
 - A. **Submit to the Land Development Services Division:**
 1. A revised landscape plan, illustrating that groundcovers, trees and shrubs will be installed within the landscape islands and landscape areas within and surrounding the employee and customer parking area. (Section 407-6)
 2. Revised drainage and grading plans for the site, to be reviewed and approved by the Washington County Principal Engineer. These plans shall include the items listed in the Principal Engineer's 11/06/01 Memo for this Casefile (Attachment E of the Staff Report and Recommendation). (Sections 207-5, 410)
 3. Revised lighting plan for the site, which identifies the location, illumination, and cutoff angle of each proposed exterior lighting fixture. The lighting plan shall demonstrate compliance with the applicable standards of Section 415-4.
 4. A floor plan for the main building that clearly identifies the area and purpose of each room. The floor plan shall verify that the building will be comprised of 4,800 square feet of office space and 14,200 square feet of warehouse space, and shall indicate square footage and purpose of each room, to substantiate that the quantity of proposed parking spaces is consistent with Section 413-9. The floor plan shall also demonstrate that the building will accommodate interior loading. (Sections 207-5, 413)
 - a) If the floor plan layout indicates that interior loading is not possible, the applicant shall submit a revised parking plan that includes provision of an exterior loading space meeting the dimensional requirements of Section 413-17.3.
 5. Evidence of an approved sign permit for the sign advertising the use. (Section 414-3)
 6. Certification stamped by a registered professional engineer that all parking / loading areas have been surfaced according to the standards of Code Section 413-5.3:

"Minimum standards for all required parking and loading areas outside the UGB shall consist of a gravel surface with four (4) inches of base

7. Written approval from the Department of Health and Human Services for the sanitary septic system serving the site. (Section 356-1)
8. Evidence that the truck wash and its disposal system have been approved by the Department of Environmental Quality (DEQ), or evidence that DEQ approvals are not required. (Section 423-10)
9. Evidence that a waiver of the right of remonstrance against accepted farm or forest practices has been signed and recorded with the County Records Division. The standardized form is available at the Land Development Services counter. (Section 356-3)
10. Evidence that a waiver of the right to remonstrate against the formation of a local improvement district (LID) or other mechanism to improve and maintain SW Clay Street to County standards between its intersection with SW Graham's Ferry Road and its western terminus has been recorded with the County Records Division. (Section 501-9.8).

* NOTE: Contact Jamil Kamawal (846-8723) of the County Survey Division to prepare the documents needed for completion of this condition. The applicant shall then record these documents in the Records Division of the Department of Assessment and Taxation (846-8752). Submittal of these documents must include the appropriate recording fee.

11. Evidence stamped by a registered professional engineer verifying the private driveways have been completed / constructed to the standards of the Tualatin Valley Fire & Rescue District. (Section 409-5.1)
12. Evidence that the applicant has obtained all necessary approvals from the Environmental Protection Agency, the state fire marshal, and/or the local fire marshal (Tualatin Valley Fire & Rescue) for the above-ground tanks, or evidence that such approvals are not required. (Section 423-9)
13. Evidence of approved and finalized Access Permits for access points that are in addition to, or are an alternative to, the existing curb cut location on the property's frontage. (Section 501-9)

III. Prior to Any Ground-Disturbing Activities on the Site, the Applicant / Owner shall:

A. Submit to the Land Development Services Division:

1. Evidence that an approved grading, drainage, and erosion control permit has been obtained from the County Building Division for the proposed ground-disturbing activities. (Section 410)

IV. Prior to Issuance of a Building / Placement Permit for any of the new structures, the Applicant / Owner shall:

A. Submit to the Building Services Division (846-3470):

1. Site plan showing building locations consistent with the site plan stamped "Preliminary Approval" in the casefile. (Section 207-5)
2. Show evidence of adequate fire fighting water supply, which may include sprinklering as required by the local fire protection district. (Section 423-11)

V. Prior to Final Inspection and Occupancy:

- A. The applicant shall submit evidence to Land Development Services (Suzanne Savin, 503-846-3831) that the Fire Marshal has concluded that the establishment meets the necessary requirements per Fire Protection Ordinance 99-01. (Section 207-5)
- B. The applicant shall request an inspection by Land Development Services (Suzanne Savin, 503-846-3831) to verify the following:
 - 1. ~~Installation of a 6-foot high, sight-obscuring fence situated roughly 20 feet west of the east edge of the site (i.e., on the west side of the landscaping on the east side of the site). [Casefile 08-428-RC/MOD]~~
 - 2. ~~Installation of a 6-foot tall, sight-obscuring fence along the north property line of the property. Deleted by Hearings Officer [Casefile 01-442-D]~~
 - 3. Installation of the landscaping as shown on the Preliminary Landscape Plan (Sheet 6), as well as the additional landscaping within the landscape islands and areas surrounding the employee/customer parking area required by Condition II.A.1 of this Casefile.

VI. Miscellaneous Conditions:

- A. Contractor's establishment activities on the site shall comply with the following limitations:
 - 1. ~~Outdoor activities, including pick-up and delivery of materials and equipment, shall be limited to 7 a.m. to 7 p.m., Monday through Saturday. [Casefile 08-428-RC/MOD]~~
 - 2. ~~Indoor activities shall be limited to 6:00 a.m. and 10:00 p.m., Monday through Saturday. "Indoor activities" means activities taking place within a fully enclosed buildings on the site, with the doors tightly shut. Indoor activities between 6 a.m. and 7 a.m. and between 7 p.m. and 10 p.m. may not cause noise, glare, fumes or dust detectable to a person of average sensibilities at any property line. [Casefile 08-428-RC/MOD]~~
 - 3. ~~The applicant may exceed these limitations in emergencies, provided the applicant shall document all such emergencies. "Emergency" means a sudden and unexpected occurrence demanding immediate action to protect people and/or property from harm. It does not mean taking advantage of business opportunities to do more work than can be done on the site during the hours specified herein. Deleted by Hearings Officer [Casefile 08-428-RC/MOD]~~
- B. Adequate sight distance shall be continuously maintained by the property owner(s) at the approved access point to the site. This may require the property owner to periodically remove obscuring vegetation from the road right-of-way (and on site). (Section 501-9)
- C. ~~This approval is for a contractor's establishment for Brian Clopton Excavating, as described in the staff report and application materials. Expansion of activities on the site, or addition of any structures on site shall require approval through a subsequent Type II application procedure. (Sections 207-5, 356) [Casefile 08-428-RC/MOD]~~
- D. ~~Any vehicle stored overnight shall be owned by or leased to Brian Clopton Excavating or its contractors or employees. Storage of vehicles or equipment not necessary for the approved business is not permitted. (Section 207-5) [Casefile 08-428-RC/MOD]~~

- E. ~~Exterior storage of materials and equipment shall be limited to the areas identified on the submitted site plan (Sheet 3). No exterior storage is permitted on the portion of the property that is south of the employee parking area and east of the temporary excavated material stockpile area and paved access road. (Section 207-5) [Casefile 08-428-RC/MOD]~~

- F. Waste fuels and oils associated with the storage and maintenance of equipment on site must be handled and disposed of in accordance with federal, state, and local requirements. No hazardous materials shall be disposed of through the septic system, or through any plumbing system without appropriate permits (contact Lynn Henson, Sr. Plumbing Inspector, 846-3470). The applicant shall work with the Department of Environmental Quality (DEQ) to ensure the site is in compliance with DEQ requirements regarding storage, handling and disposal of waste materials. (Section 207-5)

- G. ~~Not less than two years nor more than five years from the effective date of this final order, the applicant shall submit an application for a review of conditions of approval for the contractor's establishment. The application shall be subject to a Type II review process. Such review shall be limited to a determination of whether changes to conditions of approval of this decision or additional conditions are warranted to effectively reduce identified adverse impacts to surrounding properties, particularly the dwellings to the east. The applicant is not required to demonstrate continuing compliance with CDC 356-3.1.C. One or more subsequent periodic reviews may be required depending on the results of the initial review, (i.e., whether conditions are changed or amended, and further review of such changes is warranted to protect the public from potential adverse impacts of the use). [Casefile 08-428-RC/MOD]~~

BEFORE THE LAND USE HEARINGS OFFICER
OF WASHINGTON COUNTY, OREGON

FINAL ORDER

Casefile: 08-428-RC/MOD

Applicant: Clopton Excavating, Inc.

Hearing Date: March 19, 2009

I. SUMMARY

The applicant requests Review of Conditions of Approval and Modification of Conditions V.B.1, VI.A.1 and 2, VI.C., VI.D, VI.E. and VI.G of Casefile 01-442-D (Contractor's Establishment).

II. ORDER

The application is approved, subject to the original conditions of approval in Casefile 01-442-D, except that Conditions V.B.1; VI.A.1, 2 and 3; VI.C; VI.D.; VI.E. and VI.G. are removed, as set out in the Conditions of Approval in Attachment B and the Findings of the Hearings Officer.

III. HEARING AND RECORD HIGHLIGHTS

- A. The Hearings Officer received testimony on this application, Casefile No. 08-428-RC/MOD, at the public hearing on March 19, 2009. The application, Staff Report and Recommendation ("Staff Report"), and all exhibits, were present at the hearing, and have been received without objection and reviewed by the Hearings Officer. All Exhibits and records of testimony regarding this application are filed with and maintained by Washington County Department of Land Use and Transportation ("DLUT"). The Hearings Officer explained that The Hearings Officer made the statements required by ORS 197.763 and disclaimed any bias, conflicts of interest, or *ex parte* contacts with interested persons.
- B. Staff Planner, Wayne Hayson, identified the applicable criteria, summarized the Staff Report, and recommended approval subject to the Conditions of Approval in Attachment B of the Staff Report. He also pointed out a typographical error in Attachment B, and requested that the reference to "Casefile 08-442-RC/MOD" in several places in Attachment B be changed to "Casefile 08-428-RC/MOD".
- C. The Hearings Officer questioned the need to retain Condition VI.A.3., as it appeared superfluous once Conditions VI.A. 1 and 2 are removed. Planning Staff agreed.
- D. Chris Goodell, speaking for the applicant, reported that the applicant has read the Staff Report and accepts the proposed conditions of approval in Attachment B, and agreed that Condition VI.A.3 would not be needed.

- D. There was no public testimony. The Hearings Officer rendered an oral decision approving the application, subject to the proposed conditions of approval in Attachment B, with the modifications discussed; and with a written decision to be issued within two weeks of the date of the hearing.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

- A. The Staff Report is adopted and incorporated into this Final Order.
- B. Condition VI.A.3 provides an exception to the limitations imposed in Conditions VI.A. 1 and 2. For that reason, Condition VI.A.3. becomes superfluous once Conditions VI.A.1 and 2 are removed.
- C. Planning Staff identified a typographical error in several places in Attachment B. The reference to the current case file was incorrectly typed as "08-442-RC/MOD" when it should have been "08-428-RC/MOD". That can be corrected in the Notice of Decision of the Hearings Officer.
- D. The Findings of the Staff Report, with the additional findings in this Decision, provide substantial evidence that the Contractor's Establishment has complied with the conditions of approval imposed in Casefile 01-442-D, and will continue to operate in compliance with all applicable approval criteria with the removal of Conditions V.B.1; VI.A.1 and 2; VI.C; VI.D.; VI.E. and VI.G.

V. DECISION

The application can be approved, subject to the original conditions of approval in Casefile 01-442-D, except that Conditions V.B.1; VI.A.1 and 2; VI.C; VI.D.; VI.E. and VI.G. are removed, as set out Attachment B of the Staff Report. In addition, Condition VI.A. 3 is removed as discussed in the Findings above; and the typo in Attachment B can be corrected.

DATED this 23rd day of March, 2009.



Elizabeth A. Normand
Washington County Land Use Hearings Officer



Washington County
Department of Land Use and Transportation
Planning and Development Services
155 N First Ave, Suite 350
Hillsboro, OR 97124

NOTICE OF DECISION OF THE HEARINGS OFFICER

PROCEDURE TYPE: III

CPO: 5 **COMMUNITY PLAN:**

Washington County Comprehensive
Framework Plan for the Urban Area

LAND USE DISTRICT:

FD-20 (Future Development 20 Acre District)

PROPERTY DESCRIPTION:

ASSESSOR MAP#: 2S134C

TAX LOT#: 000100

SITE SIZE: 3.58 acres

ADDRESS: 23100 SW McCamant Drive

CASEFILE: L2300057-D/M

APPLICANT:

McCamant LLC

Attn: Derek Osterholme

P.O Box 3767

Wilsonville, OR 97070

APPLICANT'S REPRESENTATIVE:

AKS Engineering

Attn: Marie Holladay

12695 SW Herman Road, #100

Tualatin, OR 97062

OWNER:

McCamant LLC

P.O Box 3767

Wilsonville, OR 97070

LOCATION:

On the west side of SW McCamant Drive,
approximately 1,900 feet north of SW Tonquin
Road.

PROPOSED DEVELOPMENT ACTION: Development Review Approval for the expansion of
an existing Contractor's Establishment in the FD-20 District and Miscellaneous review for
Exceptions to the Public Facility and Service Standards as provided under Washington County
CDC Section 501-6.

DATE OF DECISION:

June 27, 2023

A summary of the decision of the Hearings Officer and supplemental findings are attached.

This decision may be appealed to the Land Use Board of Appeals (LUBA) by filing a notice of Intent to Appeal with LUBA within 21 days of the date of this decision. Contact your attorney if you have any questions in this regard.

For further information contact the Land Use Board of Appeals at 503-373-1265.

The complete case, including Notice of Decision, Application, Staff Report, Findings and Conclusions, and Conditions of Approval, if any, are available for review at no cost at the Department of Land Use and Transportation. Copies of this material will be provided at reasonable cost.

Notice to Mortgagee, Lien Holder, Vendor or Seller: ORS Chapter 215 requires that if you receive this notice it must promptly be forwarded to the purchaser.

Notice of Decision of Hearings Officer
June 27, 2023
Page 2

CASEFILE NUMBER: L2300057-D/M

SUMMARY OF DECISION:

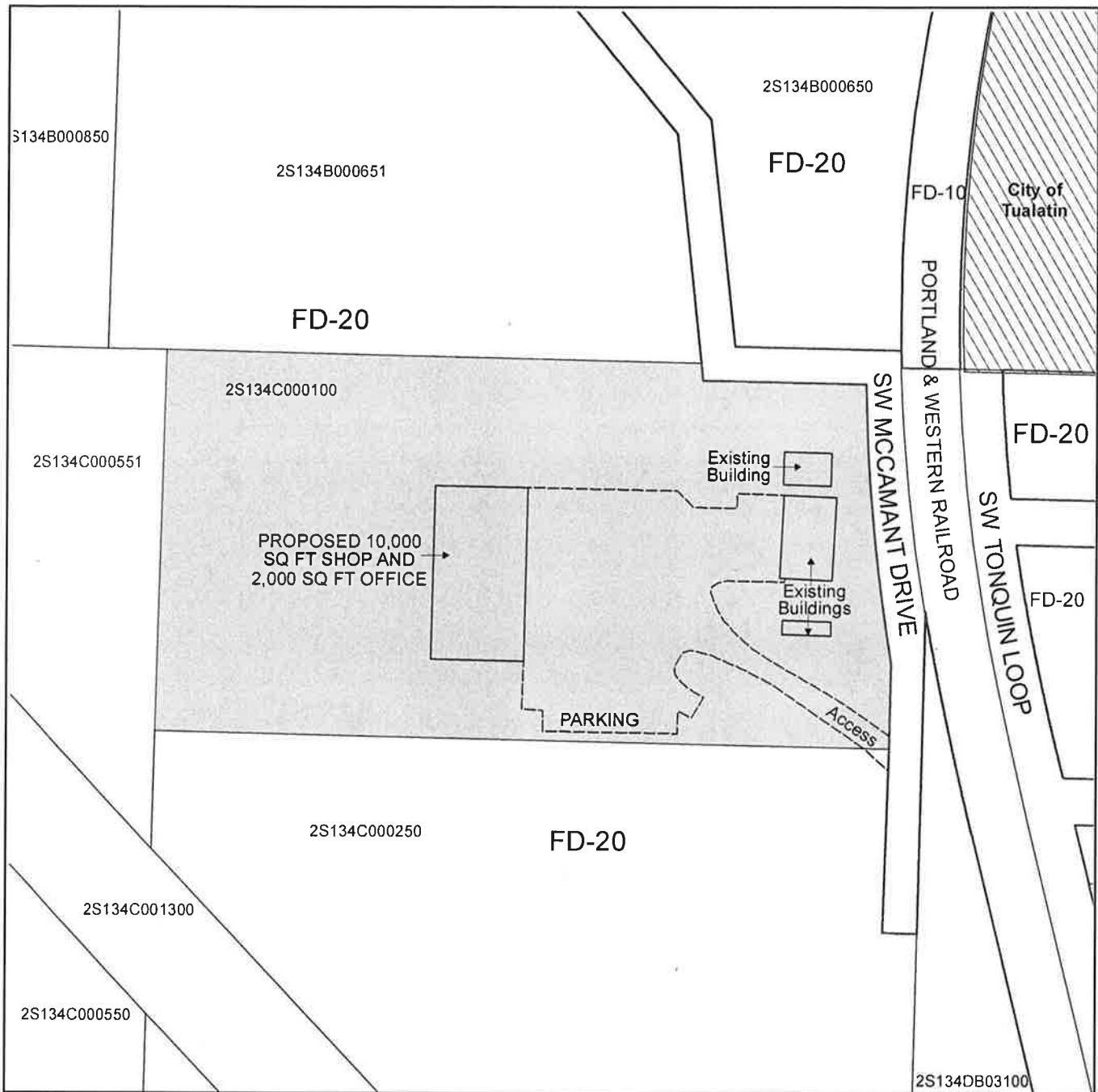
On June 27, 2023, the Washington County Hearings Officer issued a written decision (Attachment 'B') for Development Review Approval for the expansion of an existing Contractor's Establishment in the FD-20 District and Miscellaneous review for Exceptions to the Public Facility and Service Standards as provided under Washington County CDC Section 501-6. The development site is located on the west side of SW McCamant Drive and approximately 1,900 feet north of SW Tonquin Road in CPO #5 and is described as Tax Lot 100 Assessor Map 2S1 34C W.M., Washington County, Oregon. The Hearings Officer's decision is as follows:

ORDER:

The applicant is Approved subject to Conditions of Approval set forth in Attachment B.

Attachments:

- A. Vicinity Map
- B. Hearings Officer's Findings, Conclusion and Order



↑ NORTH
NOT TO SCALE

 AREA OF CONSIDERATION

SITE & SURROUNDING LAND USE DISTRICTS:

- Future Development 20-Acre District (FD-20)
- Future Development 10-Acre District (FD-10)
- City of Tualatin

REVIEW STANDARDS FROM CURRENT OR APPLICABLE ORDINANCE OR PLAN

- A. Washington County Comprehensive Plan
- B. Applicable Community Plan (See Front of Notice)
- C. Transportation System Plan
- D. Washington County Community Development Code:
 - ARTICLE I, Introduction & General Provisions
 - ARTICLE II, Procedures
 - ARTICLE III, Land Use Districts
 - ARTICLE IV, Development Standards
 - ARTICLE V, Public Facilities and Services
 - ARTICLE VI, Land Divisions & Lot Line Adjustments
 - ARTICLE VII, Public Transportation Facilities
- E. R & O 86-95 Traffic Safety Improvements
- F. ORD. NO. 738, Road Design and Construction Standards
- G. ORD.691-A, 729, 741, 746, 751, 793-A Transp. Development Tax

**BEFORE THE LAND USE HEARINGS OFFICER
OF WASHINGTON COUNTY, OREGON**

Regarding an application by McCamant LLC for)
Development Review approval for expansion of a)
contractor's establishment at 23100 SW McCamant)
Drive in unincorporated Washington County)

FINAL ORDER
Casefile No.
L2300057-D/M
(McCamant Contr.'s Estab.)

A. SUMMARY

1. The applicant, McCamant LLC, requests Development Review approval for expansion of an existing contractor's establishment on a 3.58-acre parcel located at 23100 SW McCamant Drive; also known as tax lot 000100, 2S1 134C (the "site"). The applicant is also requesting and an Exception to the Critical and Essential Service Standards of Section 501-4 of the Washington County Community Development Code (the "CDC").

a. The site and surrounding properties are zoned FD-20 (Future Development, 20-acre minimum lot size). The site has been used as a contractor's establishment for more than 20 years. The original land use approval was issued through Casefile No. 99-478-D.

b. The site is currently improved with an existing shop, an office building, and other accessory structures, including three trailers that are currently used for operations and storage. The Applicant intends for the site to continue the existing uses: storage and maintenance of contractor's equipment, including heavy machinery, excavators, semitrucks, vehicles (e.g. trucks, trailers, vans), and construction equipment, and on-site storage of materials such as rock, gravel, soil, piping, concrete blocks, etc. The majority of the site is surfaced with gravel.

c. With this application the applicant proposes to construct a new 12,000 square foot industrial building to bring existing exterior storage out of the weather, as well as relocate the activities that take place within the trailers, which are planned for removal. The applicant will also create a paved parking and maneuvering area in front of the new building, create a trash and recycling enclosure, and install additional landscaping to screen the site. The majority of the site will remain in gravel.

2. Washington County Land Use Hearings Officer Joe Turner (the "hearings officer") conducted a duly noticed public hearing regarding the application. County staff recommended that the hearings officer approve the application subject to conditions included in the Staff Report. The applicant accepted the findings and conditions in the Staff Report without exceptions. No one else testified orally or in writing other than public agency staff.

3. Based on the findings provided and/or incorporated herein, the hearings officer approves the application subject to the conditions of approval in Attachment B of this Final Order.

B. HEARING AND RECORD HIGHLIGHTS

1. Washington County Land Use Hearings Officer Joe Turner received testimony at the duly noticed public hearing about this application on June 15, 2023. At the hearing, the hearings officer received into the record and physically inspected the file maintained by the Department of Land Use and Transportation regarding the application. The hearings officer made the declarations required by ORS 197.763. The hearings officer disclaimed any *ex parte* contacts and any bias or conflicts of interest.

2. County senior planner Paul Schaefer summarized the Recommendation and Staff Report to the Hearings Officer dated June 15, 2023 (the “Staff Report”) and the applicable approval criteria.

3. Marie Holladay and Chris Goodell appeared for the applicant and waived the applicant’s right to submit a final written argument.

a. Ms. Holladay summarized her PowerPoint presentation illustrating the proposed expansion. accepted the findings and conditions in the Staff Report without objections and waived the applicant’s right to submit a written closing argument.

b. Mr. Goodell summarized the proposed stormwater disposal system for the site. He noted that condition A.4 requires the applicant to submit a drainage analysis. The proposed development will not generate a significant increase in stormwater runoff as the majority of the site is currently surfaced in compacted gravel.

4. No one else testified about the application orally or in writing other than public agency staff.

5. The hearings officer closed the record at the end of the hearing and announced his intention to approve the application subject to the conditions of approval in Attachment B.

C. APPLICABLE CRITERIA

A. Washington County Comprehensive Framework Plan for the Urban Area

B. Washington County Community Development Code:

1. Article II, Procedures:

Section 202-3

Type III Procedure

Section 203-3

Neighborhood Meetings

Section 207-5

Conditions of Approval

2. Article III, Land Use Districts:

Section 308

FD-20 District

- 3. Article IV, Development Standards:
 - Section 403 Applicability
 - Section 406 Building, Siting and Architectural Design
 - Section 407 Landscape Design
 - Section 408 Neighborhood Circulation
 - Section 410 Grading and Drainage
 - Section 411 Screening and Buffering
 - Section 413 Parking and Loading
 - Section 414 Signs
 - Section 416 Utility Design
 - Section 417 Irrigation
 - Section 418 Setbacks
 - Section 419 Height
 - Section 423 Environmental Performance Standards
 - Section 426 Erosion Control
- 4. Article V, Public Facilities and Services
 - Section 501 Public Facility and Service Requirements
- C. Washington County Transportation Plan
- D. Ordinance No. 691-A; Transportation Development Tax:
- E. Resolution and Order No. 86-95 - Determining Traffic Safety Improvements Under the Traffic Impact Fee Ordinance
- F. Ordinance No. 524 - Uniform Road Improvement Standards

D. AFFECTED JURISDICTIONS

Roads:	Washington County
Fire Protection:	Tualatin Valley Fire and Rescue
Police Protection:	Washington County Sheriff

C. DISCUSSION

A. Comprehensive Framework Plan for the Urban Area

The goals and policies which relate to the development of land are implemented by the Washington County Community Development Code (the Code). The applicant is not required to address, consider or implement any goal, policy or strategy of the Plan except where required by the Code. In accordance with Section 308-3 of the Code, the proposed use is subject to Policy 41 of the Comprehensive Framework Plan for the Urban Area.

The subject site is located within Area of Special Concern No. 3, as designated on Map C of Policy 41. Area of Special Concern No. 3 is subject to the following:

3. *Area of Special Concern 3 is comprised of approximately 63 acres of land located between Tualatin-Sherwood Road and Tonquin Road, west of the railroad tracks. The properties located in this Area of Special Concern are illustrated on the Future Development Areas Map (Map A). These properties were added to the UGB by Metro Ordinance 02-969B in December 2002. This area is designated as a Regionally Significant Industrial Area by Metro.*

Title 11 planning and FD-20 development applications within this Area of Special Concern are subject to the following criteria:

- a) *Future lot/parcel reconfigurations shall result in the largest practicable parcel. Reconfiguration of all remaining lots/parcels in this Area of Special Concern shall be in accordance with Section 3.07.420 of Metro's Urban Growth Management Functional Plan.*
- b) *New commercial retail uses are prohibited.*

The development site is located within the boundary of the City of Tualatin's Southwest Tualatin Concept Plan (SW Concept Plan). The concept plan provides a guide for the industrial development of 614-acres in southwest Tualatin.

Metro designated land for industrial development as part of a regional land use strategy. Initial planning by the City of Tualatin occurred in October 2004 with input from the public, property owners, other stakeholders, and a Technical Advisory Committee and was completed with the City Council's adoption on June 25, 2007. Later, SW Concept Plan work resumed taking into consideration both the Tualatin Tomorrow Project and the I-5 to 99W Connector Project. City staff and a consultant updated the analysis from 2005 data to 2009 and the City Council adopted amendments to the City comprehensive plan on April 11, 2011.

The site is planned for Manufacturing Business Park once it is annexed to the City of Tualatin. Until such time, the application remains subject to the requirements of Section 308. No land division is proposed. The application also does not involve development review for commercial retail uses. For further information, see Section 308 of this Final Order. In addition, according to Map B of Policy 41, there are no designated significant natural resources on the subject property. The area is mapped with Mineral and Aggregate District B. However, the proposed uses are not considered noise sensitive uses (e.g., not residential) and findings for the requirements of CDC Section 379 (Mineral and Aggregate Overlay District) are not required for this Final Order.

B. Washington County Community Development Code:

1. Article II, Procedure:

Section 202-3 Type III

202-3.1 *Type III actions involve development or uses which may be approved or denied, thus requiring the exercise of discretion and judgment when applying the development criteria contained in this Code or the applicable Community Plan. Impacts may be significant and the development issues complex. Extensive conditions of approval may be imposed to mitigate impacts or ensure compliance with this Code and the Comprehensive Plan.*

This request is being processed through the Type III procedure of the Community Development Code, pursuant to Section 308-4.5 of the Code. In accordance with the Type III procedural requirements, public notice was sent to surrounding property owners 20 days prior to the hearing. No letters of comment were received regarding this request.

Section 203-3 Neighborhood Meetings

The applicant conducted a neighborhood meeting on December 6, 2022. The application included the necessary documentation verifying compliance with the neighborhood meeting requirement.

Section 207-5 Conditions of Approval:

207-5.1 *The Review Authority may impose conditions on any Type II or III development approval. Such conditions shall be designed to protect the public from potential adverse impacts of the proposed use or development or to fulfill an identified need for public services within the impact area of the proposed development. Conditions shall not restrict densities to less than that authorized by the development standards of this code.*

The applicant shall comply with all of the Conditions of Approval.

2. Article III, Land Use District:

Section 308 FD-20 District:

Section 308-4 Uses Which May Be Permitted Through a Type III Procedure

The following uses may be permitted unless specified otherwise by the applicable Community Plan or Policy 41 of the Comprehensive Framework Plan for the Urban Area. These uses may be permitted subject to the specific standards for the use set forth below and in applicable

Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5.

308-4.5 Contractor's Establishment.

As stated previously, this request is for site improvements to an existing Contractor's Establishment. The original land use approval was issued through Casefile No. 99-478-D. The applicant's project description is as follows:

"As demonstrated on the Preliminary Plans (Exhibit A), the entire extent of the ±4.59-acre site is utilized for the storage, maintenance, and circulation of contractor's equipment. This application does not propose to expand or include additional off-site acreage or lots. The new planned building will primarily be used to keep existing exterior equipment and materials out of the weather. Further, this application does not propose expansion of activities on the site, as the project involves siting a shop building to relocate the existing office and shop operations currently conducted on-site in accessory buildings. The Existing Conditions Plan (Exhibit A) illustrates three trailers exist in the southeast portion of the site. These trailers are currently used for storage of small tools, machinery, and other materials that must be shielded from the weather, as well as areas for employee meetings and breaks. Upon approval of this application, those three structures are planned for removal, as reflected on the Preliminary Site and Utility Plan (Exhibit A). Activities conducted in these areas will be moved internal to the new industrial building. According to Casefile No. 99-478-D and noted above, a new structure should be approved through a Type II process. However, in December 2002, the property was added to the UGB by Metro Ordinance 02-969B and zoned FD-20 (Future Development 20-Acre). Pursuant to Section 308-4.5, a contractor's establishment may be permitted in the updated zone through a Type III review procedure. As such, this application involves a Type III development review for a contractor's establishment on land zoned FD-20.

As discussed above, the property is currently operating as a contractor's establishment for an excavation business, improved with an existing shop, office building, and other accessory structures. Therefore, approval of this application will allow the operations that are currently conducted on-site to continue in accordance with the applicable County provisions. The site is primarily used for the storage and maintenance of contractor's equipment, including heavy machinery, excavators, semitrucks, vehicles (including trucks, trailers, and vans), and construction equipment. On-site

storage of materials such as rock, gravel, soil, piping, concrete blocks, etc. is also included."

No letters of comment have been received requesting specific hours of operation, nor does current contractor's establishment have restricted hours of operation. It should be noted, however, that the Washington County noise ordinance requires the applicant to limit hours of operation of the site to between 7:00 am and 10:00 pm, Monday through Saturday, and legal holidays in order to ensure compliance with the ordinance.

Section 308-5 Prohibited Uses

308-5.9 Any parking or storage of tractor-trailers, semi-trucks, or heavy equipment, except in conjunction with an approved development or with a farm or forest use.

The applicant will continue the use of contractor's equipment, including heavy machinery, excavators, semi-trucks, work-related vehicles (e.g. trucks, trailers, vans), and construction equipment.

Section 308-6 Dimensional Requirements

308-6.1 Lot Area:

A. The minimum lot area shall be twenty (20) acres unless specified otherwise by the applicable Community Plan or Policy 41 of the Comprehensive Framework Plan for the Urban Area, or as provided below.

The site is approximately 4.59 acres. There are no plans to subdivide or reconfigure the current lot. There are no specific provisions in Policy 41 that require a different minimum lot size. ASC #3 of Policy 41 does include the following requirement governing lot/parcel reconfigurations, though no new lots are proposed at this time:

308-6.2 Yard Requirements:

The minimum yard requirements shall be:

- A. Thirty (30) foot front yard;*
- B. Ten (10) foot side yard;*
- C. Thirty (30) foot street side yard;*
- D. Twenty-five (25) foot rear yard;*

E. Additional setbacks may be required as specified in Sections 411 and 418; and

F. Required yards shall be horizontally unobstructed except as provided by Section 418.

The proposed new structure as shown on the submitted site plan will comply with the Code minimum setbacks, including from the front yard (setback) from SW McCamant Drive. The new structure is more than 30 feet from the front and street side yards and more than 10 feet from an interior side yard and more than 25 feet from the rear yard.

308-6.3 Height:

A. The maximum height for structures shall be thirty-five (35) feet, except as modified by other Sections of this Code.

B. The maximum height for accessory structures shall be fifteen (15) feet except as modified by other Sections of this Code.

C. Normal building appurtenances and projections such as spires, belfries, cupolas, chimneys, ventilators, elevator housings or other structures placed on or extending above roof level may exceed the thirty-five (35) foot building height limit to a maximum height of sixty (60) feet.

The new structure to be constructed is less than 35 feet; the plans indicate a building height of 20 feet height. Compliance will be confirmed at building permit review prior to issuance of the building permits.

308-6.4 Lot Dimensions:

A. The minimum lot width at the street shall be forty (40) feet;

B. The minimum lot width at the building line shall be seventy (70) feet; and

C. The minimum lot depth shall be one-hundred (100) feet.

The proposed site meets the applicable requirements of this section. The site is more than 300 feet wide and more than 600 feet deep.

Section 308-7 Additional Standards

- 308-7.1 *All new permitted uses shall be constructed in a manner which does not interfere with future conversion of the land to planned urban densities and/or uses.*
- 308-7.2 *Lawful nonconforming uses in the FD-20 District may be expanded or rebuilt to the limit of available services, through a Type II procedure when in conformance with the adopted Comprehensive Plan for the area. Expansion or replacement shall be subject to the provisions of development review and shall not include new uses.*
- 308-7.3 *Property in an Area of Special Concern on the Future Development Areas Map in the Comprehensive Framework Plan for the Urban Area is subject to the applicable Area of Special Concern provisions in Plan Policy 41.*

The development will not interfere with future conversion of the land to planned land use and intensities and is consistent with the applicable requirements of Policy 41 of the Comprehensive Framework Plan for the Urban Area (Noting that the site will ultimately be located within the City of Tualatin, which has completed comprehensive planning for this and the surrounding FD-20 lands to be included with future city expansions).

Lastly, the existing use is not nonconforming. Land use approval was granted through Casefile 99-478-D and therefore is subject to the Type III Procedure pursuant to Section 308-4.5 now that the site is designated FD-20.

Section 308-8 Access

All lots in this District shall either:

308-8.1 *Abut a public street; or*

308-8.2 *Have an easement of record at least 40 feet wide at the street or as approved by the appropriate fire marshal. In cases where no fire marshal has jurisdiction, the easement shall be subject to the standards of Fire District #1.*

The site maintains frontage on unimproved SW McCamant Drive. Existing access crosses a section of SW McCamant Drive before crossing Tax Lot 2S134DB03100 and intersecting SW Tonquin Loop. Access is located within a 50 foot wide easement over Tax Lot 2S134DB03100 (Document 95079621).

3. Article IV, Development Standards:

Section 403 Applicability

The applicant has provided a site plan and written information addressing the Development Review standards of Article IV.

403-3 Additional Standards Inside the UGB

In addition to the requirements of Table I, all Master Plan and Site Analysis applications shall address the requirements of Sections 404-419, 421-423, 427 and 429.

403-3.1 *Type III development may be denied based on the following:*

Denial of this application is not warranted based on the Type III criteria for the reasons discussed in A. through C. below.

A. The proposed development will have significant adverse impacts on property values in the area;

There is no evidence of any significant adverse impacts on property values as a result of the applicant's current operation or the proposed expansion. The site has been operating as a Contractor's Establishment since at least 1999. Compliance with the Conditions of Approval will ensure that the proposed use will not adversely impact surrounding properties.

B. The proposed development will unduly conflict with the character of an area not otherwise in transition; or

The development site is in an area in transition. The area was added to the Regional Urban Growth Boundary by Metro for the primary purpose of providing industrial land. Further, staff finds that even though there are a few existing residences east of the site, the Contractor's Establishment – like others in the surrounding area – is in character with the intended purpose of these FD-20 lands that Metro brought into the UGB for industrial development.

C. The public interest is not served by permitting the proposed development to occur on the proposed site at the proposed time. Development proposed to serve significant portions of the County may be evaluated for its impacts on the entire area to be served.

The proposed development will serve the public interest. The applicant's excavation business is essential to the economic growth that development and construction provide to the local area as well as the region as a whole.

Section 406 Building, Siting and Architectural Design

The new building will be subject to the standards of the FD-20 District. For information regarding compliance with height and setback requirements, please see Section 308 of this Final Order.

Section 407 Landscape Design:

407-1.4 Commercial, Industrial and Institutional Districts:

A. For new development, the minimum area required for landscaping shall be fifteen (15) percent of the land area.

The subject site contains approximately 20,000 square feet of existing landscaping outside of the existing and proposed developed areas. The Code has no specific provisions for landscaping of a contractor's establishment, except subsection 407-1.4 A.(1), which states 15% of the site shall be landscaped for development in industrial districts.

The landscape plan submitted with the application calls for the addition of approximately 10,200 square feet of new landscaping, including the required parking area landscaping. A minimum of almost 30,000 square feet (or 15%) of landscaping is required to comply with Section 407. The combination of existing and proposed landscaping will contain approximately 30,200 square feet of landscaping.

As conditioned, the applicant is required to submit a final landscaping plan consistent with the requirements of Section 407-4.2 of the Code.

Section 408 Neighborhood Circulation

408-5 Review Standards for Development on Lands Not Designated on the Community Plan Local Street Connectivity Maps or on Lands Not Designated as a Pedestrian/Bicycle District

The site is surrounded by other lands designated FD-20, with the noted exception of land to the northeast, which is in the City of Tualatin and zoned residential. Lands to the west and north are currently undeveloped. Lands to the east support a few single-family dwelling units on large lots. Lands to the south are developed with industrial uses. The site also has unimproved right-of-way along the east property line and an ODOT railroad right-of-way abuts the east side of the right-of-way. The railroad right-of-way impacts neighborhood circulation to the east.

The Transportation Plan designates a future Community Trail ("Tonquin Ice Age Trail") along the eastern boundary of the site. Neighborhood circulation and meeting Section 408 requirements will be met in the future upon the completion of the Community Trail along the east boundary of the site. The proposed building is located approximately 150 feet from the east property line and will not impede the future construction of this Community Trail.

Frontage improvements on SW McCamant Drive would provide a short section of sidewalks and street improvements for bicyclists. However, as stated in the Transportation Findings, requiring half-street improvements for the proposed new building for the existing Contractors Establishment would exceed the roughly proportional impact of this development on the need for such improvements. Consequently, half-street improvements should be deferred to a future date when more substantive development occurs. Additionally, the future Community Trail as described will be an important element of Neighborhood Circulation. The proposed development will not impede the future construction of the Community Trail.

Section 410 Grading and Drainage

The applicant proposed grading necessary to accommodate the proposed development, which should be generally minimal as the site is mostly flat. Washington County Building Engineers have reviewed the application, and determined that a grading permit is required for the development. As conditioned, the applicant shall obtain a grading permit from the Washington County Building Services Division, as determined by Washington County Building Engineers.

Section 411 Screening and Buffering

The applicant has proposed a contractor's establishment on the site, which has a land use designation of FD-20. The Code includes no specific provisions for screening and buffering on FD-20 uses, with screening and buffering to be determined as required by the review authority. However, inside the UGB, Code provisions specifically require screening and buffering when commercial and industrial uses adjoin residential uses. In this case, the site is in the FD-20 District and is bordered on the east by a few detached dwelling units also located in the FD-20 District.

The proposed building will be approximately 150 feet from the east property line. The proposed building will also be more than 400 feet from the nearest existing residence. There is also a significant amount of vegetation buffering the proposed building from nearby residences. Therefore, the hearings officer finds that additional screening and buffering is not necessary.

Section 413 Parking and Loading

Section 413 does not contain specific parking requirements for a contractor's establishment. The applicant proposed to provide 20 employee parking spaces. No customers are proposed to visit the site and the site is closed to the general public. The paved off-street parking spaces are located generally along the southern boundary of the proposed building and along the south property line (See Sheets P3 & P4 of the application).

413-5 Off-Street Parking Standards

413-5.1 *All required off-street parking and loading areas inside the Urban Growth Boundary shall be surfaced with concrete or asphaltic material to conform with either of the following standards:*

- A. *A minimum of four (4) inches of concrete for vehicles and six (6) inches for commercial vehicles or trucks; or*
- B. *Two (2) inches of asphalt overlaying a six (6) inch base (compacted) of crushed stone.*
- C. *In lieu of being constructed as described under A. or B. above, off-street parking and loading areas may be constructed of pervious paving materials when the applicant's engineer provides written certification with the application that appropriate site conditions exist for the use of pervious materials and that the proposed design and construction will be equal to or superior to the structural standards specified in A. or B. above.*

413-5.4 *Based upon approval of a grading plan pursuant to Section 410, for the purpose of temporary or overflow parking, or storage of heavy equipment or vehicles in the Industrial District, a gravel surface may be approved with a minimum four (4) inches of base rock with two (2) inches of three-quarter (3/4) inch minus leveling course.*

The required off-street parking spaces and maneuvering areas will be paved as required. The other existing surplus vehicle parking and loading/storage areas may remain gravel pursuant to Section 413-5.1 C.

Section 414 Signs

The applicant has not proposed a sign at this time. If the applicant proposes to erect or otherwise locate any signs on the subject site, a sign permit is required from Washington County Current Planning Services.

Section 416 Utility Design

416-1.1 *All utility distribution facilities supplying electric, communication, or similar or associated service, installed in and for the purpose of supplying such service to any development shall be placed underground.*

416-1.3 *Easements necessary for sewers, water mains, electric lines, or other public utilities shall be provided. The easements will vary according to the need of various utilities. When possible, the easement shall be located on one side of a lot line.*

416-1.4 *The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum, feasible disturbance of soil and site.*

No new utilities are proposed. All new utilities shall be placed underground pursuant to Section 416-1. The applicant stated that future utilities are planned to be underground. The location, design, and installation of new utilities (if any) shall be coordinated with the applicable service provider and carried out with minimum feasible site disturbance. Utility easements shall be provided in accordance with Section 416-1.3.

Section 417 Irrigation

417-1 Provision of Method of Irrigation

All developments, which are required to provide landscaping, shall provide appropriate methods of irrigation for the landscaping. Landscaping which exceeds one-thousand (1,000) square feet shall be irrigated with automatic sprinkler systems. Hose bibs and manually operated methods of irrigation may be approved by the Review Authority based upon written verification, submitted by a registered landscape architect, that the alternatives can satisfy the intent and purpose of the irrigation standards.

According to the application narrative, plant species selected are planned to be drought-tolerant and/or native species, and thus low-water use plants. The existing well is planned to provide the necessary water for the landscaping. However, the applicant did not provide written verification from a registered landscape architect that the alternatives satisfy the intent and purpose of the irrigation standards as required by this section. Therefore, the applicant should be required to provide such verification or include an automatic sprinkler system in the final landscape design. A condition of approval is warranted to that effect.

Section 418 Setbacks

418-2 Additional Setbacks Required for Future Right-of-Way

418-2.1 *Where a yard or setback abuts a street having insufficient right-of-way width, the minimum yard or setback requirement shall be increased by half the additional right-*

of-way necessary to meet the County standard. Classification of streets and roads shall be determined by the Transportation Plan, including the Functional Classification Transportation System Map.

418-2.2 Prior to issuance of a building permit where the land use action is subject to growth management, an applicant shall dedicate the additional right-of-way to meet the County standard. Notwithstanding the above, outside the UGB, dedication of additional right-of-way to meet the County standards shall be required prior to the issuance of any building permit where required as a valid condition of approval.

418-2.3 Setback requirements shall be determined from future rights-of-way as set forth by the official Washington County Functional Classification System Map, and as indicated on the Washington County Transportation Plan. When a stub street abuts a site, the property owner shall place all on-site structures in such a way as to not preclude extension of that stub street into or through the site.

418-2.4 The setback requirements of this Code shall not apply to existing structures when the setback is reduced by a public dedication. If the setback is not reduced by a public dedication, the structure(s) shall meet the setback requirements of this section.

The proposed structures comply with the requirements of this section concerning setbacks from SW McCamant Drive. Additionally, the required yards will not be horizontally obstructed. See the Findings for Section 308 above.

418-4 Fences and Retaining Walls

The setback requirements of this Code are not applicable to the following fence or retaining wall structures (or any combination thereof) except as required by Section 418-3:

418-4.1 A fence, wall (includes retaining wall), screen or lattice work not more than seven (7) feet in height.

418-4.2 A fence, wall (includes retaining wall), screen or lattice work not more than eight (8) feet in height along a rear, side or front yard which abuts an arterial or limited-access highway.

418-4.3 *A combination fence (not more than six [6] feet in height) and retaining wall structure (not more than four [4] feet in height) located in a side or rear yard (for design standards see Section 419-4).*

418-4.4 *Tiered retaining wall structures not exceeding seven (7) feet in height in any required yard. The maximum height measurement includes all tiers located within the yard or setback area. All non-tiered retaining walls located within the yard or setback area shall not exceed a combined total of seven (7) feet in height.*

No fencing exists or is proposed at this time.

Section 419 Height

In addition to the height restrictions in the primary districts, the following limitations shall apply:

419-1 *Within twenty (20) feet of another primary district with a lower height restriction, the height restriction of the adjacent district shall apply.*

419-2 *Beyond the twenty (20) foot area in Section 419-1 above, the height may increase on the subject property at a ratio of one (1) foot of height to one (1) foot of horizontal distance from the adjacent primary district with a lower height limitation, to the maximum height permitted in the primary district.*

419-5 *Tiered retaining wall structures shall not exceed seven (7) feet in height in any required yard. The maximum height measurement includes all tiers located within the yard or setback area. All non-tiered retaining walls located within the yard or setback area shall not exceed a combined total of seven (7) feet in height.*

No retaining walls are proposed at this time.

Section 423 Environmental Performance Standards

423-4 Air Quality

All development shall comply with the State Department of Environmental Quality Air Quality Standards.

423-5 Odor

All development shall comply with the State Department of Environmental Quality Standards pertaining to odor.

The State Department of Environmental Quality (DEQ) standards pertaining to air quality apply to all land uses. The applicant stated that the current operation complies with the DEQ provisions concerning air quality and odor.

Lastly, the use of paved surface areas for parking and vehicular maneuvering areas will help maintain air quality by reducing the amount of air-borne dust generated existing gravel surfaces.

423-6 Noise

All development shall comply with the State Department of Environmental Quality Standards relating to noise. Demonstration of compliance may be required by the Review Authority.

423-7 Vibration

No development shall generate ground vibration which is perceptible by the Director beyond the property line of origin without use of instruments. Ground vibrations caused by motor vehicles, trains, aircraft, or temporary construction work are exempt from strict application of these standards, but good faith efforts to control such vibrations shall be made by the originator.

No unusual problems with noise or vibration are anticipated with the proposed development outside of vehicle noise and outdoor storage of equipment and materials. The applicant shall be required to comply with the Washington County Noise Ordinance at all times.

423-8 Heat and Glare

Heat and glare shall be limited as follows:

423-8.1 *Except for exterior lighting, operations producing heat or glare shall be conducted entirely within an enclosed building.*

423-8.2 *Exterior lighting shall be directed entirely away from adjacent properties.*

According to the applicant, no heat and/or glare causing activities will be undertaken on-site.

423-9 Storage

423-9.1 *All materials, including wastes, shall be stored and all grounds maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard.*

423-9.2 *No open storage of materials and equipment shall be permitted unless contained by a site obscuring fence or landscaped screening.*

Per the applicant's plans and narrative, solid waste and recycling bins will be contained in a trash enclosure so as to not cause a health hazard.

In addition, no storage of materials is proposed which can be considered an attractant or aid in the propagation of insects or rodents or that would create a health hazard.

423-9.4 *Storage of Hazardous Materials*

Developments which store hazardous materials must comply with State standards, OAR Chapter 340 Division 63, and the Federal standards, 40 CFR Part 262 and 264 and shall demonstrate such compliance. All hazardous materials must be stored above ground. Transport of and disposal of such materials shall be in conformance with all applicable local, State and Federal regulations with such compliance demonstrated.

No hazardous materials are proposed to be stored on site as part of this application.

423-10 Drainage and Waste Water

All development shall comply with the State Department of Environmental Quality Water

Quality Standards for all runoff, drainage and waste water.

The applicant stated that managing of storm water runoff and wastewater will be designed to comply with applicable DEQ water quality standards.

423-11 Adequate Water Supply

All development shall be required to have an adequate water supply. Adequacy shall include:

423-11.1 Adequate supply for the use prior to issuance of a building permit (see Section 501-5.1, Critical Services).

According to the Watermaster, the subject property is within the Sherwood, Damisch-Wilsonville Limited Groundwater Area. Therefore, the water right for the proposed industrial use on the site is limited to 5,000 gallons per day. Exempt uses for groundwater are listed in Oregon Revised Statute (ORS) 537.545. The applicant proposes to continue utilizing the existing on-site well.

423-12 Radioactive Materials

The handling and storage of radioactive materials, the discharge of radioactive materials into air or water, and the disposal of radioactive waste in connection with all uses shall be in conformance with all applicable local, State, and Federal regulations with such compliance demonstrated.

423-13 Toxic or Noxious Matter

All development shall comply with the State Department of Environmental Quality standards pertaining to omission of toxic or noxious matter and such compliance shall be demonstrated.

No radioactive, toxic or noxious materials will be created or disposed of on-site.

426 Erosion Control

As conditioned in Attachment B, the applicant/property owner shall submit sedimentation/erosion control plans prior to any site disturbances and issuance of a building permit. A grading permit is required and all grading shall be conducted using erosion control which meets the provisions of Chapter 14.12 of the Washington County Code (adopted by Ordinance No. 689).

4. Article V, Public Facilities and Services:

Section 501 Public Facility and Service Requirements

501-6 Exceptions for Critical and Essential Services

501-6.1 *Development proposals that cannot ensure critical and essential services within the required time frames shall be denied unless all of the following findings can be made:*

The applicant has requested an exception for essential and critical services for the proposed Contractor's Establishment.

A. The particular inadequate facility(ies) or service(s) is not necessary for the particular proposal within the time period identified by the service provider;

In accordance with Section 501-8.1 of the Code, the following facilities and services are considered critical:

- Water;
- Sewer;
- Fire protection;
- An adequate level of access to the proposed development;
- Adequate drainage and adequate provisions for storm water, surface water and water quality management; and
- No development shall be approved on property that is located outside of the Washington County Urban Road Maintenance District;

The applicant has provided a service provider letter from the Sheriff's Office indicating that service for law enforcement is available to the site. The applicant has also provided a service provider letter from Tualatin Valley Fire & Rescue. In the agency letter dated January 13, 2023, the Fire Marshal commented that fire protection service is available to the site. However, the SPL did not include the proposed building. The applicant will need to obtain a new SPL that reflects input from TV F&R based on all expected development and submit the new SPL as part of the Final Approval application.

With regard to sewer and surface water management, the subject site is currently outside of the service district for Clean Water Services. Timeframes for the provision of sewer and surface water management services are unknown. The applicant states that the site will be served by an on-site septic treatment system for sewer service. Prior to Final Approval, the applicant shall provide evidence demonstrating that the Washington

County Health and Human Services Department has approved the existing on-site septic treatment system to serve the new proposed building.

With regard to water services, the site is currently located outside an established water district and according to the Watermaster the subject property is within the Sherwood, Damisch-Wilsonville Limited Groundwater Area. The applicant proposes to continue use of the existing well. Timeframes for the provision of urban water services to the site are unknown. Water would be provided by the City of Tualatin after the site annexes into the city.

In accordance with Section 501-8.2 of the Code, the following facilities and services are considered essential:

- Schools
- Police or Sheriff protection
- Transit agency service
- Adequate Level of Arterial and Collector Roads
- Street Lighting
- Gravel roads are unacceptable for development within the Urban Growth Boundary
- Future alignments of Collectors or Arterials
- Half street improvements

An adequate level of school service is not considered applicable to this development application for a contractor's establishment. The applicant has provided a service provider letter from the Washington County Sheriff's Department establishing that police protection is available to the site. The site is not required to annex into the Sheriff's Enhanced Patrol District, as per Policy 41 of the Washington County Comprehensive Framework Plan for the Urban Area.

Further information relating to transportation standards can be found in the Transportation Findings below.

B. The approval of the development application will not substantially interfere with the ability to later provide the particular inadequate facility(ies) or service(s) to anticipated uses in the vicinity of the subject property;

The applicant requires an exception to the critical services standards of Section 501-8.1 of the Code for sewer, water, and storm water, surface water and water quality management. The proposed development will interfere with the ability to later provide these services to anticipated uses in the vicinity of the subject property.

C. The approval of the development application without the assurance of the particular inadequate facility(ies) and service(s) will not

cause a danger to the public or residents in the vicinity of the subject property; and

Water use on the site is currently subject to the restrictions on the Sherwood, Damisch-Wilsonville Limited Groundwater Area, as administered by the Washington County Watermaster, and the applicant is required to provide evidence relating to compliance with appropriate on-site septic treatment and surface water management and drainage. As such, it is considered that use of the site without the provision of urban water, sewer, and surface water management services will not cause a danger to the public or residents in the vicinity of the subject property.

D. It is shown that the applicant has exhausted all practical methods within the ability of the applicant to ensure the provisions of the unacceptable facility(ies) and service(s).

As described above, timeframes for the provision of urban water, sewer, and surface water management services to the site are unknown. Annexation of the majority of the area into the adjacent city is expected to take a number of years. The closest sanitary and storm sewer service lines are approximately 1000 feet away (to the northeast in the City of Tualatin). Potable water provided by the City of Tualatin would also be located approximately 1000 feet away to the northeast. As stated previously, the site is planned for Manufacturing Business Park once it is annexed to the City of Tualatin. Until such time, the application remains subject to the requirements of Section 308 of the Code. As such, the applicant is unable to practically ensure the provision of these services.

501-6.2 Exceptions to the Public Facility and Service Standards as provided under Section 501-6.1 will be reviewed through a Type III process.

The request for exceptions to the Public Facility and Service Standards identified above is being reviewed through the Type III process. Further information relating to transportation standards can be found in the Transportation Findings below.

501-6.3 Development proposals that cannot ensure improvements required by Sections 501-8.1 B. (4) or 501-8.2 G. [Half-street improvements] within the required time frames shall be denied unless the Review Authority determines that the findings required under Sections 501-6.1 B. and C. plus the findings required by at least one of Sections 501-6.3 A. through C. below can be made.

A. Within five hundred (500) feet of the subject site (not including the subject site), measured in each direction along the frontage road, but not

beyond the nearest intersecting Collector or Arterial road:

- (1) No similar frontage improvements exist on the same side of the street as the subject site; and*
- (2) Seventy-five (75) percent or more of the parcels fronting on the same side as the subject site cannot be divided based on the allowed minimum lot size or density requirements of the applicable land use district(s).*

The site's frontage along SW McCamant Drive is unimproved. The site maintains approximately 475 feet of unimproved right-of-way, which extends south approximately 160 feet from the southeast corner of the site (noting that the existing platted right-of-way terminates at this point and does not intersect with SW Tonquin Loop). The County has not demonstrated that the cost of half-street improvements is roughly proportional to the impacts generated from the proposed development, particularly since no additional trips are anticipated by the building expansion. See also the Transportation Findings below.

501-6.4 Requests for exceptions to the requirements of Sections 501-8.1 B. (4) or 501-8.2 G. (Half-street improvements) as provided under Section 501-6.3 shall be reviewed through the same procedure type otherwise required for the proposed development action(s), separate from or in conjunction with other required development hearings.

The application request is being processed through the Type III Procedure, as required by Section 308-4.5.

501-6.5 If an exception to Sections 501-8.1 B. (4) or 501-8.2 G. (Half-street improvements) is granted pursuant to Section 501-6.3, the applicant shall:

- A. Be required to provide improvements necessary to mitigate the impact of the proposed development on the road system; and*
- B. Assure the following, with said assurance provided prior to issuance of a building permit:*

- (1) All other applicable requirements of Sections 501-8.1 and 501-8.2, as determined*

by the Review Authority, shall be satisfied prior to occupancy of the development;

- (2) All identified safety improvements, both on-site and within the impact and analysis area (pursuant to Resolution and Order No. 86-95 "Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance - Process Documentation" as modified or updated), shall be constructed prior to occupancy of the development; and*
- (3) Sidewalks must be constructed adjacent to any road directly abutting the development site as otherwise required by this Article prior to occupancy of the development.*

The applicant stated that the existing Contractor's Establishment does not generate pedestrian traffic and further generates a small amount of vehicle trips. No improvements are necessary to mitigate for the granting of the exception of half-street improvements.

501-6.6 Notwithstanding the provisions of this Section 501-6, all new construction and expansion of the existing structures shall pay the Transportation Development Tax, except as provided in the Transportation Development Tax Ordinance (Ordinance 691 as amended). No exception to the Transportation Development Tax shall be granted except as provided in the Transportation Development Tax Ordinance.

The new building will be subject to TDT.

C. Washington County Transportation Plan:

The findings and recommendations for transportation standards are found in the Transportation Findings below.

D. Ordinance No. 691-A; Transportation Development Tax:

The Transportation Development Tax (TDT) is required of all new development and constitutes an assurance to satisfy a development's requirement to provide additional capacity to Collectors and Arterial streets needed for development. This tax is based on the number of daily vehicle trips a site generates and is due at issuance of a building permit. See the Transportation Findings below.

E. R & O No. 86 - 95 - Determining Traffic Safety Improvements Under the Traffic Impact Fee Ordinance:

The findings and recommendations for transportation standards are found in the Transportation Findings below, and are incorporated as findings herein.

F. Ordinance No. 524 - Uniform Road Improvement Standards:

The findings and recommendations for transportation standards are found in the Transportation Findings below, and are incorporated as findings herein.

G. Transportation Findings:

1. PROJECT PROPOSAL AND TRIP GENERATION:

- a. This request is for land use approval to expand a previously approved Contractor's Establishment. The applicant also requests approval for Exceptions to the Public Facility and Service Standards (sanitary sewer and water services and street improvements).
- b. Proposed on-site improvements include a new 12,000 square foot industrial building intended to house a relocated shop and office space from an existing smaller building, 20 paved off-street parking spaces and new landscaping (noting that the addition of a larger building would constitute an expansion of the existing established Contractor's Establishment approved through Casefile 99-478-D). The existing well and septic system will serve the expansion.
- c. The ITE Manual does not publish trip generation data for contractor's establishments. The original Contractor's Establishment was approved on the basis of between 10-20 workers being employed at the site. The applicant stated that the proposed development will not generate additional vehicle trips (ADTs).

2. ABUTTING ROADWAY DESIGNATIONS, STANDARDS, AND RIGHT-OF-WAY:

- a. The Transportation Plan and WCURIDS establish required lane numbers and configurations, right-of-way and roadway widths, and pavement structural specifications for roadways.
- b. CDC Sections 418-2.2 and 501-8.4 require dedication of additional right-of-way when existing right-of-way is deficient.
- c. SW McCamant Drive is a local street. Thirty (30) feet of right-of-way currently exists along the site's eastern and northeastern frontage of SW McCamant Drive. Required right-of-way for a Local (L-2) standard is 38

feet. Hence, existing right-of-way is currently inadequate and additional right-of-way dedication is required. Prior to Final Approval the applicant shall dedicate additional right-of-way thusly: four (4) feet from the northern street frontage and eight (8) feet from the eastern frontage (eastern street frontage dedication is necessary due to the inability to obtain future right-of-way on the east side of existing right-of-way given that an ODOT railroad right-of-way abuts SW McCamant Drive to the east.

3. ABUTTING/ACCESS ROADWAY SURFACE WIDTH, STRUCTURAL CONDITION, AND REQUIRED IMPROVEMENTS:

- a. CDC Sections 501-8.1 B., 501-8.2, and 501-8.5 H. require improvement of substandard County or public roads abutting or providing access to a proposed development in accordance with the Transportation Plan and WCURIDS.
- b. CDC Section 501-8.1 B. (4) requires that unimproved Local and Neighborhood Routes fronting an urban development site be improved with a half-street improvement, designed and constructed consistent with the WCURIDS. SW McCamant Drive frontage is currently not improved to County standard. Approximately 475 feet of SW McCamant Drive frontage abuts the site. However, the County failed to demonstrate that the cost of such improvements is roughly proportional to the impacts of the proposed expansion. See the Findings under Section 501-6.3 above.
- c. SW McCamant Drive from the property line of the development site to SE Tonquin Road is not improved with a 22-foot-wide, 5 year paved wearing surface for the entire length as required by Section 501-8.1 B. (2). Approximately 875 feet of this road does not meet this requirement. No new vehicle trips are anticipated with the proposed development. Therefore, the proposed expansion will not create a need for additional transportation improvements.

4. ACCESS:

- a. CDC Section 501-8.5 governs access to County and public roads. Access to the site is currently provided from SW McCamant Drive that intersects with SW Tonquin Loop approximately 350 feet southeast of the site. The site has no street frontage on an improved public road, nor are there any street stubs at the property lines.
- b. Access was approved via Casefile 99-478-D. The proposed expansion does not impact the established access.

5. SIGHT DISTANCE:

- a. CDC Section 501-8.5. F. and WCURIDS Section 210.7 require adequate intersection sight distance at a site's access to a County or public road and at all intersections of County or public roads, in accordance with the standards of CDC 501-8.5. F. Required sight distance is equal to ten times the vehicular speeds of the road.
- b. The required sight distance at SW McCamant Drive is 250 feet based upon a posted speed of 25 m.p.h. The applicant provided Preliminary Sight Distance Certification. The certification stated that adequate sight distance is adequate to both the south and east. Prior to issuance of certificate of occupancy, the applicant shall provide Final Sight Distance Certification.
- c. Periodic trimming of vegetation may be required to maintain adequate sight distance at all intersections.

6. MAINTENANCE PROVISIONS:

- a. Local and Neighborhood Route Roads are maintained by the County Urban Road Maintenance District (URMD). CDC Section 501-8.1 D. requires properties to be annexed into URMD prior to approval of development or redevelopment. The subject property is not currently in URMD; however, Policy 41 (Urban Growth Boundary Expansions) of the Comprehensive Framework Plan for the Urban Area provides that properties in the FD-20 District are not required to annex into URMD. Therefore, CDC Section 501-8.1 D. does not apply to the subject property, and annexation into URMD shall not be required.

7. DRAINAGE:

- a. Section 501-8.1.C requires the site to have adequate roadway drainage. Roadway drainage along the site's frontages of SW McCamant Drive is not acceptable. However, this is an existing condition and the County failed to demonstrate that the proposed development will increase the need for such improvements or that the cost of improvements is roughly proportional to the impact of the development on the need for such improvements.

8. SIDEWALKS:

- a. Section 502-6 of the CDC requires a sidewalk to be constructed along a site's road frontage when one does not exist. There are no sidewalks along the site's frontage of SW McCamant Drive. Sidewalks are required on SW McCamant Drive. Noting that the applicant has requested and this Final Order approves a half-street exception, including sidewalks.

9. PERMITS REQUIRED:

- a. A Facility Permit will be required from the Assurances section of Current Planning for the construction of any required public improvements.

E. CONCLUSION

Based on the findings and discussion provided or incorporated herein, the hearings officer concludes that the Casefile No. L2300057-D/M (McCamant Contractor's Establishment) should be approved subject to the conditions of approval recommended by county staff, because the applicant sustained the burden of proof that the proposal does or will comply with the applicable approval standards in the Washington County Community Development Code subject to those conditions.

F. ORDER

The hearings officer hereby approves the Special Use approval requested in Casefile No. L2300057-D/M (McCamant Contractor's Establishment), subject to the conditions of approval in Attachment B of this decision.

DATED this 27th day of June 2023.

A handwritten signature in black ink, appearing to read 'Joe Turner', with a long horizontal flourish extending to the right.

Joe Turner, Esq., AICP
Washington County Land Use Hearings Officer

**ATTACHMENT B
CONDITIONS OF APPROVAL
Casefile No. L2300057-D/M
(MCCAMANT CONTRACTOR'S ESTABLISHMENT)**

I. THIS APPROVAL SHALL AUTOMATICALLY EXPIRE FOUR YEARS FROM THE DATE OF THIS APPROVAL, UNLESS DEVELOPMENT HAS COMMENCED, AN APPLICATION FOR AN EXTENSION IS FILED, OR THIS APPROVAL IS REVOKED OR INVALIDATED (SECTION 201-4).

II. PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES:

A. Submit to Building Services (503-846-3470) for review and approval of a Grading Permit:

1. Grading/drainage plan consistent with the standards of Section 410.
2. A site-specific geotechnical engineering report – stamped and signed by an Oregon-registered engineer - with recommendations for developing the site as proposed and approved.
3. Provide private road/driveway/parking lot structural details on the plans per site specific geotechnical engineering recommendations.
4. A drainage analysis report stamped by an engineer that shows that (demonstrates that) the additional impervious areas resulting from the proposed development will not negatively impact surrounding properties per WCC 14.12.310.
5. A sedimentation/erosion control plan.

Note: All grading / site work must also comply with all applicable requirements noted on the Building Services Division Grading Permit application forms. A site utility permit may be required for all private work. All grading shall be conducted using erosion control which meets the provisions of Chapter 14.12 of the Washington County Code (adopted by Ordinance No. 689).

III. PRIOR TO SUBMITTAL OF FINAL APPROVAL (Within 4 years):

A. The following documents shall be executed (Contact John Kidd, Survey Division, 503-846-7932):

1. **SW McCamant Drive:** Dedicate 4 feet of right-of-way from the northern street frontage and 8 feet from the eastern frontage (8 feet

along the eastern street frontage is made necessary due to the inability to obtain future right-of-way on the east side of existing right-of-way).

NOTE: SW McCamant Drive is a local street. Thirty (30) of right-of-way currently exists along the site's eastern and northeastern frontage of SW McCamant Drive. Required right-of-way for a Local (L-2) standard is 38 feet. Hence, existing right-of-way is currently inadequate and additional right-of-way dedication is required. (ODOT railroad right-of-way abuts SW McCamant Drive to the east.).

B. Submit Final Approval Application to Land Development Services, Project Planner (Paul Schaefer, 503-846-3832), including the following:

1. Final Approval form (Type I procedure; two copies).

NOTE: *The final approval application shall contain a written statement and complete evidence/documentation that all Conditions of Approval have been met.*

2. Final Approval fee.
3. Final plans illustrating the following:
 - a. Right-of-way dedications per Condition III.A.
 - b. A final landscape plan as required by Section 407-4.
 - i. The final landscape plan shall include an automatic sprinkler system unless the applicant provides written verification from a registered landscape architect that irrigation is not required for the landscaping proposed on this site.
4. Evidence that the landscaping plan required by Condition III.B.3.b. will be continuously maintained in accordance with Section 407-8.10.
5. Evidence demonstrating that the applicant has obtained final approval of the adequacy of the existing on-site septic treatment system from the Washington County Health and Human Services Department to serve the new building.

6. A completed TVF&R Service Provider Letter covering the proposed new building.

IV. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT THE APPLICANT SHALL:

- A. Obtain Final Approval in accordance with Condition III. B.
- B. Submit to Building Services (503-846-3470) site plans showing:
 1. Final landscaping required by Condition of Approval III.B.3.
- C. Pay all applicable SDCs.

Note: The applicant shall also pay the Transportation Development Tax (TDT) pursuant to Ordinance No. 691-A.

V. PRIOR TO FINAL BUILDING INSPECTION AND/OR OCCUPANCY:

- A. Complete all required on-site improvements, including but not limited to installation of landscaping, and marking of the parking spaces and obtain final sign-off by Project Planner, Paul Schaefer.
- B. Written certification from an engineer that all interior parking and loading areas, including truck parking & maneuvering/drive aisle areas have been constructed (paved) in accordance with the requirements of Section 413-4.1. A. or B.
- C. Final Certification of Sight Distance prepared and signed by a registered Oregon engineer ensuring that adequate sight distance exists at the access to SW McCamant Drive.

VI. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

- A. This approval is limited to the vehicles, equipment, and operation by McCamant, LLC., as outlined in the Staff Report. The addition of other uses to this operation at this site may require subsequent approval through the land use application process. (Section 207-5)

VII. ADDITIONAL CONDITIONS:

- A. Adequate sight distance shall be continuously maintained by the property owner(s). This may require the property owner(s) to periodically remove obstructing vegetation from the road right-of-way (and on site).

- B. This development shall be constructed in accordance with the conditions of this decision, the approved final plans and the standards of the Community Development Code (Section 207-5).**
- C. All conditions of approval shall be binding upon all heirs, successors and assigns (Section 207-5).**
- D. Transferability of this Development Permit shall be in accordance with Section 201-8.**

Section 7

Capital Improvement Plan

This section summarizes the capital projects, programs, and policy recommendations identified through the master planning process, collectively comprising the City's Stormwater Capital Improvement Plan (CIP).

A total of 15 capital projects (CPs) are identified to address current and future storm drainage infrastructure needs related to system capacity, repair and replacement (R/R), a lack of infrastructure, recurring maintenance, instream erosion and sediment accumulation, and water quality. Considering multiples phases for some projects, these 15 CPs represent 20 separately costed and phased projects for purposes of project prioritization and scheduling efforts.

CP recommendations are considered a one-time cost and are shown in Figure 7-1, located at the end of this section.

In addition to the 15 CPs, there are four, city-wide planning projects that are also considered a one-time cost. These planning projects are described in Section 7.2.

Six programmatic recommendations are identified, including addressing ongoing support for localized drainage improvements, city-wide system repair and replacement (R/R) needs, water quality retrofits and expanded stormwater facility maintenance needs, and riparian vegetation management. Program recommendations are considered an annual cost, as described in Section 6.5, and intended to support ongoing asset management efforts.

Section 7.1 summarizes the recommended actions costed for this SMP. Section 7.2 summarizes the overall CIP, and Section 7.3 outlines the staffing analysis to assess Public Works and Engineering staffing needs in support of this SMP and regulatory obligations.

7.1 Summary of Recommended Actions

Project, program, and policy recommendations in this SMP are proposed to improve and enhance drainage infrastructure and water resources throughout the City, as summarized by the following recommended actions.

- Implement CPs required to address system capacity, system maintenance, repair and replacement, water quality, instream erosion/sediment control, and new infrastructure needed to accommodate pending development. These CPs are intended to manage areas of reported deficiencies and accommodate development and growth.
- Implement stormwater-related improvement programs to address recurring, maintenance-related system needs in an expedited manner, as well as address system condition issues in accordance with ongoing inspections and the City's asset management goals.
- Implement stormwater retrofits both proactively and opportunistically to enhance water quality and improve natural system aesthetics and function.
- Update policies and procedures to support public and private partnerships for new and redevelopment activities, specifically related to stormwater infrastructure replacement and stormwater fee-in-lieu payments in conjunction with the Town Center redevelopment.
- Continue implementation of the City's Public Works Design Standards (PWDS) to address regulatory drivers, support private development activities, and protect stream health.

- Add staff necessary to maintain compliance with the City's National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer (MS4) permit, as well as to implement recommendations outlined in this SMP.
- Clearly document capital project and program costs and schedule to inform future funding and rate analyses.

7.2 Capital Improvement Program Recommendations

CP locations are mapped in Figure 7-1, at the end of this section, based on the following objectives (identified in **BOLD**):

- Increase **system capacity** to address existing and potential future deficiencies (i.e., flood control).
- Install **water quality** treatment and address instream **erosion and sediment control (E&S)** to meet regulatory drivers including the City's NPDES MS4 permit and total maximum daily load (TMDL) obligations.
- Address recurring **maintenance** and **infrastructure needs** (i.e., lack of maintenance access, add infrastructure to address localized drainage issues).
- Address system condition through **repair & replacement (R&R) needs**.

Table 7-1 lists all CP and program recommendations and references the associated Project Opportunity Area as defined in Section 6. A brief description of the project and summary of project objectives are also included. Most projects address multiple objectives. Table 7-1 also reflects the anticipated implementation schedule for the CP, based on prioritization efforts. Corresponding CP fact sheets with more detailed project information are provided in Appendix D.

The portion of total project cost considered eligible for funding via system development charges (SDCs) is also provided in Table 7-1. Projects solely related to planning, repair & replacement, and maintenance were determined not eligible for SDCs, as they do not address required improvements associated with new or redevelopment. The portion of the total project cost considered SDC eligible is calculated based on the increase in flow associated with anticipated development, using percent increase in impervious coverage as a surrogate.

Description of the four planning-related projects (City-1, City-2, City-3, and City-4) are provided below. Planning projects require specific, scheduled budget allocations and so were added to the overall stormwater CIP.

7.2.1 Flow Monitoring and Rain Gauge Installation (City-1)

This planning project includes the installation of three flow monitors, installed in the piped stormwater collection system, as well as the installation of one rain gauge to assess stormwater flow and aid in the more refined calibration of the City's InfoSWMM model. Additional flow monitoring and model calibration will help confirm the need for and sizing of select CPs, particularly where City staff have not yet observed flooding issues, but the model is predicting flooding.

Recommended locations for installation of flow monitoring include locations with a phased, capacity-related CP and pending new development. They include locations in each of the three major basins: Coffee Lake Creek, Boeckman Creek, and the Willamette basin (e.g., Charbonneau). CPs potentially informed by this effort include Day Road Stormwater Improvements (Project ID CLC-1), Garden Acres Pond Retrofit (Project ID CLC-3), Morey's Landing (Project ID WR-1), Charbonneau East (WR-4), and Charbonneau West (WR-5).

The project duration (for costing purposes) is estimated at 12 months, and the cost estimate of \$100,000 for this effort is based on recent bids for similar levels of service. This estimate has not been validated or based on a detailed scope.

7.2.2 Hydromodification Assessment and Stream Survey (City-2)

This planning project includes follow up monitoring efforts related to the 2022 geomorphic assessment of select high priority reaches as conducted for this SMP (see Appendix C). Although the focus of the assessment was to identify existing and potential future risks associated with hydromodification, the assessment also provided a baseline within the study areas to assess changes in channel, floodplain, and riparian condition over time. This was done by documenting locations of noticeable bank erosion, headcuts, neglected or compromised riparian corridor, grade control locations, and other points of interest.

Data collection efforts will use similar protocols and data sheets developed during the 2022 assessment along these high priority reaches to provide continuous monitoring of stream impacts associated with upstream development activities or hydromodification mitigation strategies. The assessment will be both field-based, consisting of stream walks along the select reaches, and qualitative, including descriptions of geomorphic setting, geomorphic trends (i.e., aggrading, incising or stable), presence of base level controls, and the primary risk to infrastructure. Reaches recommended for ongoing evaluation per the 2022 assessment include Boeckman Creek (reaches 2, and 9), Meridian Creek (reaches 1 and 2), Arrowhead Creek (reaches 2 and 3), Newland Creek (reaches 1-4), and Kruse Creek (reaches 1-3).

Additionally, the City may want to establish baseline conditions associated with identified "secondary" locations that were not included in the 2022 geomorphic assessment effort. This new evaluation may be conducted in addition to or in lieu of ongoing monitoring at select reaches.

The complete assessment will be documented in a technical memorandum summarizing the results for inclusion in TMDL and/or NPDES MS4 reporting.

This project is estimated to be completed every three years and/or following a high flow event that exceeds the 10-yr discharge. A project cost of \$30,000 per monitoring event is reflected in Table 7-1 and is assumed to occur once during initial 5-year CIP implementation period; once during the second 5-year CIP implementation period; and twice during the third, 10-year CIP implementation period.

7.2.3 Porous Pavement Pilot Study (City-3)

This planning project stems from the City's NPDES MS4 Retrofit Strategy, water quality project objectives, TMDL drivers, and the need to expand water quality treatment to areas lacking in treatment. To date, use of pervious pavement, porous asphalt or other permeable road and drive surfaces has not been used in the public right-of-way (ROW). This pilot study would include the installation of a porous pavement overlay in conjunction with pavement resurfacing efforts in the City. Water quality monitoring may be conducted to confirm/inform stormwater pollutant reduction, as local research efforts have indicated water quality benefits (i.e., reduction of sediment, bacteria, heavy metals, and organic compounds) can be observed, even with an overlay versus full pavement replacement with pervious pavement.

Recommended locations for implementation of the pilot project have not yet been identified but are anticipated to coordinate with scheduled pavement maintenance. A project duration (for costing purposes) is estimated at 24 months and scheduled during the first 5-year CIP implementation period, and the cost estimate of \$100,000 for this effort is based on recent efforts in the City of Milwaukie. This estimate has not been validated or based on a detailed scope.



7.2.4 Boeckman Creek Geomorphic and Geotechnical Evaluation (City-4)

This planning project is to conduct a geomorphic and geotechnical evaluation on Reach 1 of Boeckman Creek, where continued risk of channel incision and bank erosion exists. This project stems from a recommendation in the 2022 geomorphic assessment, which was unable to confirm source, rate, or extent of bank failure in the reach (see Appendix C). A holistic evaluation of backwater conditions, geomorphic conditions and a geotechnical assessment of slope stability and potential bank stabilization techniques is recommended.

The project duration (for costing purposes) is estimated at 12 months, and a cost estimate of \$150,000 for this effort is based on recent bids for similar levels of service. This estimate has not been validated or based on a detailed scope.

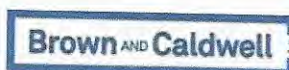


Table 7-1. City of Wilsonville Stormwater Capital Project and Program Summary

Project No. ^a	Project Opportunity Area Location ID	Basin/Waterbody	Project/Program Name	Objectives ^b	Location	Contributing Drainage Area, acres	Project/Program Summary	Estimated Cost ^c	SDC Eligible Cost ^c	Recommended Project/Program Timing		
										Annual	High Priority (2024-28)	Medium Priority (2029-33)
BC-1	4	Boeckman Creek	Library Pond Retrofit	<ul style="list-style-type: none"> Capacity Water Quality Infrastructure Need 	Existing Library Pond facility, east of SW Memorial Drive in Memorial Park	132.0	<ul style="list-style-type: none"> Clear, regrade, and replant 0.7 acre detention pond, including adding 3 ft required rocks and media to pond bottom. Install a new outlet structure. Replace 70 LF of 18-inch CSP pipe. Install 70 LF of 6-inch perforated HDPE underdrain. Install 15-foot-wide, 25-foot-long road for maintenance access. 	\$1,880,000	\$213,000	X		
BC-2	25, 26	Boeckman Creek	Ash Meadows Flow Mitigation	<ul style="list-style-type: none"> Capacity Water Quality 	East of SW Ash Meadows Rd, West of SW Parkway Ave, and north of SW Greenway Dr	295.0	<ul style="list-style-type: none"> Plug the flow diversion structure at Siemens Pond B. Upsize 95 LF of 30-inch culvert at Boeckman Road to 48-inch diameter PVC. Update 80 LF of 36-inch culvert at SW Parkway Ave to 48-inch diameter PVC. Install a 3-foot x 3-foot grated inlet to serve as a flow control structure at Ash Meadows Cir. Clear, regrade, and replant 1.3 acres of drainage way and embankment to ensure a low-flow drainage path and healthy vegetation. 	\$2,940,000	\$798,000	X		
BC-3-Phase 1	24	Boeckman Creek	Wiedemann Ditch and Canyon Creek Park Retrofit, Phase 1	<ul style="list-style-type: none"> Capacity Water Quality 	Canyon Creek Park, north of SW Carriage Oaks Ln	295.0	<ul style="list-style-type: none"> Clear, regrade, and replant approximately the 1.6-acre proposed vegetated storage facility. Install a flow control/outlet structure with emergency overflow at the storage facility. Install 350 LF of 36-inch diameter PVC to discharge from the southeast corner of the site towards Boeckman Creek. Install one new manhole at bend in new 36-inch pipe. 	\$4,860,000	\$920,000			X
BC-3-Phase 2	24	Boeckman Creek	Wiedemann Ditch and Canyon Creek Park Retrofit, Phase 2	<ul style="list-style-type: none"> Capacity Water Quality 	Existing Wiedemann Ditch alignment, south of Sysco property	295.0	<ul style="list-style-type: none"> Clear, regrade, and replant approximately 2.1 acres along the existing ditch alignment to install five, tiered wetland complexes. Install a 12-foot-wide, 1,500-foot-long access road west of Canyon Creek Road. 	\$7,210,000	\$1,365,000			X
BC-4	15	Boeckman Creek	Boeckman Creek Stabilization at Colvin Lane	<ul style="list-style-type: none"> Erosion/Sediment Control Repair/Replacement Maintenance 	Boeckman Creek corridor adjacent to Canyon Creek Estates and bounded on the west by SW Roanoke Dr	358.0	<ul style="list-style-type: none"> Removal of approx. 30 LF of existing outfall pipe. Installation of approx. 70 LF of 12-inch-diameter PVC to serve as a new outfall. Install planting and bioengineered restoration/stabilization measures along approx. 600 LF of stream corridor. Reconstruction of 150 LF of vegetated swale in accordance with the City's PWS. 	\$410,000	\$78,000	X		
BC-5	21	Boeckman Creek	Memorial Park Swale Retrofit	<ul style="list-style-type: none"> Water Quality Erosion/Sediment Control Maintenance 	Within Memorial Park, north of the parking lot by the baseball fields and south of SW Memorial Dr	33.0	<ul style="list-style-type: none"> Remove 90 LF of 10-inch CSP (SD5041 and SD5042). Remove 120 LF of 12-inch CSP (SD5044). Remove manhole (ST5098), swale inlet structure (CARTE ID 568), and outlet structure (CARTE ID 19). Fill existing 1,500 SF swale and revegetate area. Replace two 48-inch manholes (ST5200 and ST5208). Replace 60 LF of 12-inch CSP with 18-inch PVC pipe (SD5046). Replace 50 LF of 18-inch CSP with 18-inch PVC pipe (SD5206). Replace manhole ST5208 with a 72-inch flow splitting/WO manhole. Install 2,400 SF vegetated water quality swale with 1 foot of drain rock and 1.5 feet of amended soil. Install 140 LF of 6-inch perforated HDPE underdrain pipe. Install 50 LF of 12-inch PVC pipe. Install structures for the new swale: swale inflow spreader with rip-rap pad, beehive overflow structure, and outfall to the creek. 	\$910,000	\$22,000			X



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										Annual	High Priority (2024-28)	Medium Priority (2029-33)
BC-6	41	Beckman Creek	Gesellschaft Water Well Channel Restoration	<ul style="list-style-type: none"> Erosion/Sediment Control Maintenance 	Beckman Creek riparian area near Wilsonville High School, at the Gesellschaft well site (29001 SW Meadows Pkwy)	25.0	<ul style="list-style-type: none"> Install approx. 480 LF of 12" PVC pipe to convey discharge flows from the well maintenance. Install two new 48-inch manholes. Install outfall with 8 CY of Class 200 rip-rap to the creek. Restore approx. 310 LF of the existing channel with coir log check dams and matting, and re-vegetating with native trees and shrubs. Regrade and reconstruct approx. 4,500 feet of open channel to eliminate negative slope. The resulting channel shall be approximately 5-foot wide (bottom width) ranging from 1-foot to 6-foot deep. The channel widens at elevation 223.0 to create a floodplain. Side slopes are designed at 2H:1V. Construct a structural earth wall at bends in the channel and along the east-west portion of the alignment, as specified in the AKS report. Install 200 LF of open-bottom or box culverts (4 culverts total) to provide access to the existing BPA utility poles while also maximizing conveyance. Remove the unmapped, 50-foot existing culvert at the northwest corner of the northernmost industrial property south of Day Road. Install approx. 180 LF of two barrel, 36-inch diameter PVC culverts at Day Road. 	\$400,000	\$2,000	X		
CLC-1-Phase 1	9	Coffee Lake Creek	Day Road Stormwater Improvements, Phase 1	<ul style="list-style-type: none"> Repair/Replacement Capacity 	Open channel alignment south of Day Rd	944.0	<ul style="list-style-type: none"> Remove 1,200 LF of existing pipe. Upsize 1,800 LF of existing 36-inch parallel storm pipes to 48-inch. Replace seven 72-inch manholes. Install 3 trash racks. 	\$8,020,000	\$3,054,000	X		
CLC-1-Phase 2	9	Coffee Lake Creek	Day Road Stormwater Improvements, Phase 2	<ul style="list-style-type: none"> Capacity 	North of Ridder Rd through Tax Lot 500	944.0	<ul style="list-style-type: none"> Remove and replace approx. 70 LF existing double 5 ft x 5 ft concrete box culverts with a 10 ft x 3 ft concrete box culvert. Install planting and bioengineered restoration/stabilization measures after replacement of the culvert to stabilize an area approximately 20 feet along the pedestrian path length and approximately 50 feet upstream and downstream of the crossing. Repare approx. 30 LF of the approx. 20-foot-wide pedestrian path after culvert replacement. 	\$3,930,000	\$1,497,000	X		
CLC-2	20	Coffee Lake Creek	Arrowhead Creek Culvert Replacement at Arrowhead Creek Trail	<ul style="list-style-type: none"> Repair/Replacement Maintenance 	Arrowhead Creek culvert crossings under pedestrian path at the south end of SW Morey Ln	421.0	<ul style="list-style-type: none"> Install a flow diversion structure at Peters Road (ST2101A). Install 95 LF of 24-inch PVC pipe from Peters Road to the inlet of the detention pond. Increase existing detention pond capacity by 25,600 cubic feet and lower pond bottom invert to 196-ft. Clear, regrade, and replant 0.9-acres of pond footprint area. Install an outlet control structure within the detention pond. Install 155 LF of 24-inch diameter PVC pipe from the detention pond to the stormwater conveyance system on Peters Road (ST2433). Install pond underdrain in accordance with the 2015 PSW Section 3, Appendix A landscape and soil media requirements. Including 15" of drain rock, a 3" separation layer, and 18" of growing media. 	\$290,000	\$16,000	X		
CLC-3	32	Coffee Lake Creek	Garden Acres Pond Retrofit	<ul style="list-style-type: none"> Capacity Water Quality 	Existing public pond in an industrial area along Peters Rd between SW Graham's Ferry Rd to the west, SW Day Rd to the north, SW 95th Ave to the east, and the Coffee Lake Wetlands to the south.	231.0	<ul style="list-style-type: none"> Install 2,050 LF of 24-inch PVC pipe. Install 310 LF of 30-inch PVC pipe. Install seven 60-inch manholes. Install 1 outfall. 	\$3,780,000	\$1,339,000	X		
NC-1	44	Newland Creek	Frog Pond East and South Conveyance Pipe Installation	<ul style="list-style-type: none"> Infrastructure Need 	East of SW Stafford Road and the Frog Pond West development area in Wilsonville, outside of the current city limits and UGB. Only K1 Basin of Frog Pond East and South.	61.0	<ul style="list-style-type: none"> Install 2,050 LF of 24-inch PVC pipe. Install 310 LF of 30-inch PVC pipe. Install seven 60-inch manholes. Install 1 outfall. 	\$4,090,000	\$3,222,000	X		



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										Annual	High Priority (2024-28)	Medium Priority (2029-33)
WR-1 - Phase 1	1	Willamette River	SW Willamette Way/Morey's Landing Stormwater Improvements, Phase 1	<ul style="list-style-type: none"> System Capacity Water Quality 	Along Willamette Wy East from SW Play Dr to the Belknap Ct Outfall, including greenfield along BPA easement	46.0	<ul style="list-style-type: none"> Remove existing Morey's Landing Bubbler (STD6604). Clear, grade, and replant 0.12 acres to create two infiltration raingardens within the BPA easement. Install a flow control diversion structure and 25 LF of 8-inch PVC to route water quality events (low flow) to new raingardens and high flow events to the Belknap Court outfall. Install 120 LF of 12-inch PVC for flow exceeding the water quality event. Upsize 575 LF of 10-inch CPS to 12-inch PVC (SD6629, SD6630, SD6632). Upsize 145 LF of 10-inch CSP to 18-inch PVC (SD6638). Install one 48-inch manhole and replace four 48-inch manholes (ST6618, ST6619, ST6606, and ST6605). 	\$45,000	\$2,310,000	X		
WR-1 - Phase 2	1	Willamette River	SW Willamette Way/Morey's Landing Stormwater Improvements, Phase 2	<ul style="list-style-type: none"> System Capacity 	SW Champoeg Dr	46.0	<ul style="list-style-type: none"> Upsize 610 LF of 12-inch CSP to 18-inch PVC on SW Champoeg Dr E (SD6634 - SD6637). Replace three 48-inch manholes (ST6607, ST6608, and ST6609) and field inlet (6647). 	\$21,000	\$1,080,000			X
WR-2 - Phase 1	5	Willamette River	Miley Road Stormwater Improvements, Phase 1	<ul style="list-style-type: none"> Repair/Replacement Erosion/Sediment Control Maintenance 	Miley Rd outfall	138.0	<ul style="list-style-type: none"> Replace and upsize 80 LF outfall pipe (from area drain with ENG ID 9341 to outfall) from 36-inch CMP to 42-inch PVC. Replace area drain (ENG ID 9341). Replace 320 LF of existing storm pipe between area drain (9341) and MH (ST9002) with same diameter 42-inch PVC. Replace and lower invert of MH (ST9002) to ensure 3 ft cover requirement is met for incoming pipe. Maintain 0.2 ft drop within MH. Install planting and bioengineered restoration/stabilization measures after replacement of the culvert to stabilize an area approximately 25 feet along the channel upstream and downstream of the outfall. 	\$0	\$820,000	X		
WR-2 - Phase 2	5	Willamette River	Miley Road Stormwater Improvements, Phase 2	<ul style="list-style-type: none"> Repair/Replacement Maintenance 	Miley Rd from NE Airport Rd to eastern intersection with SW French Prairie Rd	138.0	<ul style="list-style-type: none"> Install approx. 530 LF of new 42-inch pipe from replaced MH ST9002 to new manhole at the near intersection with SW French Prairie Road. Install three 72-inch diameter manholes for the above 42-inch line, the most upstream of which is at the SW French Prairie Road. Install 10 new 60-inch diameter manholes and approx. 301.5 LF of new 36-inch storm pipe along NE Miley Road from SW French Prairie Road to new manhole adjacent to MH ST9011. Install 2 new 48-inch diameter manholes and approx. 650 LF of new 24-inch storm pipe from the new manhole adjacent to MH ST9011 to new manhole at upstream most lateral. Extend six total existing main connections to the new pipe alignment (approx. 40 LF each, varying diameters). Note that these points of connection run under the existing brick wall. Reconnect all existing curb inlets along new NE Miley Road alignment - approximately 13. 	\$0	\$10,510,000	X		
WR-3	7	Willamette River	Rose Lane Culvert Replacement	<ul style="list-style-type: none"> Capacity Maintenance 	SW Rose Ln between SW Wilsonville Rd and SW Montgomery Wy	14.0	<ul style="list-style-type: none"> Remove the existing 25 LF of 12-inch culvert (CARTE ID: 24370). Install approx. 40 LF of parallel 12-inch RCP culverts. Realign the culverts at a diagonal across the road with the same outlet location. Reinforce stormwater conveyance around property near culvert to move water into ditch. 	\$19,000	\$200,000	X		
WR-4 - Phase 1	30	Willamette River	Charbonneau East Stormwater Improvements, Phase 1	<ul style="list-style-type: none"> Capacity Repair/Replacement 	SW French Prairie outfall	159.0	<ul style="list-style-type: none"> Remove and replace existing Charbonneau East Outfall (ENG ID: STD9005). Upsize 115 LF of 30-inch pipe to 36-inch PVC discharging to Willamette River (ENG ID: STD9005 to ST9014). Replace one 72-inch manhole (ST9014). 	\$0	\$600,000			X



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										Annual	High Priority (2024-28)	Medium Priority (2029-33)
WR-4-Phase 2	30	Willamette River	Charbonneau East Stormwater Improvements, Phase 2	<ul style="list-style-type: none"> • Repair/Replacement • Maintenance 	SW French Prairie Rd and SW Old Farm Rd	159.0	<ul style="list-style-type: none"> • Replace 230 LF of 10-inch pipe with 12-inch PVC on SW French Prairie Rd (ST9087 to end, and ST9088 to end). • Replace 680 LF of 12-inch pipe with 12-inch PVC on SW French Prairie Rd (ST9023 to ST9242). • Replace 1,200 LF of 15-inch pipe with 15-inch PVC on SW French Prairie Rd (ST9023 to ST9020). • Replace 310 LF of 18-inch pipe with 18-inch PVC on SW French Prairie Rd (ST9020 to ST9019). • Upsize 360 LF of 21-inch pipe to 30-inch PVC on SW French Prairie Rd (ST9019 to ST9017). • Replace 570 LF of 24-inch pipe with 24-inch PVC on Old Farm Rd (ST9030 to ST9027). • Replace 300 LF of 30-inch pipe with 30-inch PVC on Old Farm Rd (ST9031 to ST9030). • Replace eight 48-inch manholes. • Replace nine 60-inch manholes. 	\$4,440,000	\$0			X
WR-5	28	Willamette River	Charbonneau West Stormwater Improvements	<ul style="list-style-type: none"> • Repair/Replacement • Maintenance 	SW Curry Dr, SW French Prairie Rd, and SW Boones Bend Rd	54.0	<ul style="list-style-type: none"> • Pipe replacement along SW Curry Drive: • Replace 110 LF of 15-in pipe with PVC (PST9012 to new manhole). • Replace 520 LF of 18-in pipe with PVC (new manhole to PRIVATE manhole CARTE ID: 1892). • Replace 140 LF of 18-in private pipe with PVC (private manhole CARTE ID: 1892 to private outfall CARTE ID: 15). • Replace private outfall (CARTE ID: 15). • Replace two private 48-in manholes (CARTE ID 1892 and 1383). • Install three 48-in manholes. 	\$10,370,000	\$0			X
City-1	N/A	City-wide	Flow Monitoring and Rain Gauge Installation	<ul style="list-style-type: none"> • Capacity 	City-wide	N/A	<ul style="list-style-type: none"> • Pipe replacement along SW French Prairie Road: • Replace 200 LF of 12-in pipe with PVC (ST9331 to ST9044) • Replace 1,280 LF of 15-in pipe with PVC (ST9048 to ST9046, ST9269 to ST9046; and ST9281 to ST9043). • Replace 1,370 LF of 18-in pipe with PVC (ST9046 to ST9044 and ST9043 to CARTE ID: 1859 - ENG ID unknown) • Replace 550 LF of 24-in pipe with PVC (ST9044 to ST9040). • Replace 640 LF of 30-in pipe with PVC (ST9040 to ST9067, ST9041 to ST9067, and unknown to ST9041). • Replace 20 LF of 36-in pipe with PVC (unknown to ST9067). • Replace 150 LF of private 36-in PVC pipe (ST9041 to private outfall - ID unknown). • Replace private outfall; install one 48-in manholes and replace 14 48-in manholes; replace four 60-in manholes; and replace two 72-in manholes. • Pipe replacement along SW Boones Bend Road: • Replace 150 LF of 15-in pipe with PVC (ST9059 to ST9058). • Replace 420 LF of 18-in pipe with PVC (ST9058 to ST9055). • Replace 680 LF of 21-in pipe with PVC (ST9055 to ST9051). • Replace 120 LF of 24-in pipe with PVC (ST9051 to ST9050). • Replace 420 LF of 27-in pipe with PVC (ST9050 to ST9040). • Replace eight 48-in manholes; and replace three 60-in manholes. 	\$100,000	N/A		X	



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										Annual	High Priority (2024-28)	Medium Priority (2029-33)
City-2	18, 19, 27	Boeckman, Meridian, and Newland	Hydromodification Assessment and Stream Survey	<ul style="list-style-type: none"> Erosion/Sediment Control 	Stream corridors associated with developing portions of the Boeckman Creek, Meridian Creek and Newland Creek basins	N/A	<ul style="list-style-type: none"> Follow-up monitoring related to the 2022 geomorphic assessment, targeting select stream reaches. 	N/A		X		X
City-3	40	City-wide	Porous Pavement Pilot Study	<ul style="list-style-type: none"> Water Quality 	City-wide	N/A	<ul style="list-style-type: none"> Implementation of a porous pavement overlay and associated water quality monitoring to inform more widespread applications. 	N/A		X		
City-4	17	Boeckman Creek	Boeckman Creek Geotechnical Evaluation	<ul style="list-style-type: none"> Erosion/Sediment Control 	Downstream 750' of the Boeckman Creek stream corridor	N/A	<ul style="list-style-type: none"> Geomorphic and geotechnical evaluation of the downstream 750' of Boeckman Creek at the confluence with the Willamette River. 	N/A		X		
P-1	5, 7, 10, 17	City-wide	Local Drainage Improvements Program	<ul style="list-style-type: none"> Infrastructure Need Capacity 	City-wide	N/A	<ul style="list-style-type: none"> Installation of small-scale, localized drainage improvements (i.e., new pipe, catch basins and laterals, grading to support curb-and-gutter flow). Relocate/install curb inlets instead of catch basins in high traffic roads to address local drainage issues 	N/A			X	
P-2	8, 11, 39, 40	City-wide	Water Quality Retrofit Program	<ul style="list-style-type: none"> Water Quality Capacity 	City-wide	N/A	<ul style="list-style-type: none"> Design and install opportunistic LID or green infrastructure (porous pavement overlays, regional facilities, stormwater planters/curb bump outs) along streets, within public property, and/or within available ROW to provide water quality treatment. 	N/A			X	
P-3	N/A	City-wide	City-wide Repair/Replacement Program	<ul style="list-style-type: none"> Repair/Replacement Maintenance 	City-wide	N/A	<ul style="list-style-type: none"> Conduct prescriptive replacement of public pipe and structures over a 100-year period. Use results of CCTV analysis to inform locations. 	N/A			X	
P-4	29	Willamette River	Charbonneau Repair/Replacement Program	<ul style="list-style-type: none"> Repair/Replacement Maintenance 	Charbonneau Basin	478.0	<ul style="list-style-type: none"> In-kind repair and replacement of public pipe and manholes within the Charbonneau basin, in accordance with the Charbonneau Consolidated Improvement Plan. Excludes pipes replaced within the last 10-years (since 2014) and CP WR-4, Phases 1 and 2 and WR-5. 	N/A			X	
P-5	18, 19, 20, 27	City-wide	Riparian Vegetation Management Program	<ul style="list-style-type: none"> Maintenance Water Quality 	City-wide	N/A	<ul style="list-style-type: none"> Conduct riparian and/or in-channel vegetation maintenance including removal of invasives. 	N/A			X	
P-6	5, 12, 22	City-wide	Stormwater Facility Enhanced Maintenance Program	<ul style="list-style-type: none"> Water Quality Maintenance 	City-wide	N/A	<ul style="list-style-type: none"> Conduct restorative maintenance on select public and private stormwater facilities. 	N/A			X	
TOTAL									\$2.545M	\$19,140,000	\$20,850,000	\$29,530,000

N/A: Not Applicable

^a CP numbering reflects the following drainage basins: BC = Boeckman Creek, CLC = Coffee Lake Creek, WR = Willamette River, NC = Newland Creek. Citywide planning projects are designated as "City". Programs (to be funded annually) are prefixed with a P designation.

^b Primary objective (for mapping purposes) is identified in **BOLD**.

^c Estimated costs and SDC eligible costs are described in Section 7 of the SMP and detailed cost summaries provided in Appendix E. City-wide planning projects and solely related to Repair/Replacement or Maintenance are not eligible for SDCs and the SDC eligible cost is indicated as N/A. For projects with no developable lands in the upstream contributing drainage area, the portion of project cost associated with SDCs is \$0.



7.3 Future/Unfunded Capital Project Opportunities

Table 7-2 summarizes potential, additional CP needs as identified during project planning efforts and documented in the Project Opportunity Matrix (Appendix A, Table A-2). However, these are considered unfunded capital projects for purposes of this SMP, as needs are more undefined and/or staff have not observed specific deficiencies in these areas. In some cases, a standalone CP may not be necessary if the project opportunity can be addressed as part of a program activity (i.e., Localized Drainage Improvement [P-1]).

Specific cost estimates have not been developed and schedule for implementation not established for these projects.



Table 7-2. Unfunded/Future Capital Project Concepts

Project Opportunity Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ^a		Modeled Capacity Deficiency (Y/N)	Stream Assessment ID Need (Y/N)	Water Quality Retrofit Opportunity (Y/N)	Project Background	Project Concept
					Primary	Secondary					
8	SW Parkway Ave south of Costco	Boeckman Creek	Staff Surveys H&H Model	Modeled results indicate flooding at US node of 30" culvert at N-S end of ditch. Downstream N-S drainage swale has flat grades and is routinely filled with sediment, surcharging the roadway drainage system, and resulting in an ongoing maintenance concern.	MAINT	CAP	Y	N	Y	<ul style="list-style-type: none"> Install WQ manhole(s) or other facilities to remove sediments from public runoff. 	
11	SW Salish Ln at intersection with Parkway Ave	Coffee Lake Creek	Staff Surveys H&H Model	A city-owned pond receives a small amount of drainage and requires frequent maintenance (due to undersized catch basins). Model predicts flooding within the pond and outlet.	CAP		Y	N	N	<ul style="list-style-type: none"> Improve maintenance access from the Shrine Center parking lot. Expand/retrofit pond to improve water quality function and outlet configuration. 	
17	Boeckman Creek - Reach 1 (US of Willamette R.)	Boeckman Creek	Stream Assessment	Continued channel incision and lateral erosion along the lowest reach of Boeckman Creek prior to confluence of the Willamette River.	E&S		N	Y	N	<ul style="list-style-type: none"> Planning project (City-4) proposed to evaluate source and potential, structural repairs first. Channel stabilization and grade control (retaining/crib wall or soldier pile) pending planning study feedback. 	
22	Oulanka and Tivoli Parks	Coffee Lake Creek	Retrofit Analysis	Four private swales—have not been maintained consistently	MAINT	WQ	N/A	N	Y	<ul style="list-style-type: none"> Acquire private swales and conduct restorative maintenance. 	
23	Creekside Apartments (Boeckman Creek at Wilsonville Rd.)	Boeckman Creek	Boeckman Road Mitigation Study Retrofit Analysis	Underutilized irrigation pond adjacent to Boeckman Creek. Upstream of this location there is an existing outfall to Boeckman Creek that has known erosion issues per the 2012 SMP (BC-5).	CAP	WQ	N/A	N	Y	<ul style="list-style-type: none"> Expand water quality treatment through retrofit of existing facility. Will require private property partnership. 	



Table 7-2. Unfunded/Future Capital Project Concepts

Project Opportunity Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ^a		Modeled Capacity Deficiency (Y/N)	Stream Assessment ID Need (Y/N)	Water Quality Retrofit Opportunity (Y/N)	Project Background	Project Concept
					Primary	Secondary					
31	Parkway Ave./Metolius Ln.	Willamette River	H/H Model 2012 SMP	Model predicts flooding along N-S run of pipe starting at the 10-yr design storm. Capacity is limited by the small diameter (21") pipes near the outfall which is causing a constriction. Flooding at this location could threaten the adjacent properties along SW Parkway Ave.	CAP	Secondary	Y	N	N	<ul style="list-style-type: none"> Invert elevation in MH prior to outfall are misaligned, causing constriction. Pipe upsizing and realignment as necessary. 	
34	Barber St.	Coffee Lake Creek	H/H Model 2012 SMP	Model predicts flooding at several DS nodes prior to Coffee Creek outfall and at node near RR tracks starting at the 25-yr design storm. Backwater conditions from Coffee Creek may be contributing to downstream flooding.	CAP	Secondary	Y	N	N	<ul style="list-style-type: none"> Pipe upsizing and realignment as necessary. No immediate need. 	
35	Lower Boones Ferry Rd.	Willamette River	H/H Model	Model predicts flooding along private drainage (former Albertsons property) to Boones Ferry Rd starting at the 2-yr design storm. Flooding at this location could impact the commercial properties along SW Boones Ferry Rd.	CAP	Secondary	Y	N	Y	<ul style="list-style-type: none"> Pipe upsizing and realignment as necessary. No immediate need. 	
42	Ridder Road Wetland Restoration	Coffee Lake Creek	2012 SMP Retrofit Analysis	Current drainage channel is underutilized with invasive vegetation. Referenced as CLC-4 per 2012 SMP.	E&S	MAINT	--	N	Y	<ul style="list-style-type: none"> Future restoration/retrofit opportunity. 	
43	Town Center Conveyance Piping	Boeckman Creek	Community Development Town Center Concept Plan	Public stormwater collection pipe (>15" diameter) per Town Center Concept Plan.	INFRA	Secondary	--	N	Y	<ul style="list-style-type: none"> Additional assets/re-piping is development driven. New/decommissioned infrastructure pending development activities. 	

Table 7-2. Unfunded/Future Capital Project Concepts

Project Opportunity Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ^a		Modeled Capacity Deficiency (Y/N)	Stream Assessment ID Need (Y/N)	Water Quality Retrofit Opportunity (Y/N)	Project Background
					Primary	Secondary				
45	SW Miami	Willamette River	H/H Model	Model predicts flooding along 15" piping starting at the 25-yr design storm.	CAP		Y	--	N	• Pipe upsizing and realignment as necessary. No immediate need.
46	Canyon Creek Rd (near Xerox)	Boeckman Creek	H/H Model	Model predicts flooding at node that conveys private stormwater from Xerox to the E across Canyon Creek Rd. starting at the 10-yr design storm.	CAP		Y	--	N	• Pipe upsizing and realignment as necessary. No immediate need.
47	River Fox Park	Willamette River	H/H Model	Model predicted flooding in 12" pipe	CAP		Y	--	N	• Pipe upsizing and realignment as necessary. No immediate need.

N/A = not applicable.

a. Categories include: MAINT=Maintenance; R/R=Repair and Replacement; CAP=Capacity Issue; E&S=Instream Erosion/Sediment Issue; INFRA=New infrastructure need per growth and development; WQ= Water Quality.

7.4 Staffing Evaluation

A supplemental staffing analysis was conducted to support the earlier, maintenance-related staffing evaluation described in Section 3.2. This analysis included both Public Works and Engineering staffing needs in conjunction with 1) new regulatory obligations associated with the City's 2021 NPDES MS4 permit and 2022 Stormwater Management Program (SWMP) Document, and 2) implementation of this SMP.

Specific to implementation of this SMP, additional Engineering staff are required to execute and manage the CPs over the 20-year CIP (see the construction administration cost by CP included in Appendix E). Additional Public Works staff support will be needed to maintain additional assets resulting from CP implementation. Figure 7-2 summarizes the departments and associated activities resulting in the need for additional staff. Summary tables and documentation related to this evaluation are included in Appendix G.

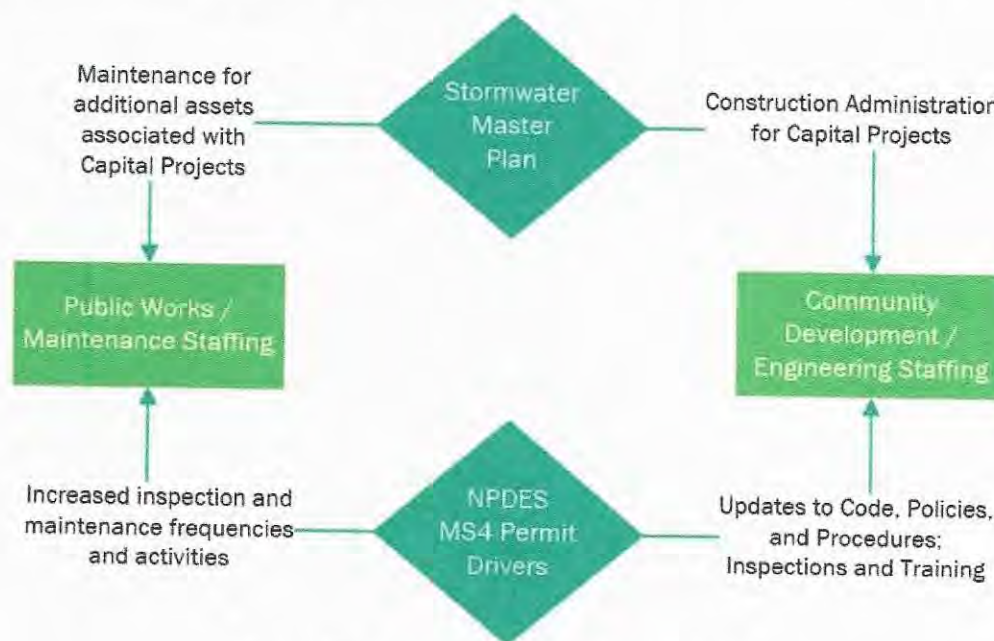


Figure 7-2: Staffing Evaluation Considerations

7.4.1 Assumptions

The following general assumptions were used to develop the staffing evaluation for both Public Works Stormwater staff and Engineering staff. Detailed assumptions specific to staffing estimates by activity are outlined in Appendix G.

- Except for the additional Public Works staffing needs identified in Section 3.2 for deferred maintenance, it is assumed that existing Public Works and Engineering staffing levels were adequate to implement the City's stormwater program and CP implementation prior to reissuance of the City's NPDES MS4 permit or implementation of this SMP. Thus, only additional activities are used to inform additional staff resource needs.
- One FTE represents 1,650 hrs (after deducting estimated annual leaves, training, and other non-task replaced hours); 0.02 FTE represents 40 hrs. For purposes of calculating an equivalent FTE cost estimate, an annual FTE labor cost was assumed at \$200,000/year (as confirmed by City staff).

- The NPDES program costs are based on an implementation schedule covering a 5-year permit term (Oct. 1, 2021-Sept. 30, 2026) - reported in tables as Fiscal Years (FY) 2023-2027, with an anticipated administrative extension after FY 2027.
- CPs are assumed implemented on an annual basis, and the CIP is assumed to be implemented over a 20-year implementation schedule, ranging from 2024-2043. Given uncertainty with schedule, CP costs are averaged across the 20-year implementation schedule equally. In practice there will be cycles of more and less staff time demands based on which projects are in construction/constructed.
- For the CPs listed in this SMP, 100 percent of engineering and permitting costs will be used for consultant support, and 100 percent of design/construction administration costs will be required for City Engineering staff.

7.4.2 Results

Table 7-3 provides a summary of the combined Public Works/Stormwater and Community Development/Engineering staffing needs for both the NPDES MS4 Permit driven activities and CP implementation activities. Detailed staffing projections, as reported in Appendix G, reflect FY 2023-2027 in alignment with the NPDES MS4 Permit timeline. However, staffing projections are relatively consistent when annualized and reflect the ongoing implementation of regulatory requirements over the 5-year permit period, as well as an annual average over a 20-year CIP implementation period. Thus, the annual average staffing is reflected below, and rounded to the nearest 0.1 FTE.

Table 7-3. Combined Staffing Assessment Summary		
		Increased Staffing (FTE)
		Annual Average
Public Works/Stormwater Staff Cost Schedule	NPDES MS4 Permit Driven Activities	2.1
	Staffing contingency for NPDES MS4 Driven Activities ^a	0.4
	CP Implementation	0.2
	Public Works Staffing Total	2.7
Community Development/Engineering Staff Cost Schedule	NPDES MS4 Permit Driven Activities	0.2
	CP Implementation	1.2
	Community Development Staffing Total	1.4

a. Staffing contingency estimated at 20% to account unscheduled maintenance and response.

For Public Works (Roads and Stormwater Section), an increase of approximately 2.5 FTE is recommended to address both deferred and additional maintenance activities as defined with the reissued NPDES MS4 permit. This increase reflects a 20 percent contingency to account for additional, unscheduled activities as well as prescriptive maintenance efforts. An additional 0.2 FTE increase is anticipated for maintenance of new infrastructure (assets) associated with CIP implementation. However, timing of this 0.2 FTE may vary in accordance with construction of CPs and could be delayed over the 20-year implementation period.

For Community Development (Engineering Division), an increase of approximately 0.2 FTE is recommended to address additional tracking and inspection needs as defined with the reissued NPDES MS4 permit. This may be accommodated through reallocation of existing staffing or contracted support. An additional 1.2 FTE is anticipated to manage and execute contracts for CP design and construction services. This increase accounts for the 1.0 FTE of engineering staff



currently dedicated to overseeing stormwater CP implementation, and reflects the additional staffing need. As with Public Works staffing, timing of this 1.2 FTE may vary in accordance with design and construction schedules and could be delayed over the 20-year implementation period. It should be noted that cost estimates for programmatic activities (i.e., Projects P-1 through P-5) have not been included in the staffing projections.

7.5 Project Prioritization

Project prioritization is an important component of the stormwater master planning process and can provide direction in sequencing projects in accordance with City objectives. This section summarizes the prioritization of CPs for implementation.

For this SMP, a CP prioritization tool was developed to assist with project prioritization. This Multi-Criteria Decision Analysis (MCDA) tool was developed using Microsoft Excel and includes prioritization criteria, scoring mechanism, and weighting factor schemes to present graphical and numeric rankings of CPs. The MCDA tool normalizes City-assigned scores for each criterion and project, which allows better differentiation of relative project performance (difference between best and worst options) and balances variability in scoring. Normalized scores were multiplied by their associated weights and summed to represent the overall project priority. The MCDA tool is intended to be updated on a continual basis; as projects are constructed, they can be removed from the ranking tool and new projects can be included as master plans are updated.

It should be noted that the overall stormwater CIP includes several new programs established to facilitate improvements without dedicated, individual CP consideration. Programs are not prioritized as part of this effort.

7.5.1 Prioritization Criteria

Proposed CPs are developed to address a variety of objectives including increased capacity, new infrastructure needs, maintenance, repair & replacement, water quality, and instream erosion/sediment control.

In consideration of the varied scope of proposed CPs and overlapping project objectives, the following scoring categories were used as the basis for developing project prioritization criteria.

- **System Operations:** System operations is a collective category representing capacity deficiencies, regular or recurring maintenance needs, and safety and accessibility as related to the location of a proposed issue or deficiency.
- **System Condition:** System condition reflects known problem areas where repair or replacement of an asset addresses a known or immediate issue.
- **Compliance:** Compliance reflects a CPs ability to address regulatory drivers including NPDES MS4 permit needs (water quality retrofits needs), TMDL and shade management drivers, and hydromodification risk.
- **Other:** Other criteria including contributing drainage area, project sequencing and phasing, construction constraints and funding source.

Table 7-4 summarizes the evaluation criteria and scoring guide. The scoring guide helps score projects consistently and advises others that may need to apply the tool in the future. A range of scores, from 0 to 3, is applied to each criterion for every project to yield an unweighted total score. As the City implements projects over time, and as priorities change and evolve, these criteria and the scoring guide can be revised in the CP prioritization tool.



Table 7-4. Project Prioritization Criteria

Criteria	Scoring Definition (3 = High; 2 = Medium; 1 = Lower; 0=Does not address)			
	High (H)	Medium (M)	Lower (L)	
System Operation-Capacity	<ul style="list-style-type: none"> Addresses a reported capacity deficiency (problem area) per Wilsonville Public Works or Engineering, and Addresses an existing capacity deficiency per hydraulic modeling efforts. 	<ul style="list-style-type: none"> Addresses a reported capacity deficiency (problem area) per Wilsonville Public Works or Engineering, and Addresses a lack of infrastructure (infrastructure need) 	<ul style="list-style-type: none"> Addresses a future capacity/infrastructure need. 	<ul style="list-style-type: none"> Does not address May provide some capacity benefit, but the location has not been identified as an existing or future capacity deficiency.
System Operation-Maintenance	<ul style="list-style-type: none"> Addresses a location that has frequent citizen complaints and onsite response requirements. 	<ul style="list-style-type: none"> Addresses a location that has frequent citizen complaints and will reduce existing maintenance needs. 	<ul style="list-style-type: none"> Addresses a location that has less frequent citizen complaints and will reduce existing maintenance needs. 	<ul style="list-style-type: none"> Project does not address existing maintenance deficiency or lack of infrastructure
System Operation-Safety and Accessibility	<ul style="list-style-type: none"> Reduces risk near a transit line, school, or backbone utility 	<ul style="list-style-type: none"> Mitigates risk, including system relocation into the public ROW to avoid collateral damage, safety concerns on private property. 	<ul style="list-style-type: none"> Reduces risk to non-essential property/minor roadways/structures. 	<ul style="list-style-type: none"> The identified problem is not anticipated to address safety concerns.
System Condition	<ul style="list-style-type: none"> Addresses an immediate system condition need (problem area) where delay may result in immediate property damage or safety concerns. 	<ul style="list-style-type: none"> Addresses a system condition need (problem area) where delay may result in additional infrastructure deterioration or property damage. 	<ul style="list-style-type: none"> Replaces an existing City asset. 	<ul style="list-style-type: none"> The project does not include replacement of an existing asset.
Compliance-Water Quality	<ul style="list-style-type: none"> Provides new or enhanced water quality treatment to address pollutants of concern, qualifying as a retrofit project with potential for fee-in-lieu 	<ul style="list-style-type: none"> Restores or enhances water quality function or coverage, qualifying as a retrofit project only. 	<ul style="list-style-type: none"> Provides some water quality benefit through sedimentation. 	<ul style="list-style-type: none"> The project does not include water quality treatment.
Compliance-Vegetation Management	<ul style="list-style-type: none"> Restores shade protection (within 100' of stream bank) to address temperature TMDL 	<ul style="list-style-type: none"> Enhances riparian corridor vegetation coverage; removes invasive species 	<ul style="list-style-type: none"> Enhances upland vegetation conditions/ characteristics. 	<ul style="list-style-type: none"> No plantings or vegetation enhancement associated with project construction
Compliance-Hydrmodification	<ul style="list-style-type: none"> Addresses area of known or observed instream erosion that could result in property damage or infrastructure failure. 	<ul style="list-style-type: none"> Addresses area of known or observed instream erosion that could result in bank stability issues. 	N/A	<ul style="list-style-type: none"> Project does not address area of known hydrmodification impacts
Other-Contributing Area	<ul style="list-style-type: none"> Project has regional impacts (drainage area is > 100 acres) 	<ul style="list-style-type: none"> Project has subbasin impacts (drainage area is > 10 acres) 	<ul style="list-style-type: none"> Project has local impacts (drainage area is < 10 acres) 	
Other-Sequencing	<ul style="list-style-type: none"> Project is required as a pre-requisite or preliminary project before another prioritized project need. 	N/A	N/A	<ul style="list-style-type: none"> Project construction scheduling would not be impacted by other project scheduling needs.
Other-Traffic and Accessibility	<ul style="list-style-type: none"> Project construction is not expected to impact traffic or private property 	<ul style="list-style-type: none"> Construction may impact residential streets. 	<ul style="list-style-type: none"> Construction may impact collector streets. 	<ul style="list-style-type: none"> Construction will impact arterial streets or structures on private property are expected
Other-Development Drivers	<ul style="list-style-type: none"> Project is a prerequisite to a current construction project. 	<ul style="list-style-type: none"> Project is required to support future growth and development or a planning area. 	N/A	N/A
Other-Funding Source	<ul style="list-style-type: none"> Project is eligible for funding via SDCs (50% or greater) 	<ul style="list-style-type: none"> Project is eligible for funding via SDCs (25%-50%) 	<ul style="list-style-type: none"> Project is eligible for funding via SDCs (up to 25%) 	<ul style="list-style-type: none"> Project is not eligible for SDC funding.



7.5.2 Scoring and Weighting Factors

Every CP was reviewed by the City Engineer, Natural Resource Manager, and Public Works Operations Supervisor and scored by assigning a “0” through “3” score to each criterion in accordance with the scoring definitions (Table 7-4).

The MCDA tool includes the ability to incorporate weighting factors schemes that vary based on the importance of various scoring categories and individual criteria. Weighting factor schemes were established in collaboration with City staff including 1) an initial weighting with emphasis on system condition and balanced weights within the system operation and compliance categories, 2) adjusted weighting to emphasize on project sequencing (part of the other category), and 3) emphasis on criteria prioritized by Public Works.

Results of the various weighting schemes were compared, and outcomes discussed internally by the City. These schemes resulted in relatively consistent prioritization of projects, with some projects moving slightly up or down in ranking depending on the scheme. Ultimately, the city selected the initial weighting scheme and opted to make some related project scheduling adjustments in accordance with Public Works feedback. Resulting weighting factors are provided in Table 7-5.

The final, average score for each criterion were multiplied by the weighting factors associated with the select weighting factor scheme and summed for a final project score creating a project ranking.

Table 7-5. Selected Weighting Schema			
Scoring Category	Category Weight (%)	Criteria	Criteria Weight (%)
System Operation	30	System Operation - Capacity	10
		System Operation - Maintenance	10
		System Operation - Safety and Accessibility	10
System Condition	25	System Condition	25
Compliance	25	Compliance - Water Quality	8.33
		Compliance - Vegetation Management	8.33
		Compliance - Hydromodification	8.33
Other	20	Other - Contributing Area	5
		Other - Sequencing	5
		Other - Traffic and Accessibility	5
		Other - Development Drivers	2.5
		Other - Funding Source	2.5



7.5.3 Prioritization Results

The CP prioritization tool provides a bar graph that illustrates scoring results (see Figure 7-3). Each bar represents the total score, and each colored segment of the bar represents a specific evaluation criterion so the user can see which criterion played the most prominent role in the scoring results for each project.

The prioritization and ranking of the CPs were reviewed and used to inform the ultimate project scheduling (see Figure 7-1). In general, the highest scoring priority projects are scheduled in the next 5 years (2024-2028); the next level of priority projects are scheduled in the following 5 years (2029-2033); and the remaining priority projects are scheduled 10 years from now (2034-2043). Based on the total number and cost of projects within any one timeframe, some project schedules were adjusted per City feedback (see Table 7-1).

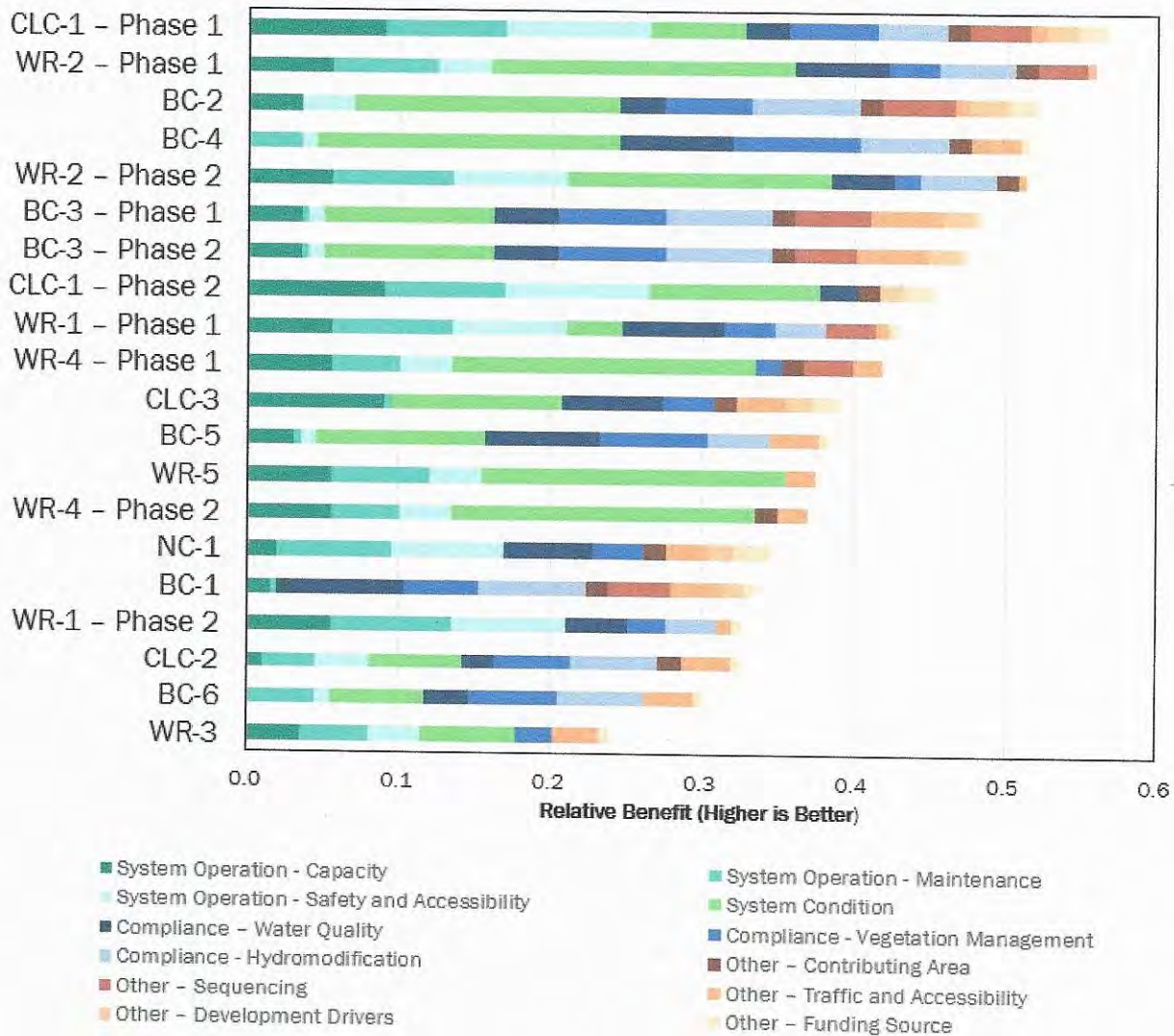
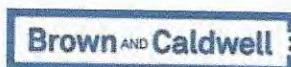


Figure 7-3: Prioritization Results



7.6 Policy Recommendations

The following policy recommendations pertaining to the implementation of this SMP and associated CIP have been referenced in this SMP and are summarized for City consideration:

7.6.1 Stormwater Design Standards Applicable to Town Center

As described in Section 6.3.4, utilization of the Library Pond to mitigate stormwater treatment and flow control for Town Center redevelopment requires a site-specific stormwater design standard applicable to the Town Center property.

The City will need to define a fee-in-lieu program and onsite stormwater mitigation tracking system to ensure adequate capacity in Library Pond is available while adhering to the City's current design standards and definition of predevelopment. Onsite treatment and flow control will need to be provided for 50% of the redeveloped property (both private and public ROW).

7.6.2 Comprehensive Plan Updates

As summarized in Section 2.7, the City of Wilsonville Comprehensive Plan was reviewed with respect to stormwater and consistency with the City's 2021 NPDES MS4 permit to ensure it is current and reflective of continued compliance.

A detailed summary of proposed modifications to the Comprehensive Plan are provided in Appendix H.

7.6.3 Design Standards for New Development and Growth Areas

Capacity-related CPs are sized in accordance with future growth and development, both within the city limits and outside city limits to the extent future zoning is established. Most area subject to new development will be within the City's jurisdiction and subject to the city's stormwater design standards that mimic pre-development flow conditions and require the use of infiltration-based facilities to the maximum extent feasible.

Site constraints occasionally prevented CP design to adhere to the City's design criteria, and in a few cases, flooding or system surcharge is still anticipated with implementation of CPs. Implementation of the City's stormwater design standards help ensure maximum capacity in the downstream stormwater collection system.

There are a few key locations in the City where future development outside of the city limits will be subject to another jurisdiction's stormwater design standards (i.e., CP CLC-1: Day Road Stormwater Improvements). Establishing consistent stormwater design standards and design metrics for key Planning Areas (Coffee Creek Industrial Planning Area, Basalt Creek Planning Area) that encompass neighboring jurisdictions including Clean Water Services and the City of Tualatin is recommended to ensure that onsite retention and flow mitigation are applied to these new development areas. This mitigation should mimic pre-development site conditions to reduce the risk of downstream capacity and hydromodification impacts, as well as preserve water quality.

7.6.4 Stormwater Facility Tracking and Maintenance for Private Facilities

The City's GIS inventory of stormwater treatment and detention facilities is currently being updated to include consistent facility naming conventions (i.e., swales, raingardens, detention ponds) and inclusion of ownership information (specific to private facilities). Such updates will allow better integration between mapping and asset management, as well as allow geographic tracking of maintenance activities and responsibilities.



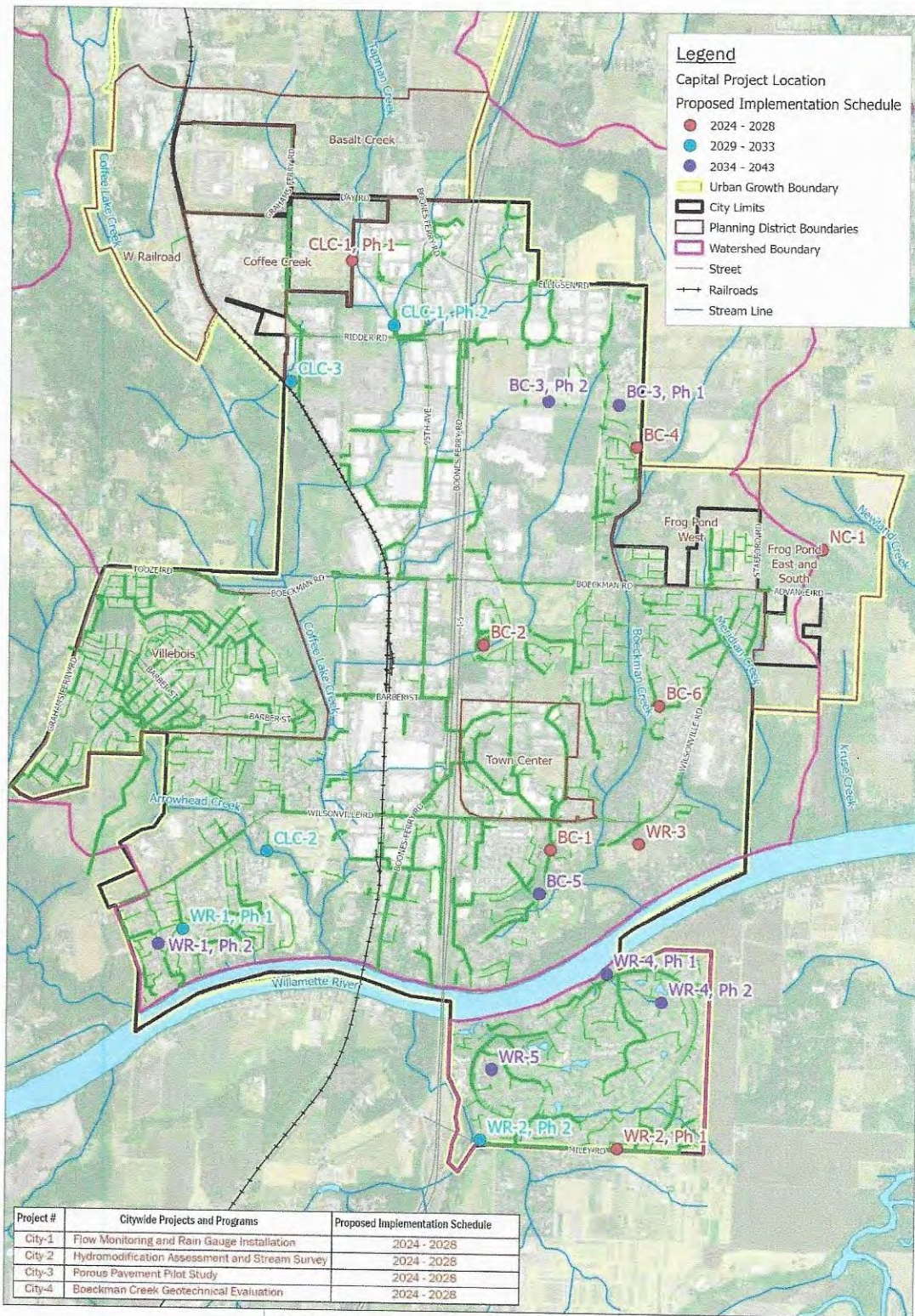
The City's Stormwater Operations and Maintenance Plan is required for newly installed private facilities to ensure that the owners recognize responsibility for inspections and maintenance of their private stormwater facilities. The Stormwater Operations and Maintenance Plan requirements went into effect in 2012 and require submittal of an Annual Inspection and Maintenance Report by May 1 each year. The City conducts private facility inspections annually, targeting facilities that did not return an Annual Inspection and Maintenance Report.

In conjunction with the identification of problem areas and Project Opportunity Areas, private facilities are routinely observed to have deficient system maintenance, due to inconsistent and infrequent maintenance. In cases where the private facility is not being maintained and functionality is compromised, the City may consider a policy to reassign maintenance responsibility for existing private stormwater facilities and conduct maintenance in accordance with public facility maintenance protocols and schedules, subject to reimbursement by the private facility owner. Implementation of this proposed policy is supported through P-5: Stormwater Facility Enhanced Maintenance Program.

7.7 Next Steps

Following adoption of this Plan, a financial analysis will be required to evaluate the City's current stormwater utility rate and SDCs to ensure adequate funding is available for implementation of CPs and programs outlined in this SMP. The resulting financial plan will provide a funding structure in accordance with the defined LOS that allows the City to implement the CPs and programs as costed and scheduled in this SMP while meeting other financial obligations and policy objectives.





Brown AND Caldwell
City of Wilsonville/
Project # 156157
Stormwater Master Plan

Note: Planning Projects City-1 to City-4 and Programs P-1 to P-6 are all city-wide and not specific to a location. Programs P-1 to P-6 assume annualized funding.

Spatial Reference:
Name: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

0 0.25 0.5 1 Miles

Figure 7-1: Capital Improvement Projects Prioritization

Appendix A: Project Planning Matrices

Table A-1: Problem Area Matrix

Table A-2: Project Opportunity Matrix

Table A-1 - Wilsonville Problem Area Matrix

Problem Area Location ID	Location/Asset Description	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted?	Workshop/Coordination Call Feedback (8-24-21 and 9-1-21)	Site Visit Outcome (9-27-21) (Green font reflects action items)	Hydraulic Model Expansion/Update Need (Y/N)	Project Planning ²		
				Primary	Secondary					Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
1	Money's Landing bubbler (AKA Wilamette Way East bubbler)	Public Works Community Development	Localized flooding during high intense storm events. Existing bubbler meant to collect runoff from the streets and divert to grass easement area under the power line and to the river. The design (location) is flawed and the water flows into the yard of the homes that back up against the easement, requiring sandbags to redirect flow.	R/R	Y	Recent outfall projects on Belnap and Money Lane. AKS study (2017) indicated current pipe size is not sufficient to redirect flow into pipe to SW Belnap Ct outfall. AKS study identified alternatives. Meetings have occurred with BPA related to locating a pond.	Any pond option on the BPA easement would require coordination and adequate BPA utility access. There is a high-pressure fuel line running N-S on the E edge of the easement that would need to be avoided. Infiltration rates anticipated to be high. Project development considerations: Need to understand infiltration rates for pond/gsi feasibility. Current sandbag system 'works' (UV resistant sandbags needed). Location of bubbler not ideal. Both pond/GSI and pipe upsizing in one project unlikely System modeling would be needed to assess flows and size detention.	Y	N	Y*	N	
2	Frog Pond ditch and culvert under Boeckman Rd.	Public Works	Ongoing flooding issue at 6920 SW Boeckman Rd. House foundation is only 2-3 in. higher than W Fork Meridian Creek. Possible culvert misalignment and minimal slope downstream of property.	R/R	Y	Area has presented an ongoing issue. Model extension is needed.	Existing culvert along Boeckman Road is directed toward the homeowner's garage, where peak flows come very close to the foundation. Project development considerations: Project needed to right size the culvert underneath Boeckman Rd (currently not in the model). A box culvert may be easier to maintain. Pile the drainage along Boeckman Road beyond the property owner's house where the channel has additional vertical drop. Projects may be implemented as part of the Boeckman Road improvements	Y	Secondary	Y*	N	
3	Pond F	Public Works	Possible design flaw and blockages impeding flow; potential maintenance issue.	R/R	N	MAINT	Not visited but discussed with PW staff. Pond is already included in model but scheduled for reconfiguration.	N	N	TBD	TBD	
4	Library Pond	Public Works Community Development	Library Pond does not have flow control/office structure or emergency overflow type structure. Pond currently floods into Library parking lot and Memorial Dr near park entrance.	CAP	Y	City wants to include Library Pond expansion in fee in lieu program for Town Center redevelopment. Current configuration/ contributing drainage area in model overestimates flow contribution. Model updates needed to more accurately reflect existing drainage area to pond.	Flow from the pond is a ditch inlet that requires maintenance to keep clear from vegetation and debris (currently there is a temporary fence installed for this purpose). Project development considerations: Phase 1: retrofit the pond outlet structure to include an emergency overflow for consistency with current standard pond details. Clear vegetation and debris. Phase 2: construct flow control structure per standard details and pond outlet structure to accommodate per future growth. Include a dedicated maintenance access path. No as-builts/drainage report available to confirm existing stage-storage. Model updates required to refine the current contributing drainage area (hydrology) and evaluate capacity.	N	Primary	Y*	N	

¹ Project planning outcome results are identified. TBD means that additional discussion may be warranted following modeling evaluation. Location IDs that are shaded in gray are not anticipated to require a project or program.
² Stream assessment locations identified as priority or secondary.
³ Priority project location identified with a *

Table A-1. Wilsonville Problem Area Matrix

Problem Area Location ID	Location/Asset Description	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted?	Workshop/Coordination Call Feedback (8-24-21 and 9-1-21)	Site Visit Outcome (9-27-21) (Green font reflects action items)	Project Planning ⁴		
				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³
5	Memorial Lift Station - current location	Public Works	Ditch behind lift station occasionally overflows during heavy precipitation.	CAP		N	Lift station is being relocated to the east and should mitigate this issue.	Not visited.	N	N	N
6	Regional Parks 7 & 8, SW Coffee Lake Dr. Level Spreader	Public Works	Level spreader does not drain properly causing erosion issues	MAINT		N	Appears to be an operational issue only.	Not visited.	N	N	N
7	SW Montgomery Way	Public Works Community Development 2012 SMP	Channel and culvert issues are causing flooding. Future development (PDR1) is anticipated upstream of problem area.	CAP		N	City staff have not reported recent flooding issues here and don't consider it a project need any longer. 2012 MP identified a CIP (WD-1) for this location. Limited GIS information available to conduct modeling. City staff have not reported recent flooding issues here and don't consider it a project need any longer.	Not visited.	N	N	N
8	Commerce Circle near Delta Logistics parking lot	Public Works Community Development	Improperly abandoned storm line on private property is causing flooding and a sink hole (safety concern).	R/R		Y	Contributing drainage area to pipeline is unclear.	Improperly abandoned storm line is not shown in the GIS. Pipe is on private property north of the street. Project/ program development considerations: Public Works would like a contracting mechanism to contract the investigation and proper abandonment of this pipe independent of the PW maintenance budget. Current sink hole is causing a safety concern. Additional as-built research is needed to identify lateral connections to the abandoned pipe.	N	N	Y
9	Miley Rd sinkhole	Public Works 2012 SMP	Collapsed mainline due to age and pipe corrosion has caused a sinkhole. Remaining pipe is failing and needs replacement.	R/R		Still Needed	Project location is in an extremely steep area. 2012 MP identified a CIP (SD9000 to SD9069) for this location. Location is already included in hydraulic model extents.	Not visited.	N	N	TBD
10	Miley Rd outfall	Public Works 2012 SMP	Significant scouring into jurisdictional wetland.	E&S		Still Needed	Project location is in an extremely steep area. 2012 MP identified a CIP (SD9000 to SD9069) for this location. Location is already included in hydraulic model extents. Erosion issues are entering a jurisdictional wetland and thus replacement is beyond scope for maintenance.	Not visited.	N	Y*	N

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Problem Area Location ID	Location/Asset Description	Source	Problem Description	Deficiency Category ⁴		Site Visit Conducted?	Workshop/Coordination Call Feedback (8-24-21 and 9-1-21)	Site Visit Outcome (9-27-21) (Green font reflects action items)	Project Planning ⁵			
				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
11	Town Center Loop near Les Schwab Tire Shop	Public Works Community Development	Observed flooding along Town Center Loop W via the CBs that tie into current high flow bypass. Town Center redevelopment will impact high flow bypass for flows towards Library Pond.	CAP		Y	In 2015, ODOT installed a reducer on the 18" pipe that outfalls west before entering ODOT culvert under I-5.	ODOT reducer (12" as verified by PW 10-11-21) limits the existing 18" pipe that outfalls west to the ODOT culvert underneath I-5. Town Center redevelopment will remove the high flow bypass that currently sends flow south towards Library Pond. PW has observed flooding along Town Center Loop W via the CBs that tie into this current high flow bypass line. Project development considerations: Model development needed to determine when it floods, and project need for existing conditions. Future conditions will be driven by adherence to Town Center plan.	Y	N	Y	N
12	Rose Ln culvert	Public Works Community Development 2012 SMP	Culvert under Rose Lane floods road and neighboring yard/garage on downstream side. Drainage is very flat with several hard turns. Future development (PDR1) is anticipated upstream of problem area.	CAP	MAINT	Y	City has implemented programmatic activities to resolve the issues but is still a problem. 2012: MP identified a CIP (WD-2) for this location. Limited GIS information available to conduct modeling. Beckman Road project may inform need.	Culvert underneath Rose Lane floods as vegetation on the upstream side blocks flow and drainage overlaps the road and floods the neighbor's yard/garage on the downstream side. Drainage patterns here take several hard turns and is very flat. Project development considerations: Realign the existing culvert (at a diagonal) and/or install a secondary culvert south across Rose Lane to alleviate the US ponding that occurs in the adjacent field.	N	N	Y	N
13	SW Parkway Ave south of Costco	Public Works	N-S drainage swale south of Parkway has filled with sediment, surcharging the roadway drainage system, and resulting in ongoing maintenance. Ditch is owned and maintained by Sysco but receives flows from both public and private sources. Upstream drainage from Costco includes a large underground detention system that does not function properly and holds water year-round. Related to Problem Area #30.	MAINT	CAP	Y	Ongoing maintenance issue. Grade of swale and channel is a concern. Ditch was recently dredged. Location is already included in hydraulic model extents.	Sysco ditch experiences high sedimentation rates due to minimal grade for the first section of the ditch. Sysco has plans to develop the lot to the west of the ditch, but timeline for this is unknown. Project development considerations: Since this is a complicated issue (Sysco owns ditch but receives drainage from others both public/private). City may install WQ manhole (s) to remove sediments from public runoff. This would isolate any additional sediment accumulated in Sysco ditch to private sources. Hydraulic model review is needed to confirm long stream profile for potential improvement opportunities. Public works confirmed 36" pipe from Costco to 40" pipe to Sysco ditch (may attribute to Costco backwater).	N	N	TBD	TBD
14	Culvert south of Day Rd.	Public Works	Culvert needs replacement. Conveyance and storage limitations exist south of Day Rd (limited areas, BPA towers, narrow channel, etc.). Related to Problem Area #15/26.	R/R		Y	Location is already included in hydraulic model extents. AKS Coffee Creek system evaluation included additional survey that needs to be incorporated into model. Need to evaluate area from larger perspective and investigate US/DS opportunities for improvement.	See Problem #15.	Y	Secondary	Y*	N



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				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
15	South of Day Road ponds near power lines behind businesses	Public Works 2012 SMP	Without brush clearing, the ponds south of Day Road back up and flow onto the road. Conveyance and storage limitations S of Day Rd (limited areas, BPA towers, narrow channel, etc.). Related to Problem Area # 14/26.	MAINT		Y	Location is already included in hydraulic model extents. 2012 MP identified a CIP (C1-C-1) for this location. AKS Coffee Creek system evaluation included additional survey that needs to be incorporated into model. Need to evaluate area from larger perspective and investigate US/DS opportunities for improvement.	Area studied as part of AKS Coffee Creek Facility Study. Effort worked to identify infrastructure needs and alternatives). The 2012 MP also included several capital projects to address these issues. Project development considerations: AKS study did not directly incorporate survey into existing condition model (extra effort required to incorporate survey independently into the hydraulic model). AKS study does not alienate flooding.	Y	Secondary	TBD	TBD
16	95th Ave north of Hillman Rd.	Public Works	Crushed storm pipe found during CCTV inspection.	R/R		N	Location is already included in hydraulic model extents. Per City (10-1-21), replacement being completed as CIP #7062 95th Avenue Storm Line Repair. North repair is replacement of 120 LF of existing 24" CMP with 24" PVC (Carte ID 2335). South Repair is replacement of 44 LF of 15" CMP with 15" PVC (Carte ID 2337).	Not visited.	N		N	N
17	Mont Blanc in Villebois	Public Works	Tree planted in front of inlet blocking drainage into swale	MAINT		N	Location is already included in hydraulic model extents.	Not visited.	N		N	N
18	Memorial Park drainage area behind the barn	Public Works	Same drainage ditch that causes issues with Memorial lift station (see Location ID5).	CAP		N	Location is already included in hydraulic model extents. Lift station is being relocated to the east and should mitigate this issue.	Not visited.	N		N	N
19	NW intersection of Elligsen Road and SW Parkway Ave near 76 gas station	Public Works External Survey	During heavy precipitation the CB backs up and floods the road at the corner	CAP		N	Location is already included in hydraulic model extents. Additional CBs were installed with roadway improvements at low points and has alleviated flooding issue.	Visited surrounding property area and confirmed no issue.	N		N	N
20	NE corner of Elligsen Road and SW Parkway Center	Public Works	Sediment from the agriculture area north of Elligsen Road impacts Pheasant Ridge RV Park detention pond.	MAINT		N	Location is already included in hydraulic model extents. Appears to be an operational issue.	Not visited.	N		N	N
21	NW corner of Graham Oaks parking lot	Public Works	Erosion around outfall sends debris into creek.	E&S		N	Location is already included in hydraulic model extents. Outfall included in model for capacity only, does not evaluate erosion. Public Works filled with CDF and is continuing to monitor for erosion.	Not visited.	N		N	N

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				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
22	Converted bubbler River Fox Park & SW Preakness	Parks Department (via) Public Works	Piped collection system is outside of the ROW and pipe diameter is reduced. Leaf debris affects the manhole in front of 11591 SW Preakness limits flow to mainline to Wilamette Way East causing flooding. "Bubbler" manhole at fence line acts like a sump.	MAINT	CAP	Y	Manhole (Cartograph # 57) surcharges and water exits the system, overflowing to inlet Cart #1240. Issue is capacity and whether the manhole should be redesigned to actually be a bubbler and not a surcharged manhole.	Complicated SW configuration. Pipe size changes from 24" to 18" to 12". Based on conversations with the property owner at 11242 SW Champoeg Dr (adjacent to inlet grate in SW corner of park) no flooding occurs here. Project development considerations: May consider installation of a pipe to directly tie runoff that is coming from Preakness Dr. into the MH at the end of Champoeg Dr. Following site visit, PW confirmed with Parks that this is nonissue. Cleaning grates of any leaf debris addresses the issue. Future CCTV at this location may be warranted to confirm configuration.	N	N	N	N
23	Cul-de-sacs west of Serenity Way	Public Works	Inlets at Pleasant (Cartograph #1750) and Serenity Ln. (Cartograph #1749) become covered with leaf debris causing cul-de-sacs to flood.	CAP		N	Installation of additional inlets near the intersection of Serenity Ln. may prevent ponding at the bottom of the cul-de-sac.	Not visited but confirmed that additional inlets can be included in a programmatic effort.	N	N	N	Y
24	Catch basins corner of Wilsonville Rd & Kinsman Rd	Public Works	Recurring flooding at catchbasins occurs after cleaning.	CAP	MAINT	Still Needed	Location is already included in hydraulic model extents.	Not visited.	N	N	TBD	TBD
25	SW Salish Ln at intersection with Parkway Ave	Public Works	Undersized catch basins cause flooding (ponding in SE corner by pond).	CAP		Y	Location is already included in hydraulic model extents, but with limited detail. As-builts provided from City reflect drainage ditches but no cross sections for ditches.	City pond at the Shrine Center receives a small amount of drainage and requires frequent maintenance. Project development considerations: Need improved access for a vector truck to the WO MH and pond maintenance (like Library Pond). Access should be from the Shrine Center parking lot. Refinement of the model extents not needed.	N	N	Y	TBD
26	Day Rd culvert at Topman Creek near PGE substation	Public Works	Undersized culvert over capacity causing flooding. Conveyance and storage limitations S of Day Rd (limited channel, narrow areas, BPA towers, narrow culvert, etc.). Related to Problem Areas #14/15.	CAP		Y	Location is already included in hydraulic model extents. Need to evaluate area from larger perspective and investigate US/DIS opportunities for improvement.	See Problem #15.	N	Secondary	Y*	N
27	Storm basin SW Iron Horse St & SW Willow Creek Dr	Public Works	Reoccurring maintenance issues causing flooding; mix of private and City maintained structures	MAINT		N	Appears to be an operational issue.	Not visited.	N	N	N	N
28	SW Advance Rd b/w Stafford Rd & SW 63rd Ave	Public Works	Outfall blockage issues caused by vegetation. City cannot access to fix	MAINT		N	Appears to be an operational issue.	Not visited.	N	N	N	N

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Problem Area Location ID	Location/Asset Description	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted?	Workshop/Coordination Call Feedback (8-24-21 and 9-1-21)	Site Visit Outcome (9-27-21) (Green font reflects action items)	Project Planning ²			
				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
29	SW Daybreak St & SW Morningstide Ave	Public Works	Capacity issues with Renaissance detention pond. Possible elevation or directional issue with flow out of detention pond	CAP		N	Renaissance Pond is included in existing hydraulic model. City confirmed configuration and pond outlet to west.	Not visited.	N	N	TBD	N
30	Sysco drainage ditch south of Parkway Ave	Public Works Community Development	Historical flooding issues; can no longer be accessed due to newly constructed fence. Ditch is owned and maintained by Sysco but receives flows from both public and private sources. Upstream drainage from Costco includes a large underground detention system that does not function properly and holds water year-round. Related to Problem Area #30.	CAP	MAINT	Y	Ongoing maintenance issue. Grade of swale and channel is a concern. Ditch was recently dredged. Location is already included in hydraulic model extents.	See Problem #13. Same issue.	N	N	Y	TBD
31	Off Canyon Creek Road; catch basin in a residential backyard	Public Works	When farmer plows the field east of area debris enters catch basin and causes backups.	MAINT		N	Appears to be an operational issue.	Not visited.	N	N	N	N
32	Drainage ditch west & south of Delta Logistics	Public Works 2012 SMP	Overflow floods parking lot/channel conveyance issues. Related to Problem Area#15.	CAP		Y	Location is already included in hydraulic model extents. 2012 MP identified a CIP (CLC-3) for this location. AKS Coffee Creek system evaluation included additional survey that needs to be incorporated into model. Need to evaluate area from larger perspective and investigate US/DS opportunities for improvement.	See Problem #15. Same issue.	Y	Secondary	Y*	N
33	Elligson Rd and Parkway Center Dr near Jeep Dealership	Public Works	Bubbler does not operate as designed; runoff goes over road.	R/R		N	Bubbler location is mapped incorrectly (located on SW Canyon Creek Rd near Burns Way). Issue deemed to be not significant by COW staff.	Not visited.	N	N	N	N
34	95th Ave at Grace Chapel	Public Works Community Development	Outfall blockage in ODOT right of way.	MAINT		N	Appears to be an operational issue requiring coordination with ODOT.	Not visited.	N	N	N	N
35	Culverts under I-5	Public Works	End of design life and need to be replaced (already modeled). Various locations along Parkway Ave & Bonnes Ferry Rd.	R/R		Still Needed	Locations already included in hydraulic model extents. Requires coordination with ODOT.	Not visited.	N	N	TBD	TBD

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				Primary	Secondary				Hydraulic Model Expansion/Update Need (Y/N)	Stream Assessment Location (Y/N) ²	Project Need? (Y/N) ³	Program Need?
36	Culverts under Jobsey Ln. and Arrowhead Creek	Public Works 2012 SMP	Damaged and old culverts (already modeled), need to be replaced	R/R		Y	Locations already included in hydraulic model extents. 2012 MP identified a CIP (CLC-9) for this location.	Not visited.	N	N	Y	TBD
37	Boeckman Creek N of Colvin Ln.	Public Works	Erosion of streambank and migrating channel.	E&S		N	Potential stream survey evaluation area	Not visited.	N	Primary	Y	N
38	Villebois neighborhoods	Public Works	Ponding issues in front of mailboxes.	R/R		N	Staff is unaware of any ponding in this area. Existing modeling extents are adequate.	Not visited.	N	N	N	N
39	Villebois neighborhood	Public Works	Concerns about the various detention ponds and whether they are being maintained appropriately. Maintenance issues include Grahams Ferry Pond - potential design issues for the WQ mainhole and adjacent outlets, Palermo (Pond F) - a large concrete pond off Grahams Ferry Road requires routine maintenance to prevent upstream tailwater issues.	MAINT		Still Needed	HOA is responsible for maintenance of ponds (currently overgrown with vegetation) and the City maintains the inlets and outlets. Grahams Ferry Pond has some design issues associated with the WQ mainhole and adjacent inlets. Tooze Pond needs to be added to the hydraulic model (need stage-storage curve).	Not visited but discussed with PW. Pond maintenance is an ongoing issue. Recommend dedicated program to address and review of SOPs.	Y	N	TBD	Y
40	Citywide	Public Works	1996 flooding event	CAP		N	No additional information provided for specific areas/structures of concern.	Not visited.	N	N	N	N
41	Citywide	Public Works	2006 flooding event	CAP		N	No additional information provided for specific areas/structures of concern.	Not visited.	N	N	N	N
42	Citywide	Public Works	2015 flooding event	CAP		N	No additional information provided for specific areas/structures of concern.	Not visited.	N	N	N	N
43	Town Center Loop W - Shari's	External Survey	Drainage issues -Shari's parking lot.	CAP		N	Issue to be resolved with SW infrastructure proposed in Town Center Plan (2019).	Not visited.	N	N	Y	N
44	Town Center Loop W - Starbucks	External Survey	Drainage issues -Starbucks parking lot.	CAP		N	Issue to be resolved with SW infrastructure proposed in Town Center Plan (2019).	Not visited.	N	N	Y	N
45	Coffee Creek	External Survey	Lots of trash within creek at various locations (especially at choke points).	MAINT		N	Locations already included in hydraulic model extents, but need to verify configuration.	Not visited but location discussed with PW. Modeling refinements to incorporate the 30" and 36" lines from the Coca Cola Pond, starting at Seely Road to Coffee Creek.	Y	N	N	N
46	29851, 29840 SW Camelot St.	External Survey	Flooding from storm drain street grate. Grate clogs with debris.	MAINT		N	Appears to be an operational issue.		N	N	N	Y

Table A.2. Project Opportunity Matrix

Project Opportunity Location ID ¹	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ²		Site Visit Conducted (Y/N)	Project Planning ²					Project/Program Development		
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Project Need? (Y/N) ⁴	Program Need? (Y/N)
1	1	Morey's Landing bubbler (AKA Willamette Way East bubbler)	Willamette River	Staff Surveys	Localized flooding during high intense storm events. Existing bubbler meant to collect runoff from the streets and divert to grass area within the BPA power line easement and to the river. 2012 AHS study identified deficient pipe capacity, preventing flow from reaching SWM Belnap Court outfall. Water flows into yards adjacent to the easement, requiring sandbags to redirect flow.	R/R	WQ	Y	Y	N	Y	<ul style="list-style-type: none"> Project area is adjacent to high pressure fuel line. Project will require continued coordination with BPA to locate water quality facility and maintain utility access. Need to understand infiltration rates for retention/GSI feasibility. Current sandbag system "works" (UV resistant sandbags needed). Location of bubbler not ideal. GSI and pipe upsizing in one project unlikely 	Y- WR-1, Phase 1 and 2	--	--	
2	2	Frog Pond ditch and culvert under Boeckman Rd.	Meridian Creek	Staff Surveys H&H Model	Ongoing flooding issue at 6920 SW Boeckman Rd. Culvert along Boeckman Road directs flows toward an existing garage. The foundation is only 2-3 inches higher than W Fork Meridian Creek. Possible culvert misalignment and minimal slope downstream of property.	R/R	CAP	Y	Y	Y	N	<ul style="list-style-type: none"> Project Fact Sheet and Cost Estimate prepared March 2022. Project currently in design as part of the Boeckman Road Improvements Piped drainage system extended along Boeckman Road beyond the existing house, where the channel has additional vertical drop. 	N	N	N	N
3	3, 39	Pond F and other ponds in Villebois	Coffee Lake Creek	Staff Surveys	Concerns whether various private detention ponds are being maintained appropriately. HOA is responsible for maintenance of ponds (currently overgrown with vegetation) and the city maintains the inlets and outlets. Maintenance issues include Grahams Ferry Pond - potential design issues for the WQ manhole and adjacent outlets. Palermo (Pond F) - a large concrete pond off Grahams Ferry Road requires routine maintenance to prevent upstream tailwater issue.	R/R	MAINT	Y	Y, except for Grahams Ferry Pond	N	Y	<ul style="list-style-type: none"> H/H model updated to include relevant facilities. Active maintenance implemented by HOA. Workshop recommendation - Need program for restorative maintenance of ponds (especially private). Current PW staffing doesn't support private pond maintenance. Policy recommendation - Implement an escalating, more robust enforcement protocol with provisions for City-initiated maintenance subject to private property reimbursement. Per City (6/9/23) - Pond F swales above the level spreader have been cleaned out and are no longer causing issues. 	N	N	Y- P-6	Y
4*	4	Library Pond	Boeckman Creek	Staff Surveys Retrofit Analysis H&H Model	Library Pond does not have flow control/office structure or emergency overflow type structure. Pond currently floods into Library parking lot and Memorial Dr near park entrance.	CAP	WQ	Y	Y	N	Y	<ul style="list-style-type: none"> Primary objective is to accommodate redevelopment of the Town Center, secondary is to accommodate Boeckman mitigation needs. As-built (stage-storage) incorporated into H&H evaluation. 	Y- BC-1	--	--	Y

N/A = Not Applicable

Project Opportunities in gray have been removed from consideration for further project development.

1 Categories include: MAINT=Maintenance; R/R=Repair and Replacement; CAP=Capacity Issue; E&S=Instream Erosion/Sediment Issue; INFRA=New infrastructure need per growth and development; WQ=Water Quality.

2 Project planning outcome results are identified. TBD means that additional discussion may be warranted following modeling evaluation. Location IDs that are shaded in gray are not anticipated to require a project or program.

3 Stream assessment locations identified as priority or secondary.

4 Costed Project needs = Y were confirmed with City during on 3-15-23 and require a conceptual design, fact sheet and cost estimate. Unfunded Project needs will be documented in the SMP but will not have a conceptual design or cost associated. The resulting Project ID is listed for reference.

5 Project Opportunity Locations affiliated with the Boeckman Road mitigation efforts are indicated with a *.

Table A-2. Project Opportunity Matrix

Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²						Project/Program Development						
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ¹	Program Need? (Y/N)	Policy Need?				
					Ongoing challenges with debris removal at existing ditch inlet (which serves as outlet from pond). City has considered expanding the pond as part of the fee in lieu program for Town Center redevelopment.																
					2012 MP CIP SD9000 to SD9069. Collapsed mainline due to age and pipe corrosion has caused a sinkhole at eastern edge of pipe alignment. Challenge is exacerbated by steep slopes. Remaining pipe along Miley Rd. is failing and needs replacement. Significant scouring into jurisdictional wetland.																
5	9, 10	Miley Rd sinkhole and outfall	Charbonneau	Staff Surveys 2012 SMP H&H Model	Upstream capacity deficiencies indicated by H/H modeling (preliminary flooding location #1).	R/R	CAP	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y		
					Observed flooding along Town Center Loop W via the CBS that tie into current high flow bypass. Existing reducer (12" control on 18" pipe) was installed in 2015 to limit flow toward ODOT culvert under I-5. Restriction contributes to upstream problems through Town Center Loop. Town Center redevelopment will remove the high flow bypass for flows towards Library Pond.																
6	11	Town Center Loop near Les Schwab Tire Shop	Boeckman Creek	Staff Surveys	2012 MP identified a CIP WD-2 for this location. Culvert under Rose Lane floods road and neighboring yard/garage on downstream side. Drainage pattern is very flat with several hard turns. Future development (PDR1) is anticipated upstream of problem area.	CAP	MAINT	Y	Y	N	N	N/A	N	N	N	N	N	N	N	Y	
7	12	Rose Ln culvert	Willamette River	Staff Surveys 2012 SMP																	
8	13, 30	SW Parkway Ave south of Costco	Boeckman Creek	Staff Surveys H&H Model	N-S drainage swale south of Parkway has flat grades and is routinely filled with sediment, surcharging the roadway drainage system, and resulting in an ongoing maintenance concern.		MAINT	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	P-1

Table A.2. Project Opportunity Matrix

Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²					Project/Program Development		
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment ID Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)
9	14, 15, 26, 32	Open channel system from Day Rd. to Ridder Rd	Coffee Lake Creek	Staff Surveys 2012 SMP H&H Model	Culvert needs replacement. Conveyance and storage limitations exist south of Day Rd (limited areas, BPA towers, narrow channel, etc.). Existing AKS design does not fully alleviate modeled flooding.	R/R		Y	Y	N	Y	Y - CLC-1, Phase 1 and 2 and City-1	--	Y - P-5	Y	
10	24	Catch basins corner of Wilsonville Rd & Kinsman Rd	Coffee Lake Creek	Staff Surveys	Recurring flooding at catch basins occurs even after cleaning. Undersized catch basins cause flooding (ponding in SE corner by pond). A city-owned pond at the Shirine Center receives a small amount of drainage and requires frequent maintenance. Model predicts flooding within the pond and outlet. Pond configuration is based on original model build from 2012 SMP (preliminary flooding location # 10).	CAP	MAINT	N	Y	N	Y		N	Y - P-1	N	
11	25	SW Salish Ln at intersection with Parkway Ave	Coffee Lake Creek	Staff Surveys H&H Model	Model predicts flooding within the pond and outlet. Pond configuration is based on original model build from 2012 SMP (preliminary flooding location # 10).	CAP		Y	Y	N	N		Y	Y - P-1	N	

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Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²					Project/Program Development		
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)
12*	29	SW Daybreak St & SW Morningside Ave	Coffee Lake Creek	Staff Surveys	Capacity issues with Renaissance detention pond. Possible elevation or directional issue with flow out of detention pond. Opportunity to improve water quality treatment through retrofit and reconfiguration of existing pond property.	CAP		Y	N	N	Y		N	N	Y- P-6	Y
13	35	Culverts under I-5	Coffee Lake Creek	Staff Surveys H/H Model	End of design life and need to be replaced. Various locations along Parkway Ave & Boones Ferry Rd (crossings from E-W).	R/R	N	Y	Y	N	N		N	N	N	N
14	36	Culverts under Jobsey Ln. and Arrowhead Creek	Coffee Lake Creek	2012 SMP Stream Assessment	2012 MP identified CIP CLC-9 for this location. Damaged and old culverts (already modeled), need to be replaced	R/R	Y	Y	Y	N	N		Y- CLC-2	--	N	N
15	37	Boeckman Creek N of Colvin Ln.	Boeckman Creek	Staff Surveys 2012 SMP	2012 MP identified BC-8 (Canyon Creeks Estate Pipe Removal) for this location. Erosion of streambank and migrating channel reported in downstream portion of the project site.	E&S	Y	Y	N	N	N		Y- BC-4	--	N	N
16	43, 44	Town Center Loop W - Shari's and Starbucks	Boeckman Creek	External Survey	Drainage issues - Shari's and Starbucks parking lot (down the road from each other).	CAP	N	Y	N	TBD			N	N	N	Y
17		Boeckman Creek - Reach 1 (US of Williamette R.)	Boeckman Creek	Stream Assessment	Significant risk of continued channel incision and lateral erosion along the lowest reach of Boeckman Creek prior to confluence of the Williamette River. Several properties have experienced bank failures and loss of land, and an active	E&S	Y	Y	Y	Y			Y- City-4	Possible	N	N

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						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment ID'd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Coated Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)	Policy Need?
18		Meridian Creek in Landover Park - Reach 1 (US of Wilsonville Rd.)	Meridian Creek	Stream Assessment	Sediment-clogged culvert (30-inch) at the Meridian Creek Crossing at Wilsonville Road. Culvert is mostly obstructed and appears to cause ponding during storm runoff.	MAINT	E&S	Y	N	Y	N	Y- City-2	N	Y- P-5	N		
19		Meridian Creek in Landover Park - Reach 2 (DS of Willow Creek Dr.)	Meridian Creek	Stream Assessment	Culvert outlet at upstream end of reach is clogged and backs up water underneath Willow Creek Dr. PVC SW outfall along reach is undermined (STA 1,100) and 6-foot section has washed out and moved downstream.	MAINT	E&S	Y	N	Y	N	Y- City-2	N	Y- P-5	N		
20		Arrowhead Creek at Pedestrian Bridge (Reach 4)	Coffee Lake Creek	Stream Assessment	Culvert at upstream end of reach (at pedestrian crossing) is failing and should be considered for replacement.	R/R		Y	N	Y	N	Y- CLC-2	N	N	N		
21*		Memorial Park (Swale Retrofit, Pipe Upsizing, and Mitigation)	Boeckman Creek	Retrofit Analysis H/H Model	Swale at Memorial Dr. is not draining properly. Potential concept is to extend swale all the way along the road or relocate to the base of hill. Modeling evaluation indicates that the pipe system after convergence point at Memorial Drive has a constriction resulting in backwater and upstream system flooding (preliminary flooding location #5).	MAINT	CAP	Y	Y	N	Y	Y- BC-5	--	N	N		
22		Oulanka and Tivol Parks	Coffee Lake Creek	Retrofit Analysis	6 swales haven't been maintained properly - 2 are City owned and 4 need to be retrofitted and taken over by City	MAINT	WQ	Y	N/A	N	Y	N	Y	Y- P-5	Y		

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Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²					Project/Program Development				
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)	Policy Need?	
23*		Creekside Apartments (Boeckman Creek at Wilsonville Rd.)	Boeckman Creek	Boeckman Road Mitigation Study Retrofit Analysis	City staff have identified a former irrigation pond near this apartment complex adjacent to Boeckman Creek. This location may have potential to provide additional storage or provide mitigation measures. Upstream of this location there is an existing outfall to Boeckman Creek that has known erosion issues per the 2012 SMP (BC-5).	CAP	WQ	Y	N	N/A	Y	N	N	Y	N	N	Y	
24*		Wiedeman Ditch/ Canyon Creek Park/BPA Easement	Boeckman Creek	Boeckman Road Mitigation Study 2012 SMP Retrofit Analysis	City staff identified potential project opportunity to construct a regional wetland or drainage facility at this location (would require BPA coordination). Facility would be able to manage runoff from Angyle Square, Sysco, and other future developments to help offset Boeckman Creek flows. This location is adjacent to previously identified erosion issues within Canyon Creek Estates (BC-8).	CAP	WQ	Y	N	N	Y	N	N	Y	Y - BC-3, Phase 1 and 2	--	N	N
25*		Mentor Graphics/Siemens Ponds	Coffee Lake Creek	Boeckman Road Mitigation Study	Existing series of ponds located on Siemens property (8005 Boeckman Rd) currently only provide flow through storage. Ponds have potential to be modified to provide detention or reconfigured to divert less flow to Boeckman Creek during large storm events.	CAP		Y	Y	N	Y	N	N	Y - BC-2	--	N	N	
26*		Mentor Graphics/Siemens Flow diversion structure and Ash Meadows Detention	Coffee Lake Creek	Boeckman Hydraulic Eval TM	Eliminate flow diversion structure or private property that diverts flows to Boeckman Creek during high flows (Project Opportunity Area 25). To account for additional flow returning to the Coffee Lake Creek drainage basin, utilize the Ash Meadows area to detain flows prior to entering the ODOT culvert underneath I-5. Utilize the volume of the natural depression near Ash Meadows to detain flows during large storm events.	CAP	WQ	Y	Y	N	N	N	N	Y - BC-2	--	N	N	
27*		Boeckman Creek instream flow mitigation and restoration	Boeckman Creek	Boeckman Hydraulic Eval TM	Within Boeckman Creek, several concepts have been identified to provide flow mitigation for projected increases in flow.	CAP	E&S	Y	Y	N	Y	Y	Y	Y - City-2	N	Y - P-5	N	

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Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²					Project/Program Development			
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)	Policy Need?
				Retrofit Analysis	<p>Specific locations within Boeckman Creek have not been identified at this stage:</p> <ul style="list-style-type: none"> Beaver Analogs: Increase the depth and size of natural ponding within the creek. This would supplement the existing population of beavers and dams currently within Boeckman Creek. Channel Improvements: Protect, harden, or slow flow in areas potentially impacted by the change in creek flows. May include the addition of large woody debris, large root wads, grade control structures or other appropriate measures to protect threatened stream banks." 												
28		Charbonneau West - SW French Prairie Rd and SW Boones Bend Rd.	Charbonneau	2012 SMP	Stormwater system within the western portion of Charbonneau was identified in the 2012 SMP as a location that requires replacement	R/R	CAP	N	Y	N	N	Y	Y - WR-5	--	N	N	
29		Charbonneau East - SW French Prairie Rd Outfall and SW Edgewater	Charbonneau	H/H Model 2012 SMP	<p>Model predicts flooding at this outfall and along the SW Edgewater piped system. Predicted flooding along this system generally starts at the 10-yr design storm, while the most upstream pipe segments along SW Edgewater are predicted to start at the 2-yr design storm.</p> <p>Restriction is caused by undersized outfall (30") in comparison to upstream pipe segments (36"). This outfall pipe was replaced in 2018 during an emergency repair but was not upsized to 36" per the recommendation from the 2012 SMP.</p>	CAP	R/R	N	Y	N	N	Y	N	N	Y - P-4	N	
30		Charbonneau East - SW French Prairie Rd and SW Old Farm Rd piped system	Charbonneau	2012 SMP	Model predicts flooding throughout these piped systems starting at the 2-yr design storm due to insufficient capacity at the outfall pipe (Project Opportunity #29). Flooding at this location could impact the residential properties within Charbonneau.	R/R	CAP	Y	Y	N	N	Y	Y - WR-4, Phase 1 and 2 and City-1	--	N	N	

Table A-2. Project Opportunity Matrix

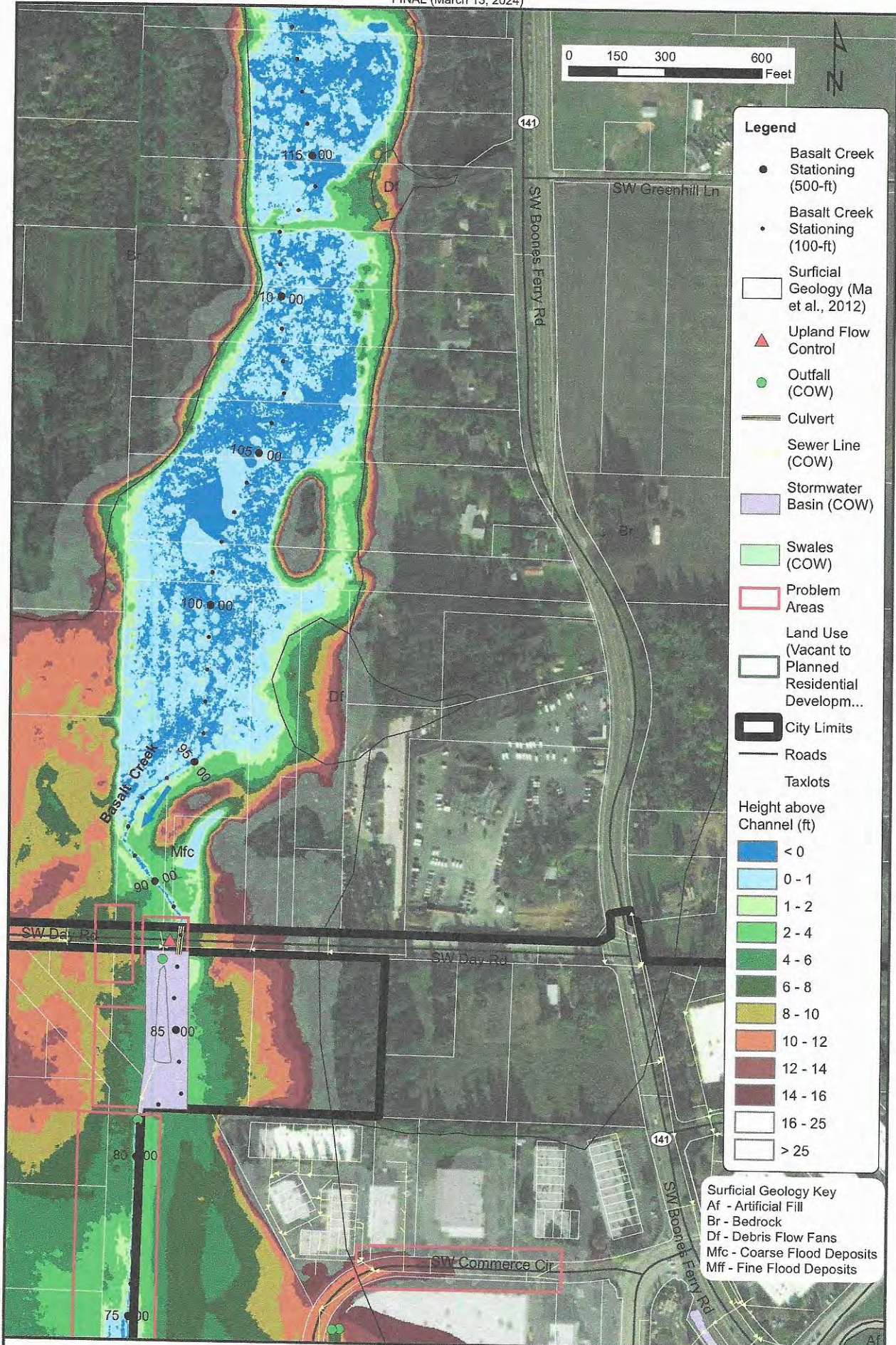
Project Opportunity Location ID ⁵	Previous Problem Area Location ID	Location/Asset Description	Basin	Source	Problem Description	Deficiency Category ¹		Site Visit Conducted (Y/N)	Project Planning ²				Project/Program Development			
						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment IDd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁵	Program Need? (Y/N)
31		Parkway Ave./Meolius Ln.	Williamette River	H/H Model 2012 SMP	Model predicts flooding at several nodes along N-S run of pipe starting at the 10-yr design storm. Capacity is limited by the small diameter (24") pipes near the outfall which is causing a constriction. Flooding at this location could threaten the adjacent properties along SW Parkway Ave.	CAP		N	Y	N	N		N	Y	N	N
32		Garden Acres Rd./Peters Rd.	Coffee Lake Creek	H/H Model Retrofit Analysis	Model predicts flooding along N-S piped system along Garden Acres that crosses the RR tracks and outfalls to Coffee Creek wetlands. Model flooding starts at the 2-yr design storm. City concern with obtaining easement/ coordinating with railroad to upsze pipe. Flooding at this location during the 2-yr design storm is concerning as in the future the contributing drainage area will further develop which will exacerbate this issue.	CAP		Y	Y	N	TBD		Y-CLC-3	--	N	N
33		Bobberg Rd. and RR crossing	Coffee Lake Creek	H/H Model 2012 SMP	Model predicts flooding along N-S pipe prior to discharging into open channel starting at the 2-yr design storm. Predicted flooding also at two large diameter culverts flowing E-W underneath RR tracks. Flooding at this location could impact the industrial properties along Bobberg Rd.	CAP		N	Y	N	N		--	N	N	N
34		Barber St.	Coffee Lake Creek	H/H Model 2012 SMP	Model predicts flooding at several DS nodes prior to Coffee Creek outfall and at node near RR tracks starting at the 2.5-yr design storm. Backwater conditions from Coffee Creek may be contributing to downstream flooding.	CAP		N	Y	N	N		N	Y	N	N
35		Lower Boones Ferry Rd.	Williamette River	H/H Model	Model predicts flooding along piping that conveys private drainage (former Albertsons property) to Boones Ferry Rd starting at the 2-yr design storm. Flooding at this location could impact the commercial properties along SW Boones Ferry Rd.	CAP		N	Y	N	Y		N	Y	N	N

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						Primary	Secondary		Hydraulic Model Developed? (Y/N)	Modeled Capacity Deficiency (Y/N)	Stream Assessment ID'd Need (Y/N) ³	Water Quality Retrofit Opportunity (Y/N)	Project Development Considerations (per Workshop and City Discussions)	Costed Capital Project Need? (Y/N) ⁴	Unfunded or Future Capital Project Need? (Y/N) ⁴	Program Need? (Y/N)	Policy Need?
36	8	Commerce Circle near Delta Logistics parking lot	Coffee Lake Creek	Staff Survey	Improperly abandoned storm line on private property is causing flooding and a sink hole (safety concern).	R/R		Y	--	N	N	<ul style="list-style-type: none"> Discussion during Public Works during site visit concludes no project need. Public Works would like a contracting mechanism to contract the investigation and proper abandonment of this pipe independent of the PW maintenance budget. Additional as-built research is needed to identify lateral connections and drainage area to the abandoned pipe. Program Recommendation - Localized Drainage Improvements Program or Repair and Replacement. 	N	N	Y- P-1	N	
37	23	Cul-de-sacs west of Serenity Way	Coffee Lake Creek	Staff Survey	Inlets at Pleasant (Cartograph #1750) and Serenity Ln. (Cartograph #1748) become clogged with leaf debris causing cul-de-sacs to flood.	CAP		N	--	N	N	<ul style="list-style-type: none"> Program Recommendation - Localized Drainage Improvements Program. Installation of additional inlets near the intersection of Serenity Ln. may prevent ponding at the bottom of the cul de sac. 	N	N	Y- P-1	N	
38	46	29851/29840 SW Camelet St	Coffee Lake Creek	External Survey	Flooding from storm drain street grate. Grate clogs with debris.	MAINT	WQ	N	--	N	N	<ul style="list-style-type: none"> Appears to be an operational issue. Program Recommendation - Localized Drainage Improvements Program. 	N	N	Y- P-1	N	
39		Green Streets/LID Facilities	N/A	Retrofit Analysis	Develop a program to install LID facilities in conjunction with planned roadway improvements. Potential locations as listed in the Retrofit Assessment include SW Camelet, SW Wilsonville Road, and SW Hillman.	R/R		N	--	N	Y	<ul style="list-style-type: none"> Program Recommendation - Water Quality Retrofit Program. 	N	N	Y- P-2	N	
40		Porous Pavement Pilot Study	N/A	Retrofit Analysis	Evaluate feasibility of porous pavement for future parking projects.	R/R		N	--	N	Y	<ul style="list-style-type: none"> Consider applicability as a planning project to do porous pavement overlays for water quality in conjunction with pavement restoration/improvement needs. 	Y- City-3	N	N	N	N
41		Gesellschaft Water Well Channel Restoration	Boeckman Creek	2012 SMP Retrofit Analysis	Erosion is occurring within the drainage channel that enters Boeckman Creek.	E&S		N	--	N	Y	<ul style="list-style-type: none"> Determined to be a higher priority retrofit location per 2015 Retrofit Assessment. Per Wisp 3-15, project per 2012 SMP needed for funding. 	Y- BC-6	N	N	N	N
42		Ridder Road Wetland Restoration	Coffee Lake Creek	2012 SMP Retrofit Analysis	Current drainage channel is underutilized with invasive vegetation. Referenced as C.L.C-4 per 2012 SMP.	E&S	MAINT	N	--	N	Y	<ul style="list-style-type: none"> Determined to be a low priority retrofit location per 2015 Retrofit Assessment. Discussion needed during planning workshop to confirm that funded project is not warranted. 	N	Y	N	N	N
43		Town Center Conveyance Piping	Boeckman Creek	Community Development Town Center Concept Plan	Public stormwater collection pipe (15" diameter) per Town Center Concept Plan.	INFRA		Y	--	N	Y	<ul style="list-style-type: none"> Conveyance sizing is based on no onsite controls. Library Pond analysis will be used to support onsite (private) collection system requirements. Additional assets/ re-piping is development driven. No defined project need, pending redevelopment. 	N	Y	N	N	Y

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44		Frog Pond E and S Conveyance Piping	Newland Creek	Community Development Frog Pond East and South Master Plan	Public stormwater collection pipe and outfall along SW 60th Ave. (>15" diameter) per Frog Pond Master Plan.		INFRA	N		Y		Y	Y - NC-1	-		N	N
45		SW Miami	Williamette River	H/H Model	Model predicts flooding along 15" piping starting at the 25-yr design storm.		CAP	N	Y	-		N			Y	N	N
46		Canyon Creek Rd (near Xerox)	Beckman Creek	H/H Model	Model predicts flooding at node that conveys private stormwater from Xerox to the E across Canyon Creek Rd. starting at the 10-yr design storm.		CAP	N	Y	-		N			Y	N	N
47		River Fox Park	Williamette River	H/H Model	Model predicted flooding in 12" pipe		CAP	Y	Y	-		N			Y	N	N



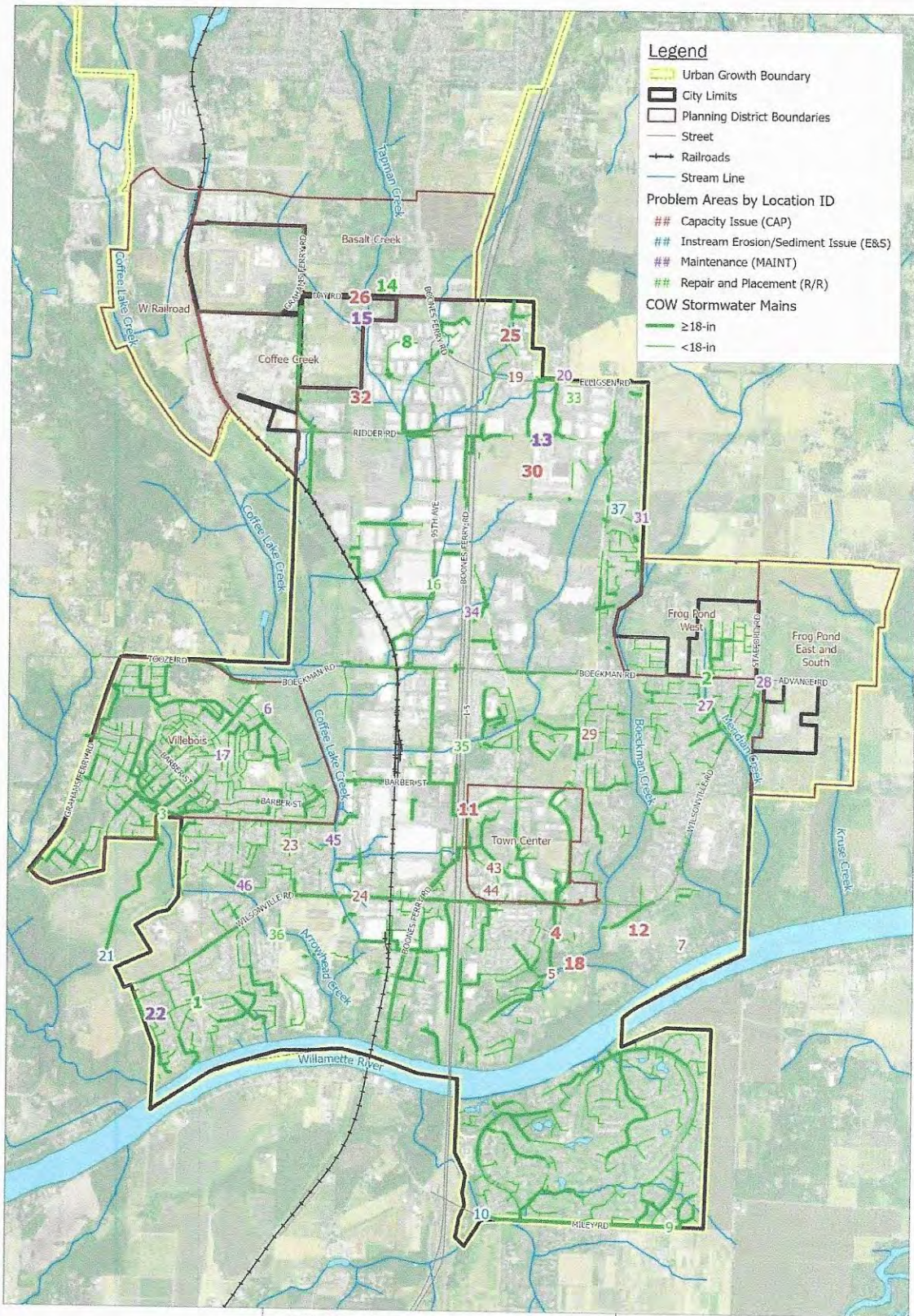
Basalt Creek Overview - Secondary Location

Wilsonville
Stormwater
Master Plan



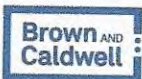
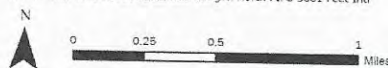
FIGURE

7



Note: Bold location IDs represent locations where a site visit occurred.

Spatial Reference:
 Name: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl



City of Wilsonville/
 Project # 156157
 Stormwater Master Plan

Figure 3-1: Problem Area Location

**BEND, OR**2777 NW Lolo Drive
Suite 150
Bend, OR 97703
(541) 317-8429**KEIZER, OR**3700 River Road N
Suite 1
Keizer, OR 97303
(503) 400-6028**THE DALLES, OR**3775 Crates Way
The Dalles, OR 97058
(541) 296-9177**TUALATIN, OR**12965 SW Herman
Road, Ste 100
Tualatin, OR 97062
(503) 563-6151**KENNEWICK, WA**501 N Quay Street,
Suite C-102
Kennewick, WA 99336
(509) 905-0219**VANCOUVER, WA**9600 NE 126th Avenue
Ste 2520
Vancouver, WA 98682
(360) 882-0419**WHITE SALMON, WA**107 W Jewett, Ste 100
White Salmon, WA
98672
(509) 281-3227

www.aks-eng.com

Date: 5/30/2024
From: Chuck Gregory, PE - Principal
Project Name: 9675 SW Day Road
AKS Job No.: 3916

Subject: 9675 SW Day Road - Preliminary Drainage Analysis & Stormwater Report

1.0 Purpose of Report

This report analyzes the effects of the proposed site improvements with respect to the existing and proposed stormwater management system. Evaluation of the stormwater system includes documentation of regulatory criteria, methodology, and informational sources used to design/evaluate the stormwater system. The results of the preliminary hydrology/hydraulic analysis are presented below and attached.

2.0 Project Description & Location

The proposed project will consist of constructing a new open-air covered building and installing additional gravel surfacing to provide an outdoor storage area.

The updated site area is comprised of five properties (Tax Lots 302, 303, 309, 310, and 311 of Washington County Assessor’s Map 3S102B) and totals ±10.78 acres. The site is within unincorporated Washington County, more specifically located west of SW Boones Ferry Road, and east of SW Grahams Ferry Road, along the north side of SW Day Road. The whole site is designated FD-20 District and is surrounded by like-zoned properties. There is an electrical substation to the west, shipping and receiving operations occur to the east, and “rural” residential dwellings on larger homesites are present to the north and south.

3.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) Method was used to analyze stormwater runoff from the site. This method utilizes the SCS Type 1A 24-hour design storm. HydroCAD 10 computer software aided in the analysis. Representative CN numbers were obtained from the NRCS *Technical Release 55* and are attached for reference.

4.0 Design Parameters

4.1 Design Storms

Per Washington County’s Code of Ordinances, the stormwater analysis utilized 24-hour storm information for the evaluation and design of the existing and proposed stormwater facility. The following 24-hour rainfall intensities were utilized as the design storms for the recurrence intervals:

Table 4-1: Rainfall Intensities	
Recurrence Interval (Years)	Total Precipitation Depth (Inches)
2	2.50
5	3.10
10	3.45
25	3.90

4.2 Pre-Developed Site Conditions

4.2.1 Site Topography

Existing on-site grades generally vary from 1%± to 50%±, with the site generally draining towards the west towards Tapman Creek. The site has a high point of 270± feet near the northeast property corner and a low point of 224± feet near the northwest property corner.

4.3 Soil Type

The following table outlines the Hydrologic Soil Group rating for each soil type located at the site:

NRCS Map Unit Identification	NRCS Soil Classification	Hydrologic Soil Group Rating
5B	Briedwell Stony Silt Loam	B
37B	Quatama Loam	C
38B	Saum Silt Loam	C
38C	Saum Silt Loam	C
38D	Saum Silt Loam	C
38E	Saum Silt Loam	C
43	Wapato Silty Clay Loam	C/D

Further information on this soil type is included in the attached NRCS Soil Resource Report.

4.4 Post-Developed Site Conditions

4.4.1 Site Topography

The on-site slopes will be modified with cuts and fills to accommodate the construction of the open-air covered building, additional gravel surfacing for outdoor storage, and stormwater facilities.

4.4.2 Post-Developed Input Parameters

See HydroCAD Analysis in the attached appendices.

4.4.3 Description of Off-Site Contributing Basins

The properties to the east of the site direct stormwater onto the site, therefore, the new stormwater system will be designed to allow for additional stormwater to be conveyed and passed through the new system's underground piping, detention facilities, etc.

5.0 Stormwater Analyses

5.1 Proposed stormwater quantity control facility design

The site has historically sent runoff west to Tapman Creek. Stormwater from the new building and additional graveled storage area will be routed via sheet flow and/or underground piping to an interceptor soakage trench containing a 10" perforated pipe (see attached Preliminary Utility Plan and Interceptor Soakage Trench Detail). Stormwater will then be routed to 48" diameter detention pipes located below the ground surface. Stormwater will be detained for all required 24-hour rain events via a combination of the subsurface detention pipes and flow control structures prior to being discharged to Tapman Creek.

Due to the characteristics of the site, a portion of the newly improved area's on-site stormwater cannot be captured, therefore, the detention pipe system described above has been designed in a manner that over detains the on-site stormwater captured so that the total stormwater leaving the site is less than or equal to pre-developed flows for the required storm events. Additionally, as shown

on the basin maps (attached), upstream (off-site) stormwater is also directed onto the site, therefore, the proposed stormwater conveyance system and detention system has been designed to convey and pass-through this additional stormwater.

Table 5-1: Peak Flows Comparison			
Storm Event	Peak Pre-Development Flows (cfs)	Peak Post-Development Flows (cfs)	Peak Flow Increase or (Decrease) – (cfs)
2-Year	0.80	0.79	(0.01)
5-Year	1.17	0.94	(0.23)
10-Year	1.39	1.03	(0.36)
25-Year	1.68	1.65	(0.03)

As demonstrated by the peak flow comparison table above, the site’s peak post-developed flow is less than its corresponding peak pre-developed flow for each of the required storm events. Additionally, the site’s overall basin drainage pattern has been preserved and the stormwater will be directed to the same general downstream discharge point (wetland located on the development property) it historically has. These reasons substantiate that the improvements should not negatively affect any of the adjacent or downstream properties and downstream storm water facilities.

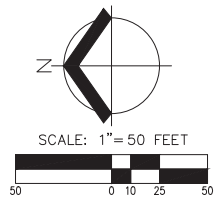
If you have any questions, please feel free to call 503-563-6151 or email at chuckg@aks-eng.com.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC
 Chuck Gregory, PE, Principal
 12965 SW Herman Road, Suite 100
 Tualatin, OR 97062
 503-563-6151 | chuckg@aks-eng.com



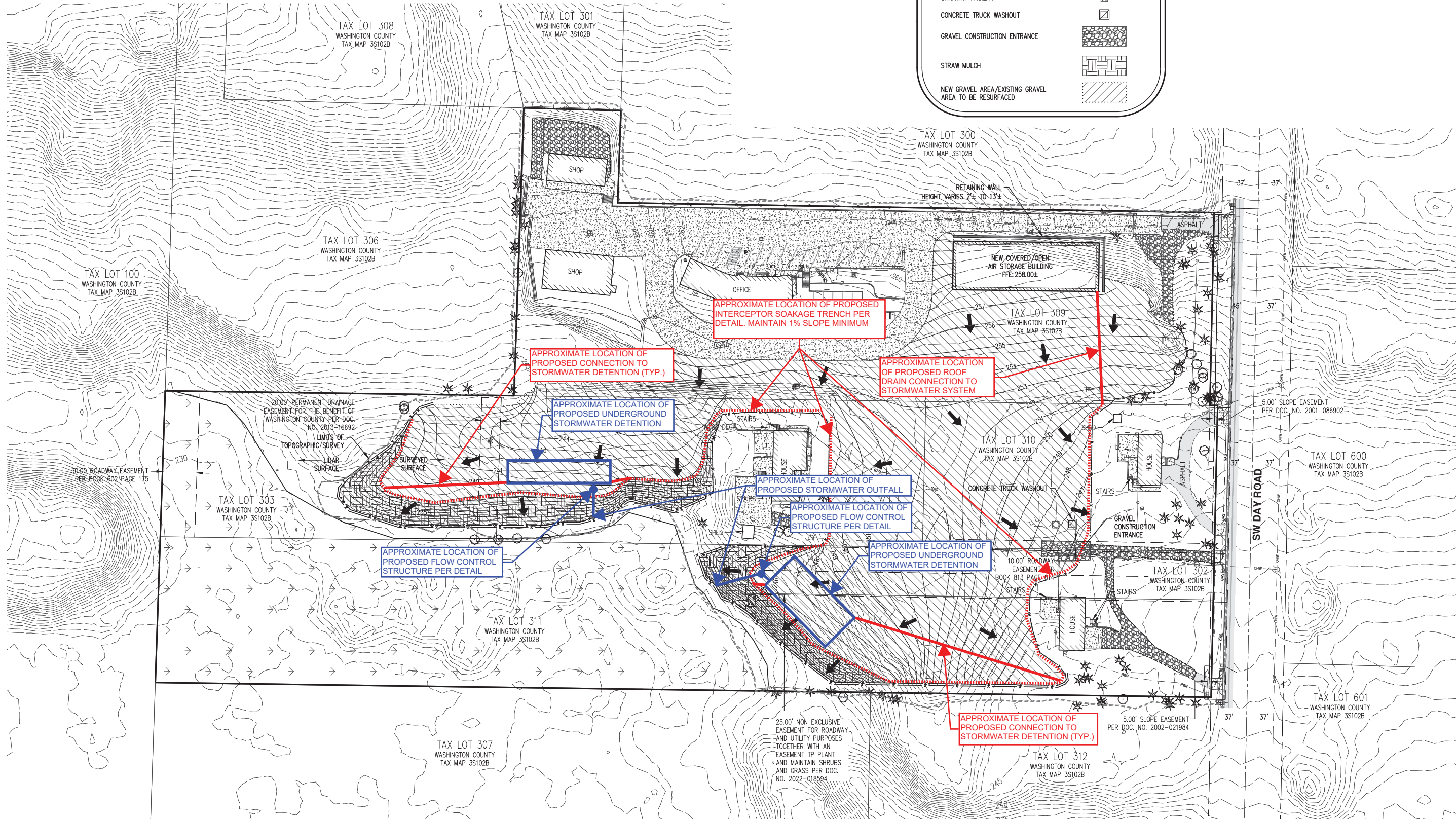
- Attachments:
- Preliminary Utility Plan - Attachment A
 - Interceptor Soakage Trench Detail - Attachment B
 - Flow Control Structure Details – Attachment C
 - Soil Report - Attachment D
 - Basin Map - Attachment E
 - HydroCAD Report - Attachment F
 - TR55 Runoff Curve Numbers - Attachment G

ATTACHMENT A



LEGEND

EXISTING GROUND CONTOUR (1 FT)	---	150
EXISTING GROUND CONTOUR (5 FT)	---	150
FINISHED GRADE CONTOUR (1 FT)	---	150
FINISHED GRADE CONTOUR (5 FT)	---	150
EXISTING CONIFEROUS TREE		
EXISTING DECIDUOUS TREE		
DRAINAGE FLOW ARROW		
SEDIMENT FENCE OR STRAW WATTLES		
SANITARY FACILITY		
CONCRETE TRUCK WASHOUT		
GRAVEL CONSTRUCTION ENTRANCE		
STRAW MULCH		
NEW GRAVEL AREA/EXISTING GRAVEL AREA TO BE RESURFACED		

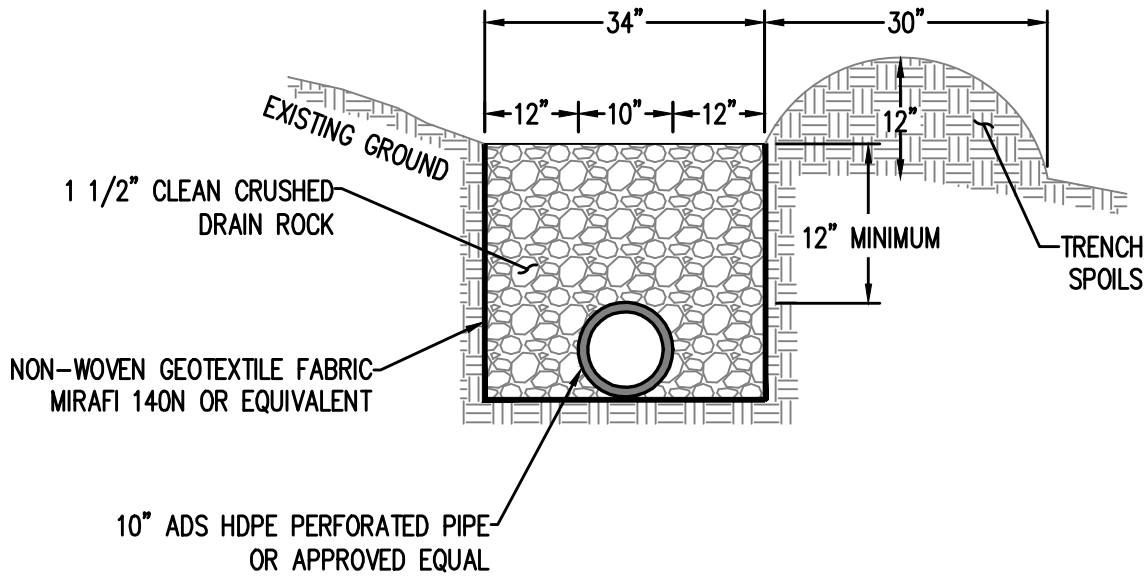


PRELIMINARY UTILITY PLAN
BROWN CONTRACTING, INC.
WASHINGTON COUNTY, OREGON



JOB NUMBER:	3916
DATE:	5/30/2024
DESIGNED BY:	DJS
DRAWN BY:	CDH
CHECKED BY:	BRB

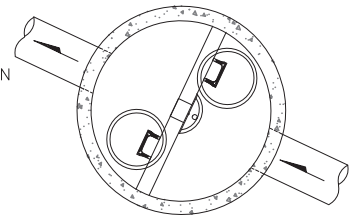
ATTACHMENT B



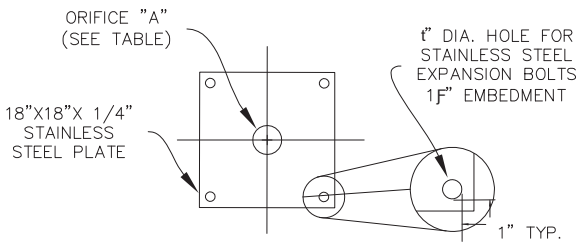
ATTACHMENT C

NOTES:

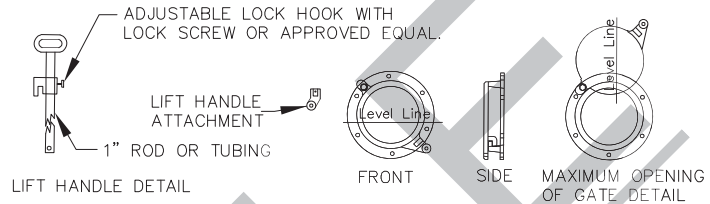
1. BAFFLE WALL SHALL HAVE #4 BAR AT 12" SPACING EACH WAY.
2. PRECAST BAFFLE SHALL BE KEYED AND GROUTED IN PLACE. JOINT BETWEEN CONCRETE BAFFLE AND MANHOLE WALL SHALL BE WATERTIGHT.
3. UPPER FLOW ORIFICE SHALL BE ALUMINUM, ALUMINIZED STEEL OR TREATMENT 1 GALVANIZED STEEL.
4. FRAME AND LADDER OR STEPS ARE TO BE OFFSET SO THAT SHEAR GATE IS VISIBLE FROM THE TOP; CLIMB-DOWN SPACE IS CLEAR OF RISER AND GATE; FRAME IS CLEAR OF CURB.
5. RESTRICTOR PLATE WITH ORIFICE AS SPECIFIED IN THE CONTRACT. OPENING IS TO BE CUT ROUND AND SMOOTH. NEOPRENE GASKET SHALL BE INSTALLED BETWEEN THE ORIFICE PLATE AND CONCRETE BAFFLE TO PROVIDE A WATERTIGHT SEAL.
6. SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275,
7. DESIGNATION Zg32A OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. LIFT HANDLE MAY BE SOLID ROD OR HOLLOW TUBING WITH ADJUSTABLE HOOK AS REQUIRED. NEOPRENE RUBBER GASKET REQUIRED BETWEEN RISER MOUNTING FLANGE AND GATE FLANGE. MATING SURFACES OF LID AND BODY SHALL BE MACHINED FOR PROPER FIT. FLANGE MOUNTING BOLTS SHALL BE 3/8" X 16 X 3" LG SS REDHEADS.
8. SHEAR GATE MAXIMUM OPENING SHALL BE CONTROLLED BY LIMITED HINGE MOVEMENT, STOP TAB OR SOME OTHER DEVICE.
9. ALTERNATE SHEAR GATES DESIGNS ARE ACCEPTABLE, IF MATERIAL SPECIFICATIONS ARE MET AND FLANGE BOLT PATTERN MATCHES.
10. ALL MANHOLE FLAT TOPS SHALL CONFORM TO ASTM C-478 AND ARE DESIGNED TO MEET H-20 TRAFFIC LOADING..



PLAN



RESTRICTOR PLATE, ORIFICE



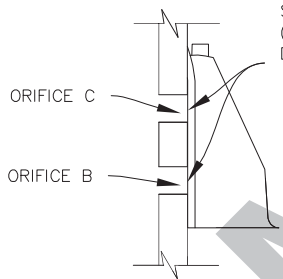
SHEAR GATE
MANUFACTURED BY KENNEDY VALVE OR EQUAL

INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS MIN 2" BELOW THE ORIFICE B INVERT.

ONE SNOOT MAY BE USED FOR BOTH ORIFICE C AND B.

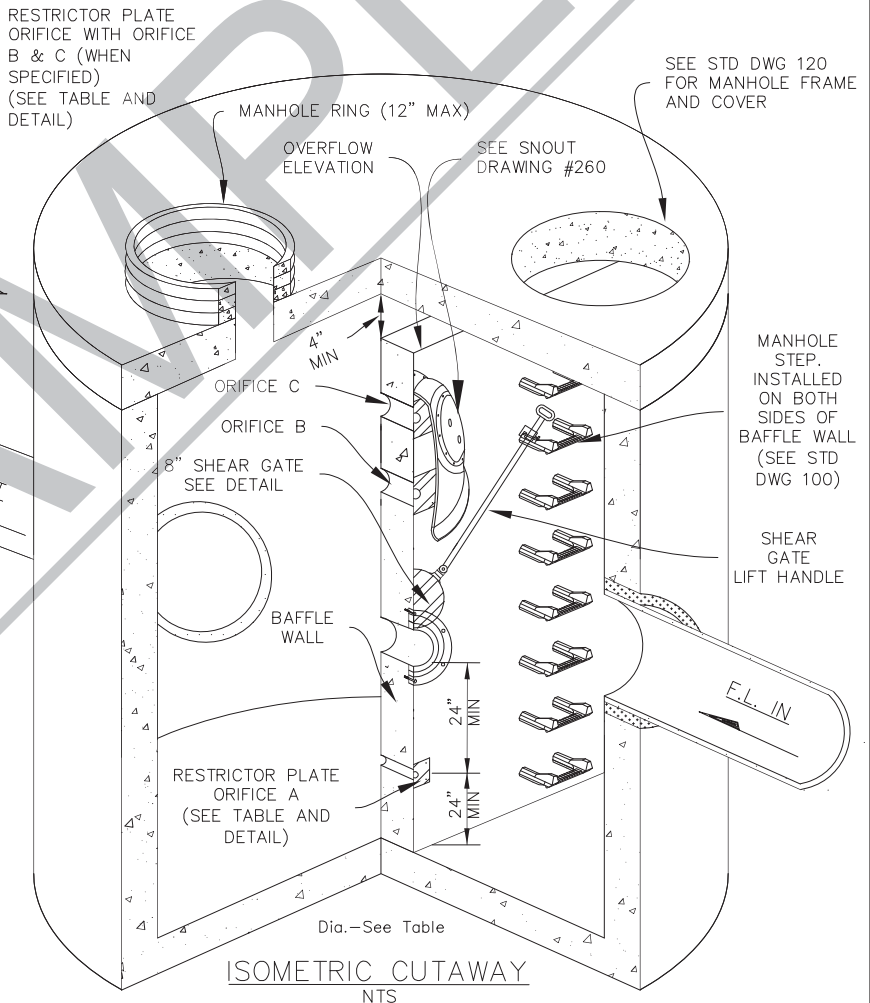
IT MAY BE NECESSARY TO USE TWO SNOOTS ON OFFSET ORIFICES TO MEET PLAN ELEVATION.



SNOOT DETAIL

FLOW CONTROL STRUCTURE TABLE

Diameter Of Manhole (In.)	60" MIN
F.L. (In)	
F.L. (Out)	
Outlet Pipe Diameter (In.)	
Number Of Orifice	
Orifice A Elevation	
Diameter Of Orifice A (In.)	
Orifice B Elevation	
Diameter Of Orifice B (In.)	
Orifice C Elevation	
Diameter Of Orifice C (In)	
Overflow Elevation	
Rim Elevation	



ISOMETRIC CUTAWAY
NTS

FLOW CONTROL STRUCTURE
DETAIL



ATTACHMENT D

Custom Soil Resource Report for Washington County, Oregon



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

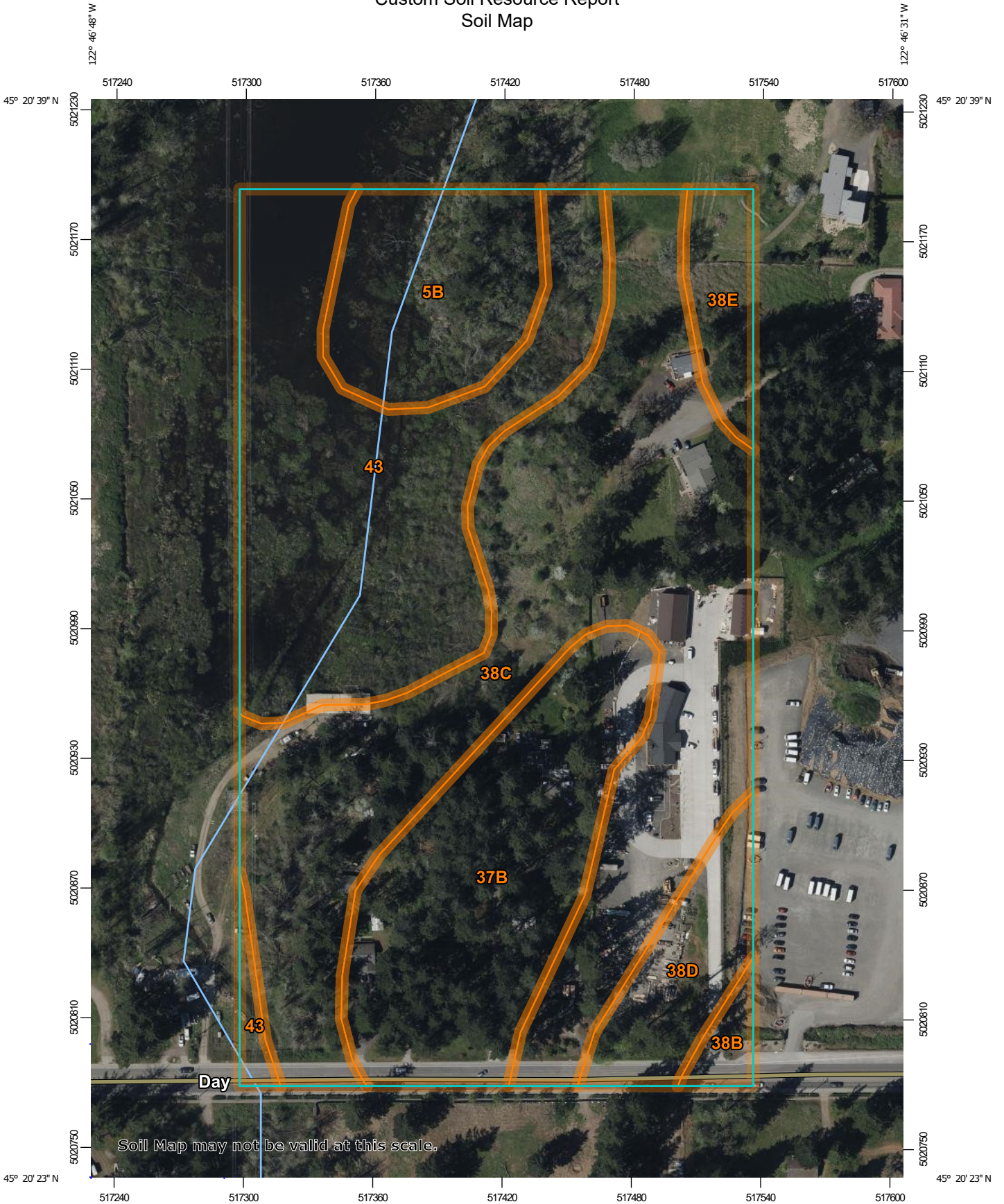
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

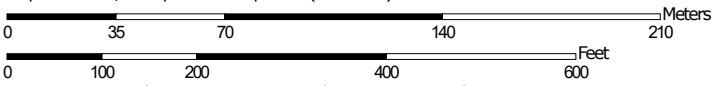
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.


Map Scale: 1:2,430 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Oregon
 Survey Area Data: Version 22, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 16, 2021—Apr 18, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	2.2	8.9%
37B	Quatama loam, 3 to 7 percent slopes	4.2	17.2%
38B	Saum silt loam, 2 to 7 percent slopes	0.3	1.1%
38C	Saum silt loam, 7 to 12 percent slopes	9.8	40.0%
38D	Saum silt loam, 12 to 20 percent slopes	1.3	5.2%
38E	Saum silt loam, 20 to 30 percent slopes	0.8	3.1%
43	Wapato silty clay loam	6.0	24.4%
Totals for Area of Interest		24.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor

Custom Soil Resource Report

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Washington County, Oregon

5B—Briedwell stony silt loam, 0 to 7 percent slopes

Map Unit Setting

National map unit symbol: 220h

Elevation: 200 to 320 feet

Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Briedwell and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Briedwell

Setting

Landform: Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Silty over gravelly alluvium

Typical profile

H1 - 0 to 12 inches: stony silt loam

H2 - 12 to 26 inches: clay loam

H3 - 26 to 60 inches: extremely cobbly clay loam

Properties and qualities

Slope: 0 to 7 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R002XC006OR - Stream Terrace Group

Forage suitability group: Well drained < 15% Slopes (G002XY002OR)

Other vegetative classification: Well drained < 15% Slopes (G002XY002OR)

Hydric soil rating: No

37B—Quatama loam, 3 to 7 percent slopes

Map Unit Setting

National map unit symbol: 21zm
Elevation: 140 to 250 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Quatama and similar soils: 85 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quatama

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 15 inches: loam
H2 - 15 to 30 inches: clay loam
H3 - 30 to 62 inches: loam

Properties and qualities

Slope: 3 to 7 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R002XC008OR - Valley Terrace Group
Forage suitability group: Moderately Well Drained < 15% Slopes (G002XY004OR)
Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Huberly

Percent of map unit: 4 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

38B—Saum silt loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: 21zq
Elevation: 250 to 1,200 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Saum and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills
Landform position (two-dimensional): Summit, toeslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 23 inches: silty clay loam
H3 - 23 to 50 inches: stony silty clay loam
H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Custom Soil Resource Report

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F002XB006OR - Foothill Group

Forage suitability group: Well drained < 15% Slopes (G002XY002OR)

Other vegetative classification: Well drained < 15% Slopes (G002XY002OR)

Hydric soil rating: No

38C—Saum silt loam, 7 to 12 percent slopes

Map Unit Setting

National map unit symbol: 21zr

Elevation: 250 to 1,200 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Saum and similar soils: 80 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluve, base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 23 inches: silty clay loam

H3 - 23 to 50 inches: stony silty clay loam

H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 7 to 12 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F002XB006OR - Foothill Group
Forage suitability group: Well drained < 15% Slopes (G002XY002OR)
Other vegetative classification: Well drained < 15% Slopes (G002XY002OR)
Hydric soil rating: No

38D—Saum silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 21zs
Elevation: 250 to 1,200 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Saum and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 23 inches: silty clay loam
H3 - 23 to 50 inches: stony silty clay loam
H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 3e

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Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F002XB006OR - Foothill Group
Forage suitability group: Well Drained > 15% Slopes (G002XY001OR)
Other vegetative classification: Well Drained > 15% Slopes (G002XY001OR)
Hydric soil rating: No

38E—Saum silt loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: 21zt
Elevation: 250 to 1,200 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Saum and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 23 inches: silty clay loam
H3 - 23 to 50 inches: stony silty clay loam
H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

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Ecological site: F002XB006OR - Foothill Group
Forage suitability group: Well Drained > 15% Slopes (G002XY001OR)
Other vegetative classification: Well Drained > 15% Slopes (G002XY001OR)
Hydric soil rating: No

43—Wapato silty clay loam

Map Unit Setting

National map unit symbol: 2203
Elevation: 100 to 300 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Wapato and similar soils: 85 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wapato

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Recent alluvium

Typical profile

H1 - 0 to 14 inches: silty clay loam
H2 - 14 to 42 inches: silty clay loam
H3 - 42 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F002XC002OR - Backswamp Group
Forage suitability group: Poorly Drained (G002XY006OR)

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Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

Minor Components

Cove, silty clay loam surface

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Labish

Percent of map unit: 3 percent
Landform: Lakebeds (relict), flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

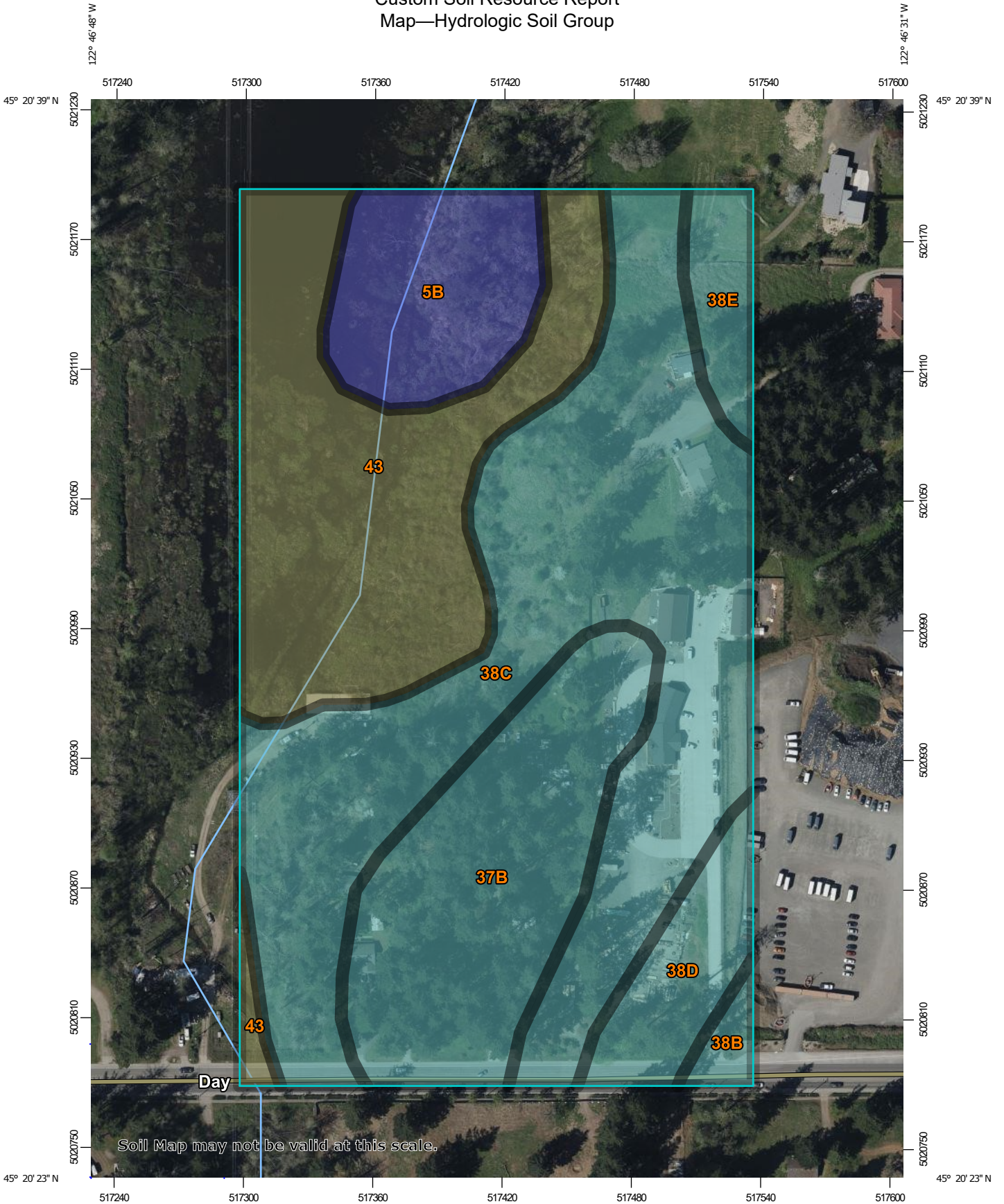
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Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

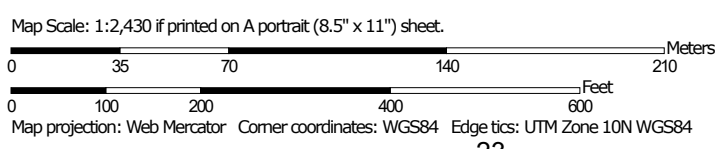
Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.


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Map—Hydrologic Soil Group



Soil Map may not be valid at this scale.











MAP LEGEND









Area of Interest (AOI)
 Area of Interest (AOI)

Soils





Soil Rating Polygons

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available





Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available


Soil Rating Points

-  A
-  A/D
-  B
-  B/D






Soils

-  C
-  C/D
-  D
-  Not rated or not available


Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Oregon
 Survey Area Data: Version 22, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 16, 2021—Apr 18, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	B	2.2	8.9%
37B	Quatama loam, 3 to 7 percent slopes	C	4.2	17.2%
38B	Saum silt loam, 2 to 7 percent slopes	C	0.3	1.1%
38C	Saum silt loam, 7 to 12 percent slopes	C	9.8	40.0%
38D	Saum silt loam, 12 to 20 percent slopes	C	1.3	5.2%
38E	Saum silt loam, 20 to 30 percent slopes	C	0.8	3.1%
43	Wapato silty clay loam	C/D	6.0	24.4%
Totals for Area of Interest			24.5	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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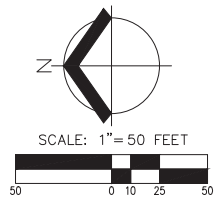
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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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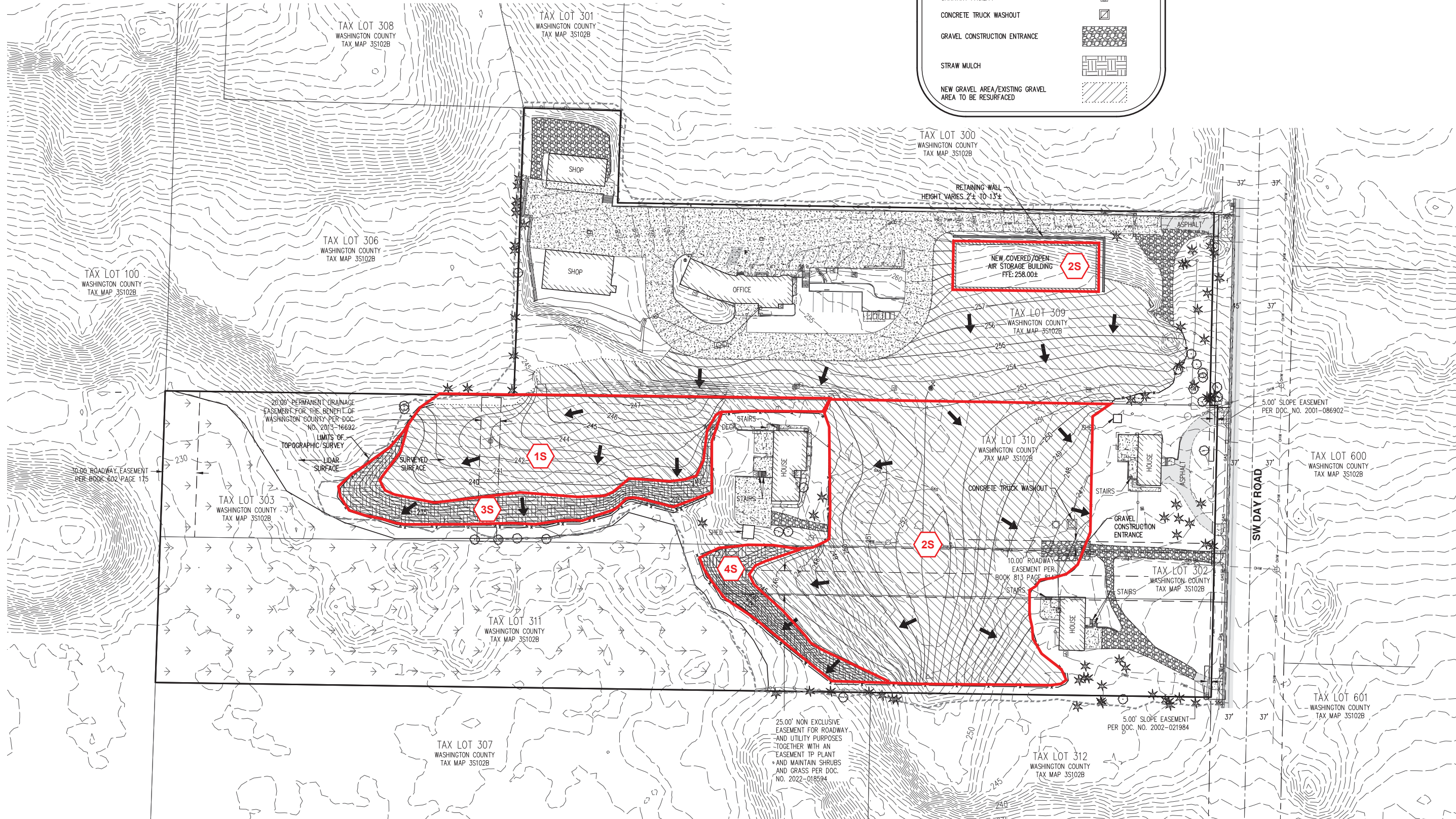
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ATTACHMENT E



LEGEND

EXISTING GROUND CONTOUR (1 FT)	---	150
EXISTING GROUND CONTOUR (5 FT)	---	150
FINISHED GRADE CONTOUR (1 FT)	---	150
FINISHED GRADE CONTOUR (5 FT)	---	150
EXISTING CONIFEROUS TREE		
EXISTING DECIDUOUS TREE		
DRAINAGE FLOW ARROW		
SEDIMENT FENCE OR STRAW WATTLES		
SANITARY FACILITY		
CONCRETE TRUCK WASHOUT		
GRAVEL CONSTRUCTION ENTRANCE		
STRAW MULCH		
NEW GRAVEL AREA/EXISTING GRAVEL AREA TO BE RESURFACED		



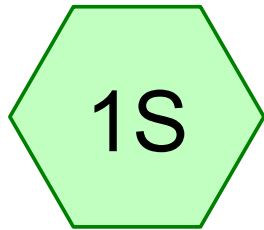
PRELIMINARY
 NOT FOR CONSTRUCTION

RENEWS: JUNE 30, 2025

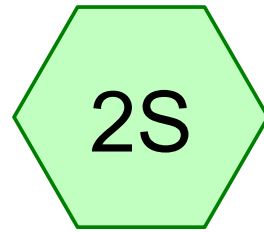
JOB NUMBER:	3916
DATE:	5/30/2024
DESIGNED BY:	DJS
DRAWN BY:	CDH
CHECKED BY:	BRB

AKS DRAWING FILE: 3916 GRADING LAND USE.DWG | LAYOUT: P4

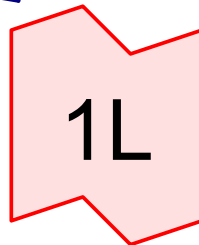
ATTACHMENT F



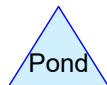
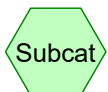
NORTH BASIN



SOUTH BASIN



TOTAL OUTFLOW



3916 9675 SW Day Road Pre-Developed HydroCAD Analysis

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.969	86	<50% Grass cover, Poor, HSG C (1S, 2S)
0.117	98	Paved parking, HSG C (2S)
3.086	86	TOTAL AREA

3916 9675 SW Day Road Pre-Developed HydroCAD Analysis

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
3.086	HSG C	1S, 2S
0.000	HSG D	
0.000	Other	
3.086		TOTAL AREA

3916 9675 SW Day Road Pre-Developed HydroCAD Analysis

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	2.969	0.000	0.000	2.969	<50% Grass cover, Poor	1S, 2S
0.000	0.000	0.117	0.000	0.000	0.117	Paved parking	2S
0.000	0.000	3.086	0.000	0.000	3.086	TOTAL AREA	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH BASIN Runoff Area=44,118 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=137' Slope=0.0850 '/' Tc=11.6 min CN=86/0 Runoff=0.27 cfs 0.104 af

Subcatchment 2S: SOUTH BASIN Runoff Area=90,298 sf 5.65% Impervious Runoff Depth>1.29"
Flow Length=266' Slope=0.1200 '/' Tc=17.2 min CN=86/98 Runoff=0.53 cfs 0.223 af

Link 1L: TOTAL OUTFLOW Inflow=0.80 cfs 0.327 af
Primary=0.80 cfs 0.327 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.327 af Average Runoff Depth = 1.27"
96.21% Pervious = 2.969 ac 3.79% Impervious = 0.117 ac

Summary for Subcatchment 1S: NORTH BASIN

Runoff = 0.27 cfs @ 8.01 hrs, Volume= 0.104 af, Depth> 1.24"

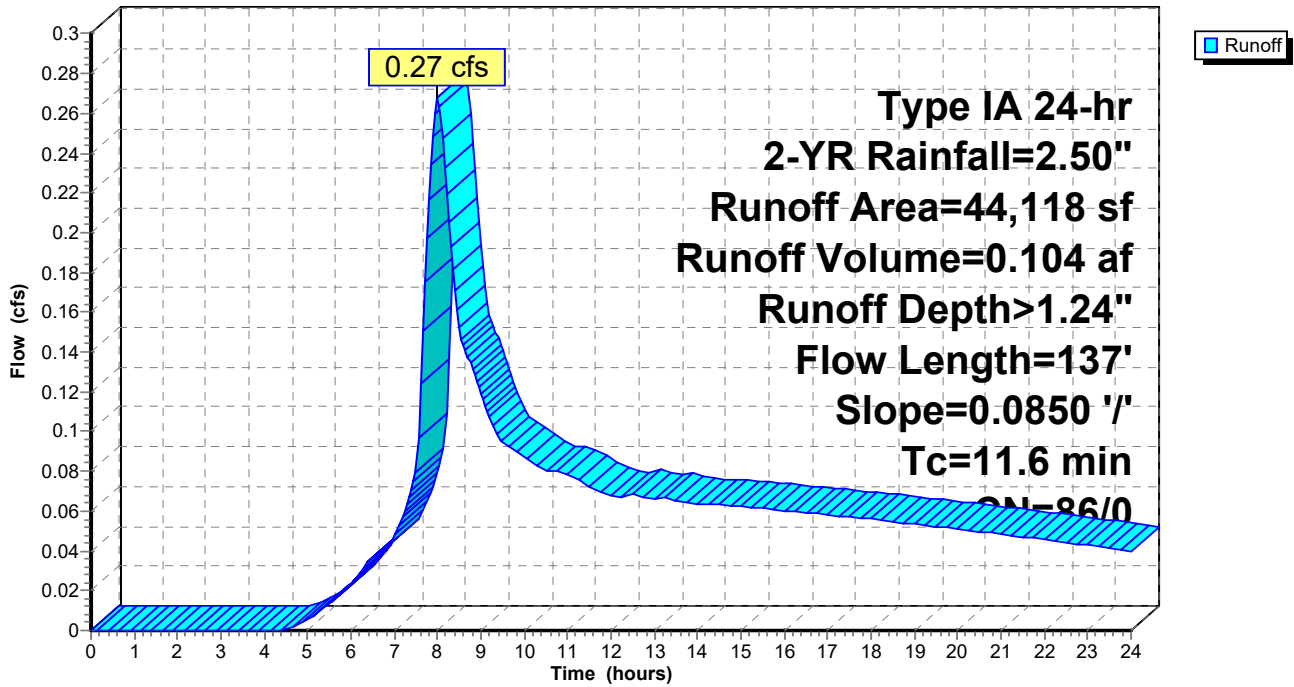
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
44,118	86	<50% Grass cover, Poor, HSG C
44,118	86	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	137	0.0850	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: NORTH BASIN

Hydrograph



Summary for Subcatchment 2S: SOUTH BASIN

Runoff = 0.53 cfs @ 8.03 hrs, Volume= 0.223 af, Depth> 1.29"

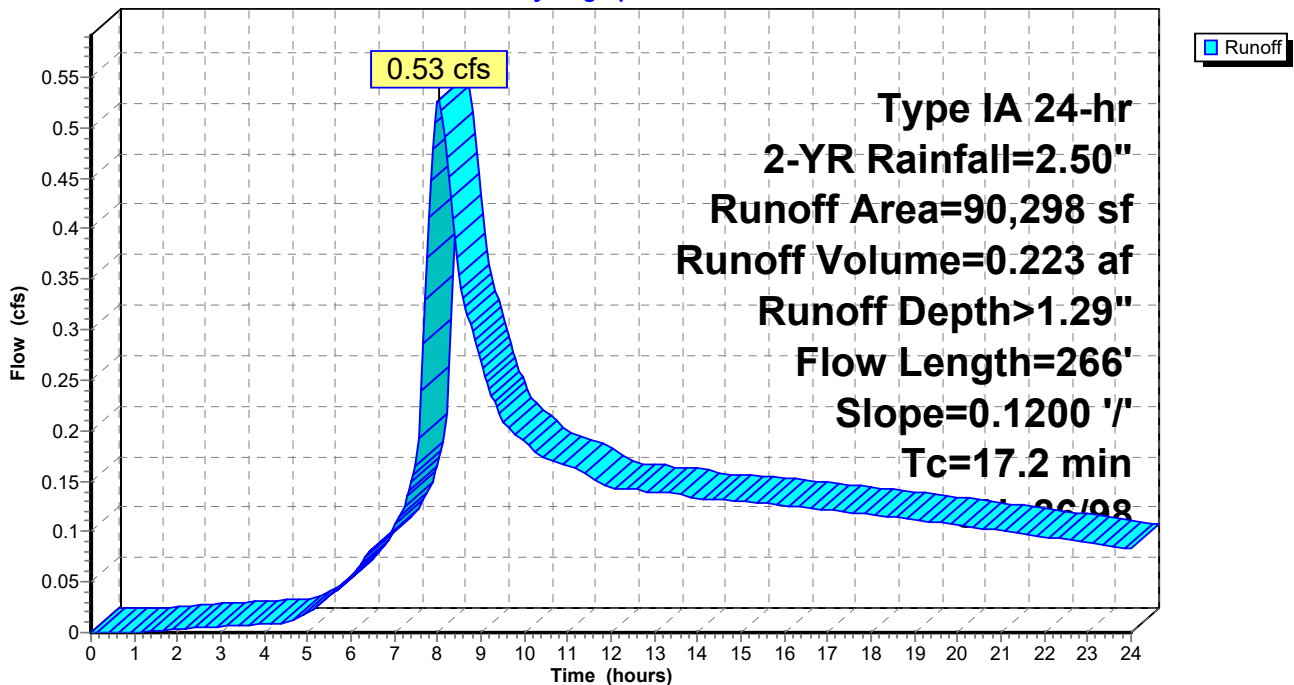
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
82,798	86	<50% Grass cover, Poor, HSG C
2,400	86	<50% Grass cover, Poor, HSG C
5,100	98	Paved parking, HSG C
90,298	87	Weighted Average
85,198	86	94.35% Pervious Area
5,100	98	5.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	266	0.1200	0.26		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 2S: SOUTH BASIN

Hydrograph

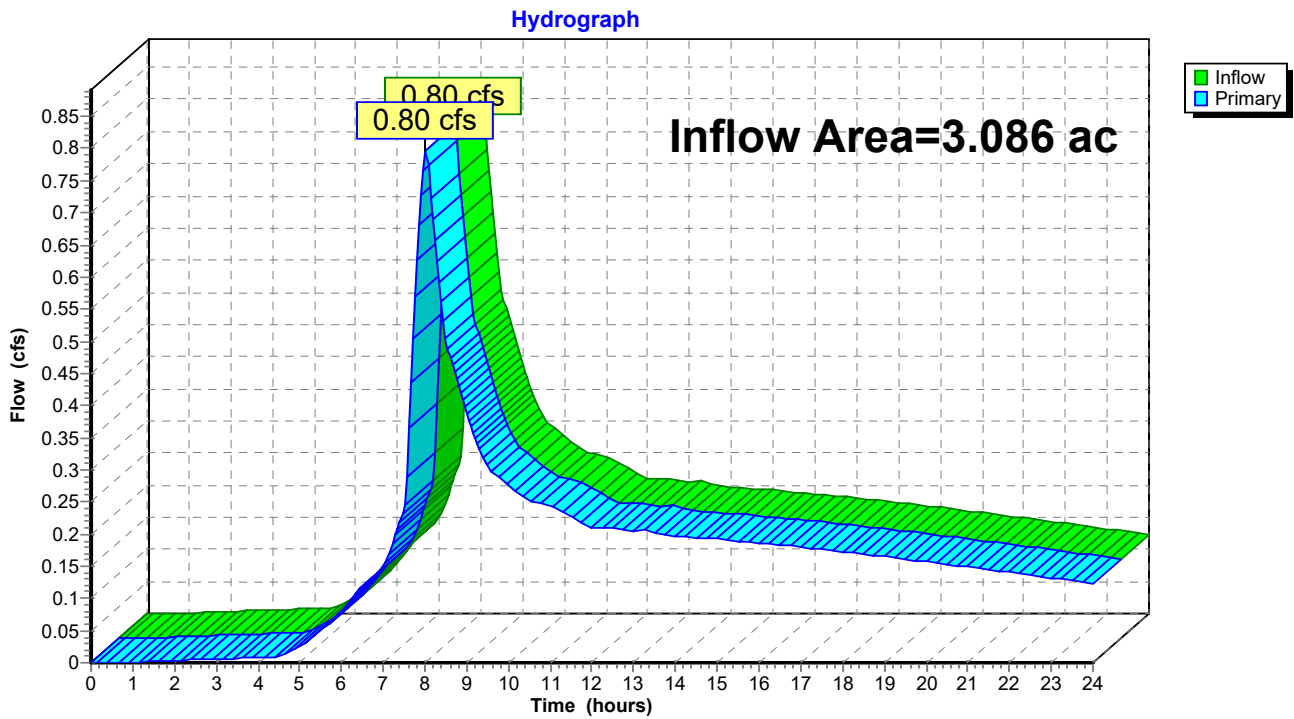


Summary for Link 1L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 3.79% Impervious, Inflow Depth > 1.27" for 2-YR event
 Inflow = 0.80 cfs @ 8.02 hrs, Volume= 0.327 af
 Primary = 0.80 cfs @ 8.02 hrs, Volume= 0.327 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH BASIN Runoff Area=44,118 sf 0.00% Impervious Runoff Depth>1.74"
Flow Length=137' Slope=0.0850 '/' Tc=11.6 min CN=86/0 Runoff=0.40 cfs 0.147 af

Subcatchment 2S: SOUTH BASIN Runoff Area=90,298 sf 5.65% Impervious Runoff Depth>1.80"
Flow Length=266' Slope=0.1200 '/' Tc=17.2 min CN=86/98 Runoff=0.77 cfs 0.310 af

Link 1L: TOTAL OUTFLOW Inflow=1.17 cfs 0.457 af
Primary=1.17 cfs 0.457 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.457 af Average Runoff Depth = 1.78"
96.21% Pervious = 2.969 ac 3.79% Impervious = 0.117 ac

Summary for Subcatchment 1S: NORTH BASIN

Runoff = 0.40 cfs @ 8.00 hrs, Volume= 0.147 af, Depth> 1.74"

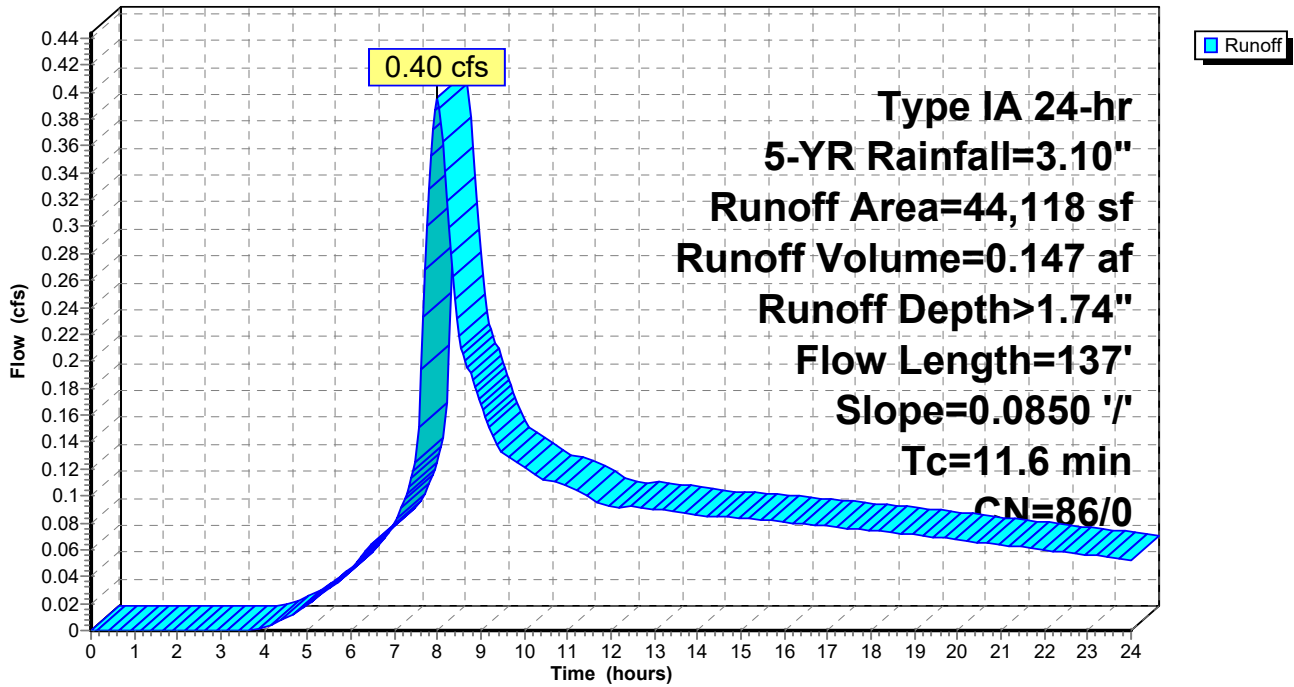
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
44,118	86	<50% Grass cover, Poor, HSG C
44,118	86	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	137	0.0850	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: NORTH BASIN

Hydrograph



Summary for Subcatchment 2S: SOUTH BASIN

Runoff = 0.77 cfs @ 8.02 hrs, Volume= 0.310 af, Depth> 1.80"

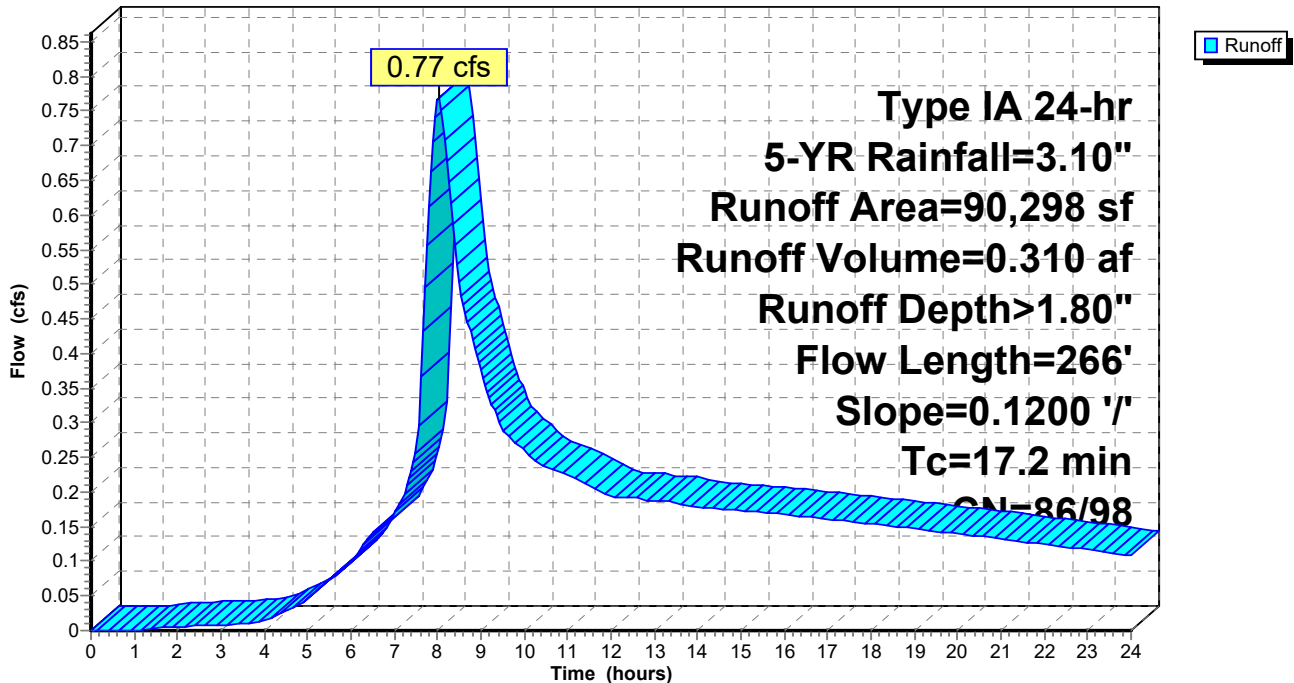
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
82,798	86	<50% Grass cover, Poor, HSG C
2,400	86	<50% Grass cover, Poor, HSG C
5,100	98	Paved parking, HSG C
90,298	87	Weighted Average
85,198	86	94.35% Pervious Area
5,100	98	5.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	266	0.1200	0.26		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 2S: SOUTH BASIN

Hydrograph

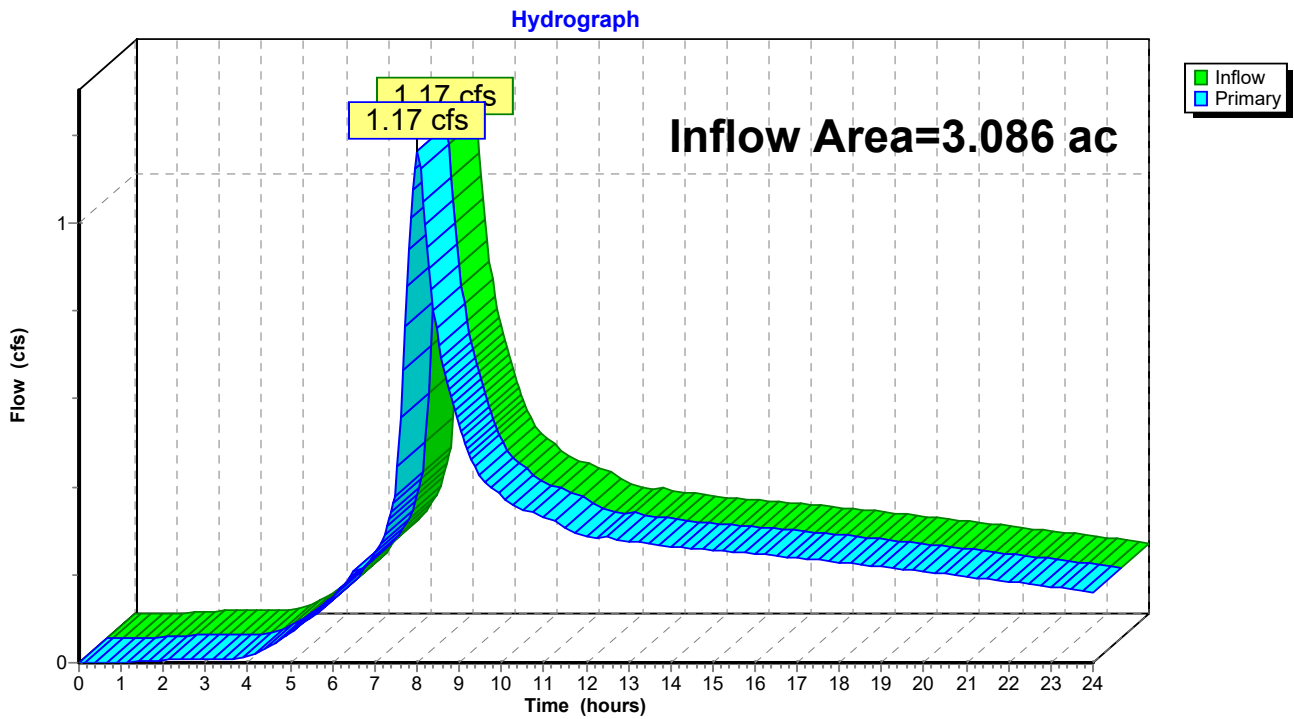


Summary for Link 1L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 3.79% Impervious, Inflow Depth > 1.78" for 5-YR event
 Inflow = 1.17 cfs @ 8.01 hrs, Volume= 0.457 af
 Primary = 1.17 cfs @ 8.01 hrs, Volume= 0.457 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH BASIN

Runoff Area=44,118 sf 0.00% Impervious Runoff Depth>2.04"

Flow Length=137' Slope=0.0850 '/' Tc=11.6 min CN=86/0 Runoff=0.47 cfs 0.172 af

Subcatchment 2S: SOUTH BASIN

Runoff Area=90,298 sf 5.65% Impervious Runoff Depth>2.10"

Flow Length=266' Slope=0.1200 '/' Tc=17.2 min CN=86/98 Runoff=0.92 cfs 0.363 af

Link 1L: TOTAL OUTFLOW

Inflow=1.39 cfs 0.536 af

Primary=1.39 cfs 0.536 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.536 af Average Runoff Depth = 2.08"
96.21% Pervious = 2.969 ac 3.79% Impervious = 0.117 ac

Summary for Subcatchment 1S: NORTH BASIN

Runoff = 0.47 cfs @ 8.00 hrs, Volume= 0.172 af, Depth> 2.04"

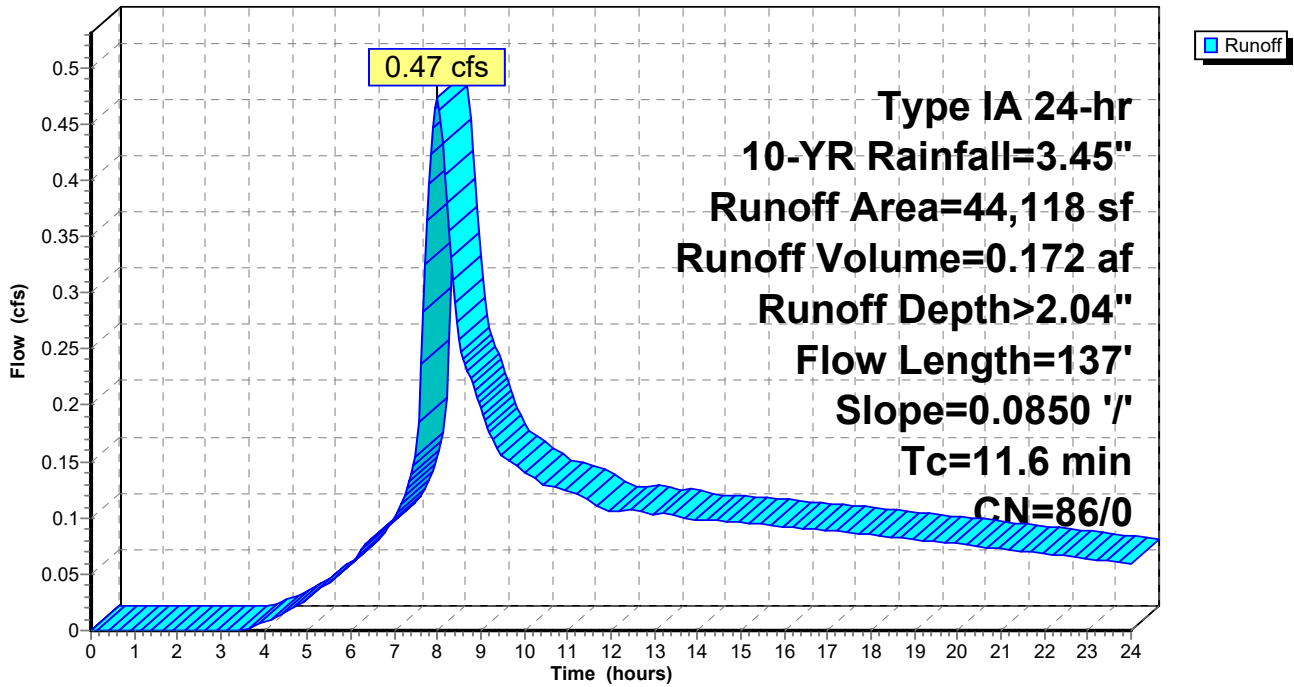
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
44,118	86	<50% Grass cover, Poor, HSG C
44,118	86	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	137	0.0850	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: NORTH BASIN

Hydrograph



Summary for Subcatchment 2S: SOUTH BASIN

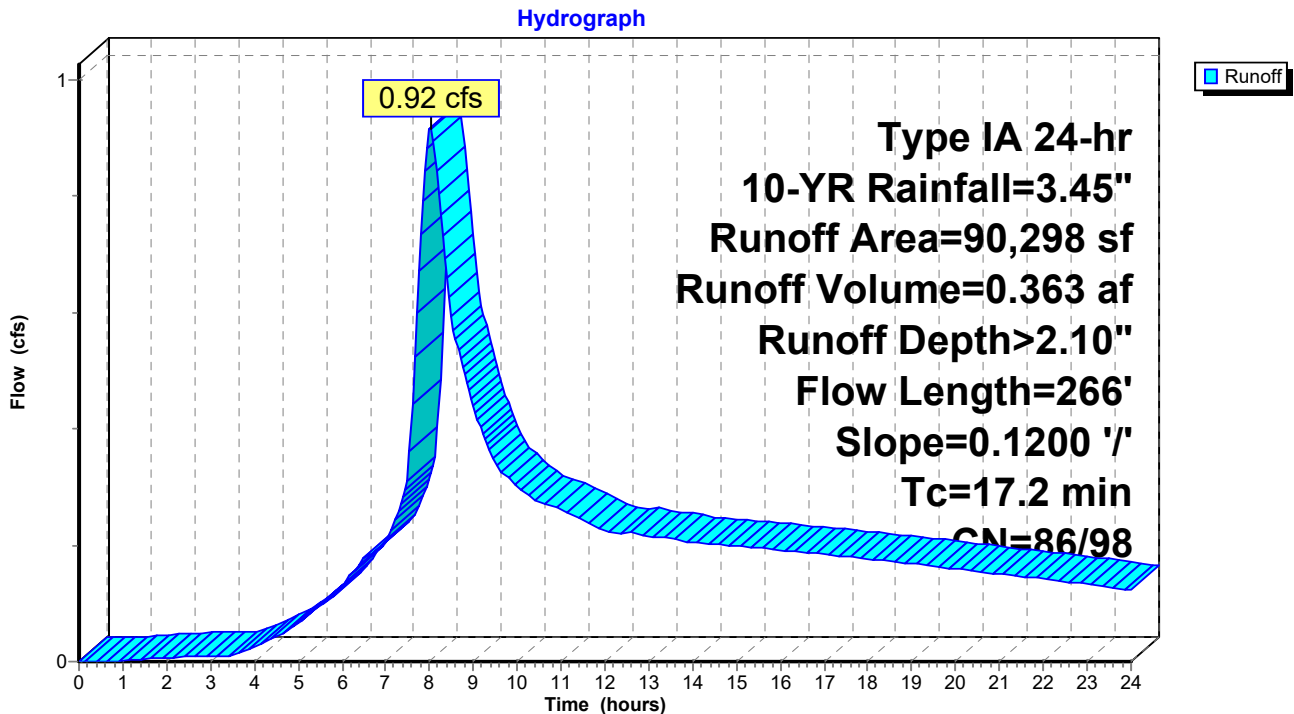
Runoff = 0.92 cfs @ 8.02 hrs, Volume= 0.363 af, Depth> 2.10"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
82,798	86	<50% Grass cover, Poor, HSG C
2,400	86	<50% Grass cover, Poor, HSG C
5,100	98	Paved parking, HSG C
90,298	87	Weighted Average
85,198	86	94.35% Pervious Area
5,100	98	5.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	266	0.1200	0.26		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 2S: SOUTH BASIN

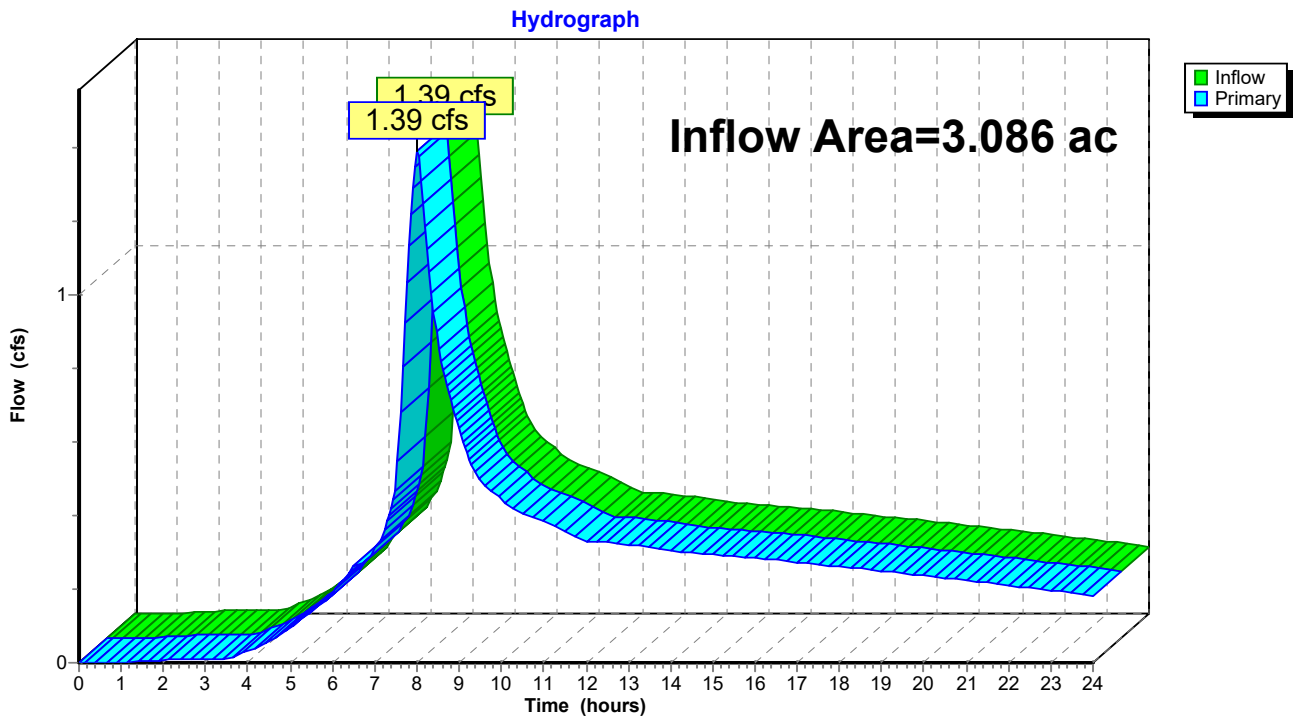


Summary for Link 1L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 3.79% Impervious, Inflow Depth > 2.08" for 10-YR event
Inflow = 1.39 cfs @ 8.01 hrs, Volume= 0.536 af
Primary = 1.39 cfs @ 8.01 hrs, Volume= 0.536 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW



3916 9675 SW Day Road Pre-Developed HydroCAD AnType IA 24-hr 25-YR Rainfall=3.90"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH BASIN

Runoff Area=44,118 sf 0.00% Impervious Runoff Depth>2.44"

Flow Length=137' Slope=0.0850 '/' Tc=11.6 min CN=86/0 Runoff=0.58 cfs 0.206 af

Subcatchment 2S: SOUTH BASIN

Runoff Area=90,298 sf 5.65% Impervious Runoff Depth>2.50"

Flow Length=266' Slope=0.1200 '/' Tc=17.2 min CN=86/98 Runoff=1.11 cfs 0.433 af

Link 1L: TOTAL OUTFLOW

Inflow=1.68 cfs 0.639 af

Primary=1.68 cfs 0.639 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.639 af Average Runoff Depth = 2.48"
96.21% Pervious = 2.969 ac 3.79% Impervious = 0.117 ac

Summary for Subcatchment 1S: NORTH BASIN

Runoff = 0.58 cfs @ 8.00 hrs, Volume= 0.206 af, Depth> 2.44"

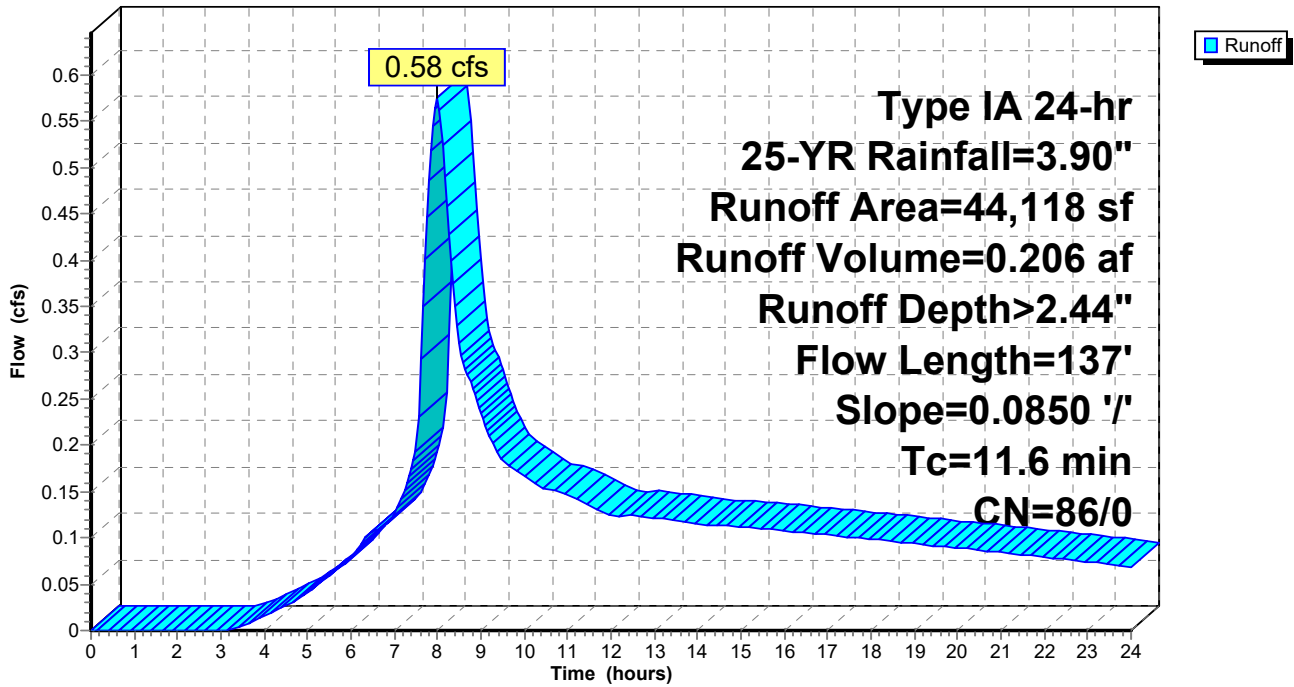
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
44,118	86	<50% Grass cover, Poor, HSG C
44,118	86	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	137	0.0850	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: NORTH BASIN

Hydrograph



Summary for Subcatchment 2S: SOUTH BASIN

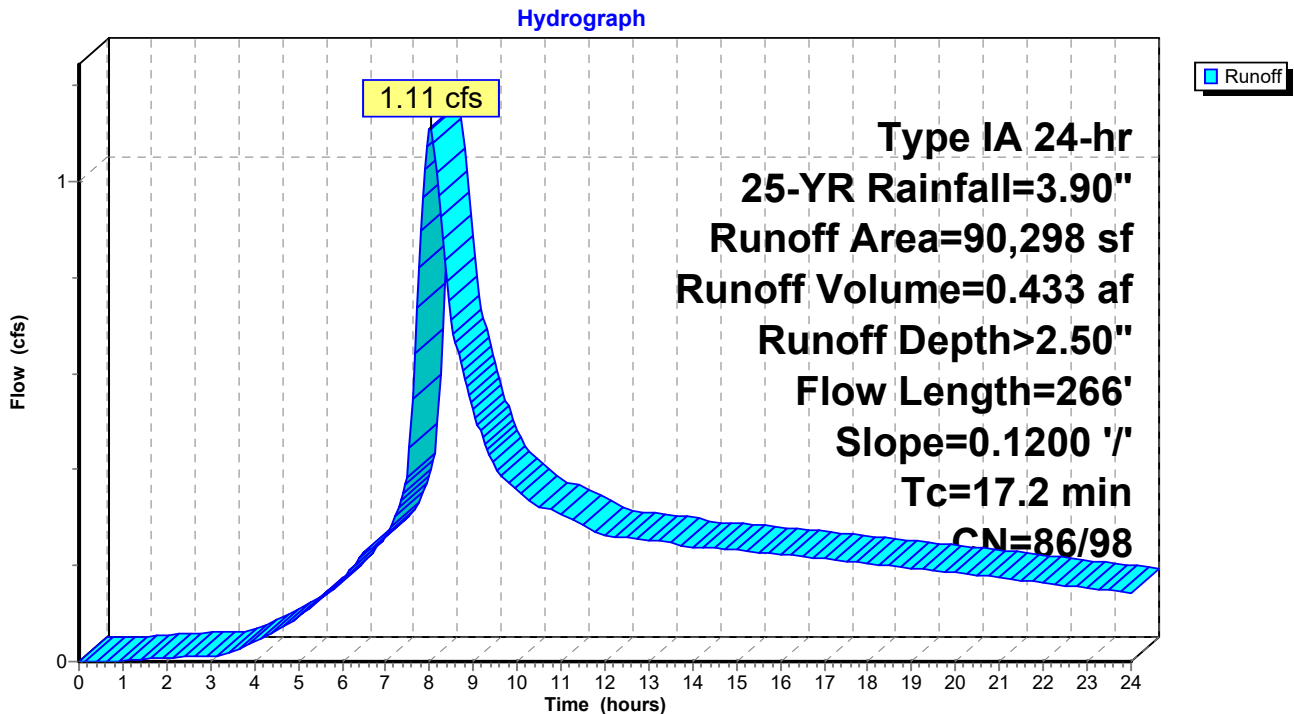
Runoff = 1.11 cfs @ 8.02 hrs, Volume= 0.433 af, Depth> 2.50"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
82,798	86	<50% Grass cover, Poor, HSG C
2,400	86	<50% Grass cover, Poor, HSG C
5,100	98	Paved parking, HSG C
90,298	87	Weighted Average
85,198	86	94.35% Pervious Area
5,100	98	5.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	266	0.1200	0.26		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 2S: SOUTH BASIN

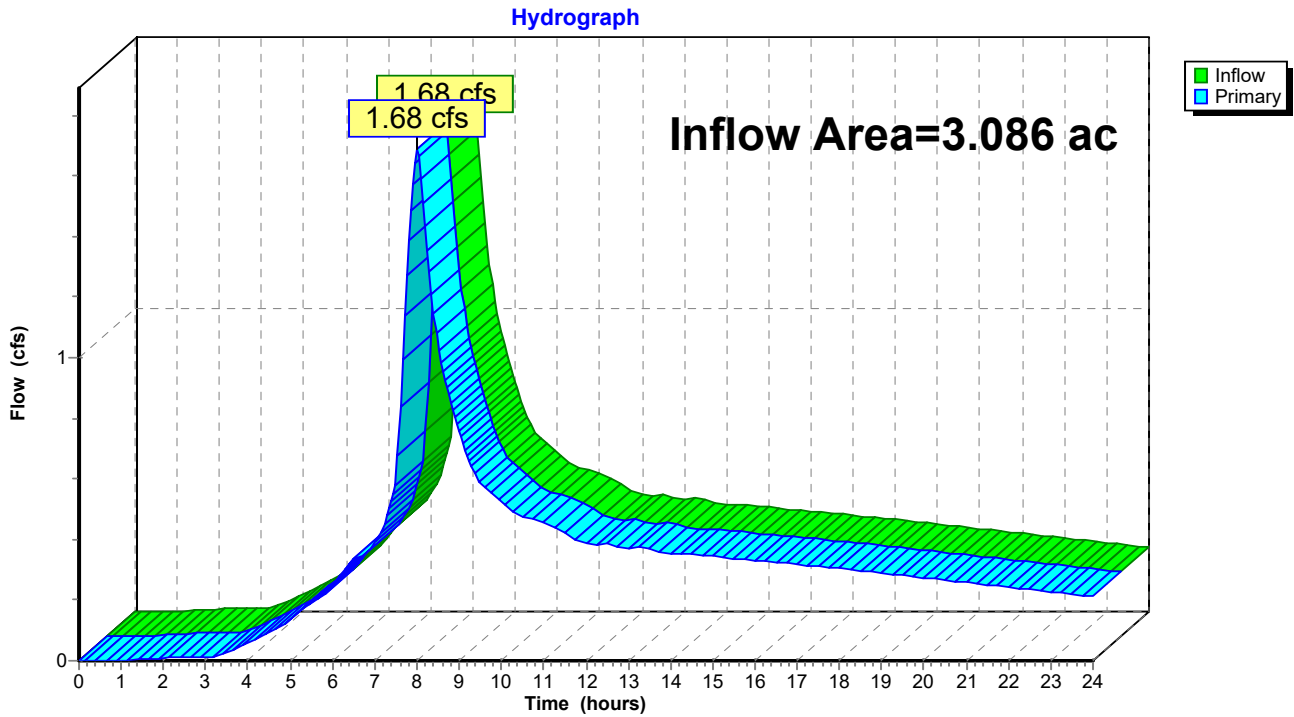


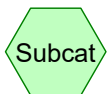
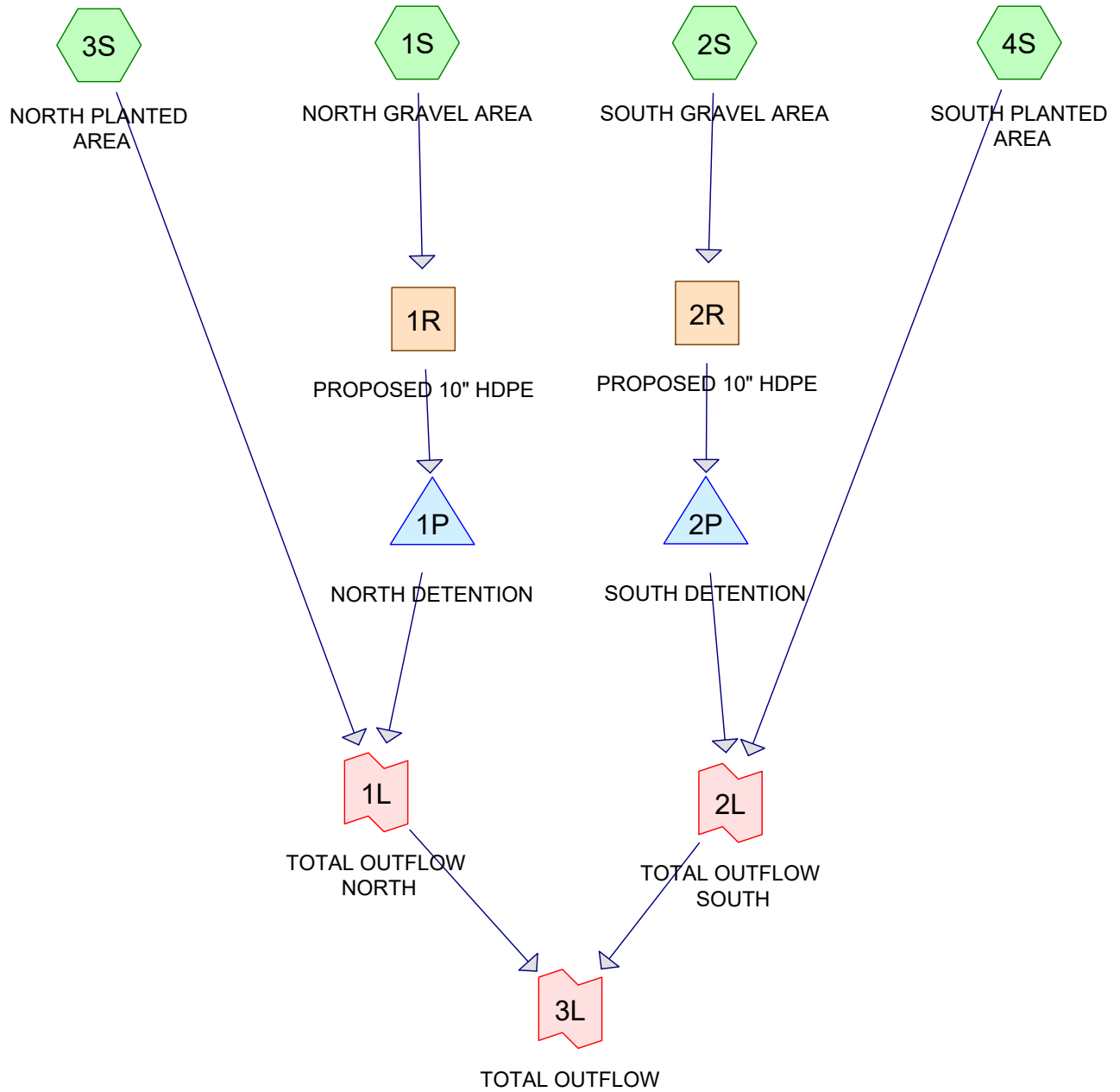
Summary for Link 1L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 3.79% Impervious, Inflow Depth > 2.48" for 25-YR event
Inflow = 1.68 cfs @ 8.01 hrs, Volume= 0.639 af
Primary = 1.68 cfs @ 8.01 hrs, Volume= 0.639 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW

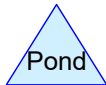




Subcat



Reach



Pond



Link

Routing Diagram for 3916 9675 SW Day Road Post-Developed HydroCAD Analysis

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.425	74	>75% Grass cover, Good, HSG C (3S, 4S)
1.928	98	Gravel Staging Area and New Storage Building, HSG C (2S)
0.734	98	Gravel Staging Area, HSG C (1S)
3.086	95	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
3.086	HSG C	1S, 2S, 3S, 4S
0.000	HSG D	
0.000	Other	
3.086		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover
0.000	0.000	0.425	0.000	0.000	0.425	>75% Grass cover, Good
0.000	0.000	0.734	0.000	0.000	0.734	Gravel Staging Area
0.000	0.000	1.928	0.000	0.000	1.928	Gravel Staging Area and New Storage Building
0.000	0.000	3.086	0.000	0.000	3.086	TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1R	236.00	235.80	10.0	0.0200	0.013	10.0	0.0	0.0
2	2R	238.40	238.20	10.0	0.0200	0.013	10.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH GRAVEL AREA Runoff Area=31,952 sf 100.00% Impervious Runoff Depth>2.27"
 Tc=5.0 min CN=0/98 Runoff=0.42 cfs 0.139 af

Subcatchment 2S: SOUTH GRAVEL AREA Runoff Area=83,964 sf 100.00% Impervious Runoff Depth>2.27"
 Tc=5.0 min CN=0/98 Runoff=1.11 cfs 0.364 af

Subcatchment 3S: NORTH PLANTED AREA Runoff Area=12,166 sf 0.00% Impervious Runoff Depth>0.61"
 Tc=5.0 min CN=74/0 Runoff=0.02 cfs 0.014 af

Subcatchment 4S: SOUTH PLANTED AREA Runoff Area=6,342 sf 0.00% Impervious Runoff Depth>0.61"
 Tc=5.0 min CN=74/0 Runoff=0.01 cfs 0.007 af

Reach 1R: PROPOSED 10" HDPE Avg. Flow Depth=0.21' Max Vel=3.98 fps Inflow=0.42 cfs 0.139 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=3.10 cfs Outflow=0.42 cfs 0.139 af

Reach 2R: PROPOSED 10" HDPE Avg. Flow Depth=0.34' Max Vel=5.21 fps Inflow=1.11 cfs 0.364 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=3.10 cfs Outflow=1.11 cfs 0.364 af

Pond 1P: NORTH DETENTION Peak Elev=235.00' Storage=0.010 af Inflow=0.42 cfs 0.139 af
 Outflow=0.26 cfs 0.138 af

Pond 2P: SOUTH DETENTION Peak Elev=236.11' Storage=0.043 af Inflow=1.11 cfs 0.364 af
 Outflow=0.50 cfs 0.362 af

Link 1L: TOTAL OUTFLOW NORTH Inflow=0.28 cfs 0.152 af
 Primary=0.28 cfs 0.152 af

Link 2L: TOTAL OUTFLOW SOUTH Inflow=0.51 cfs 0.370 af
 Primary=0.51 cfs 0.370 af

Link 3L: TOTAL OUTFLOW Inflow=0.79 cfs 0.522 af
 Primary=0.79 cfs 0.522 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.524 af Average Runoff Depth = 2.04"
13.77% Pervious = 0.425 ac 86.23% Impervious = 2.661 ac

Summary for Subcatchment 1S: NORTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.42 cfs @ 7.90 hrs, Volume= 0.139 af, Depth> 2.27"

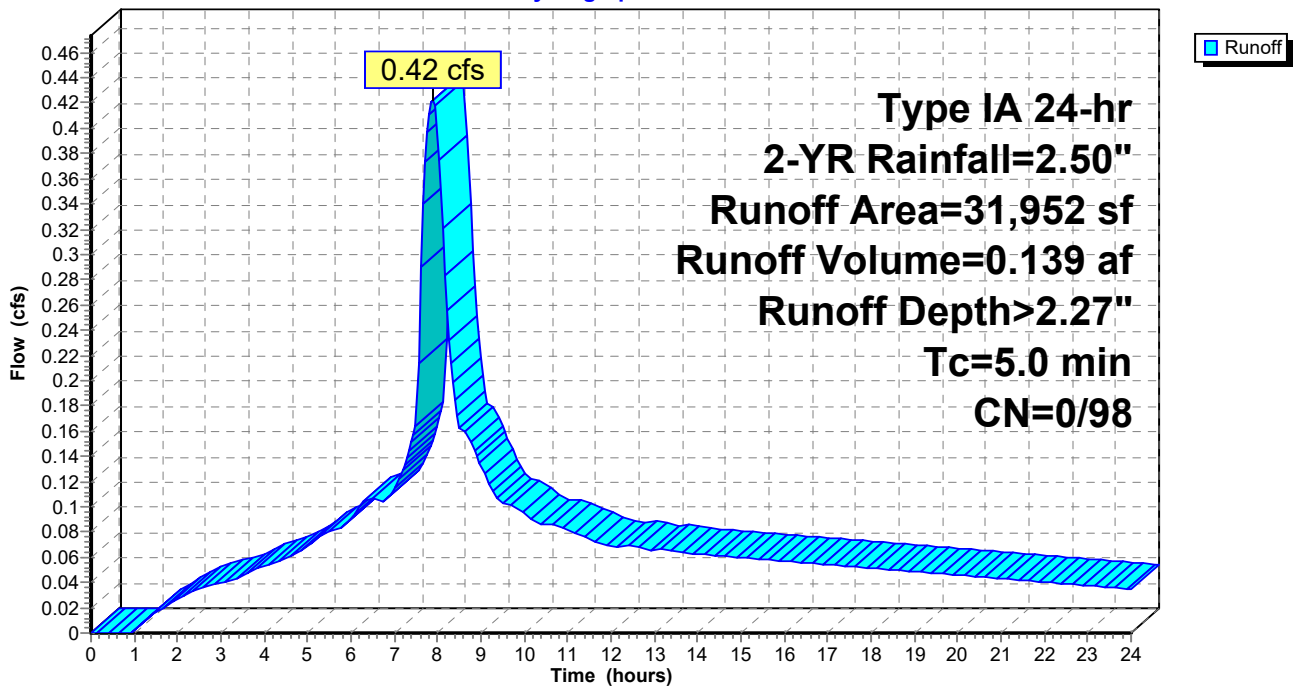
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
* 31,952	98	Gravel Staging Area, HSG C
31,952	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: NORTH GRAVEL AREA

Hydrograph



Summary for Subcatchment 2S: SOUTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

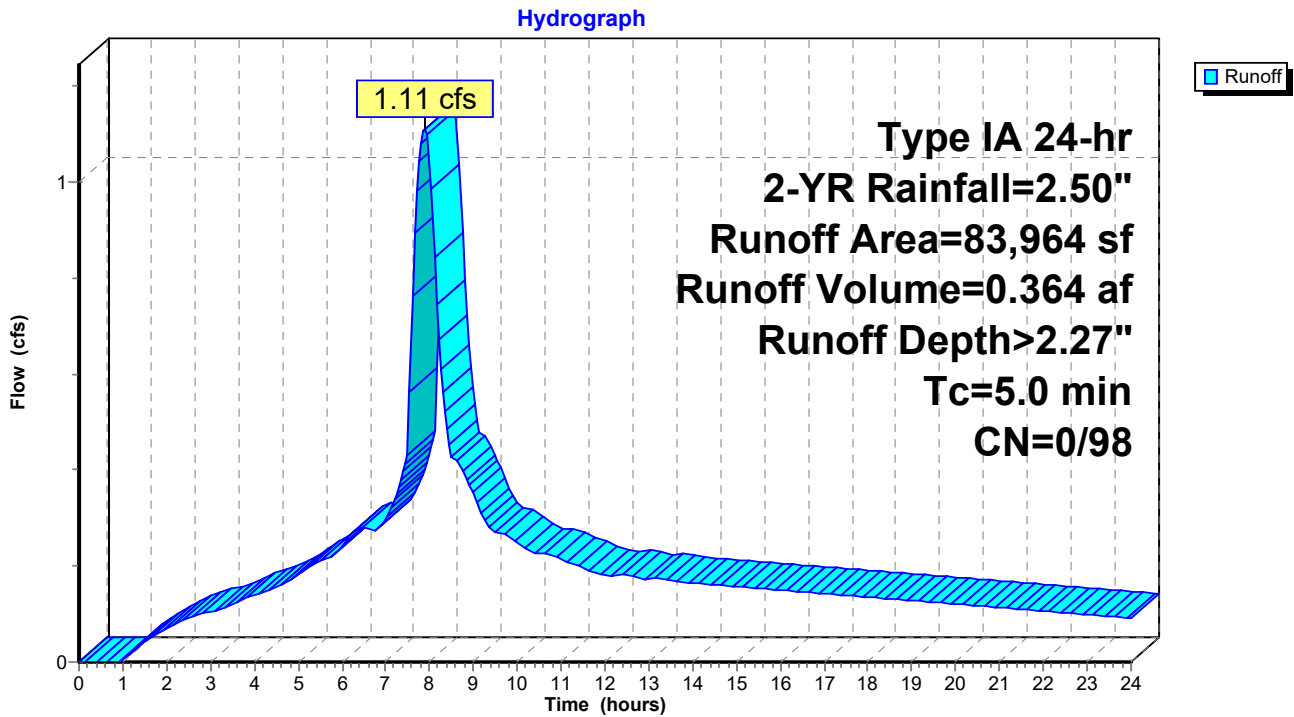
Runoff = 1.11 cfs @ 7.90 hrs, Volume= 0.364 af, Depth> 2.27"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
83,964	98	Gravel Staging Area and New Storage Building, HSG C
83,964	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: SOUTH GRAVEL AREA



Summary for Subcatchment 3S: NORTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.02 cfs @ 8.01 hrs, Volume= 0.014 af, Depth> 0.61"

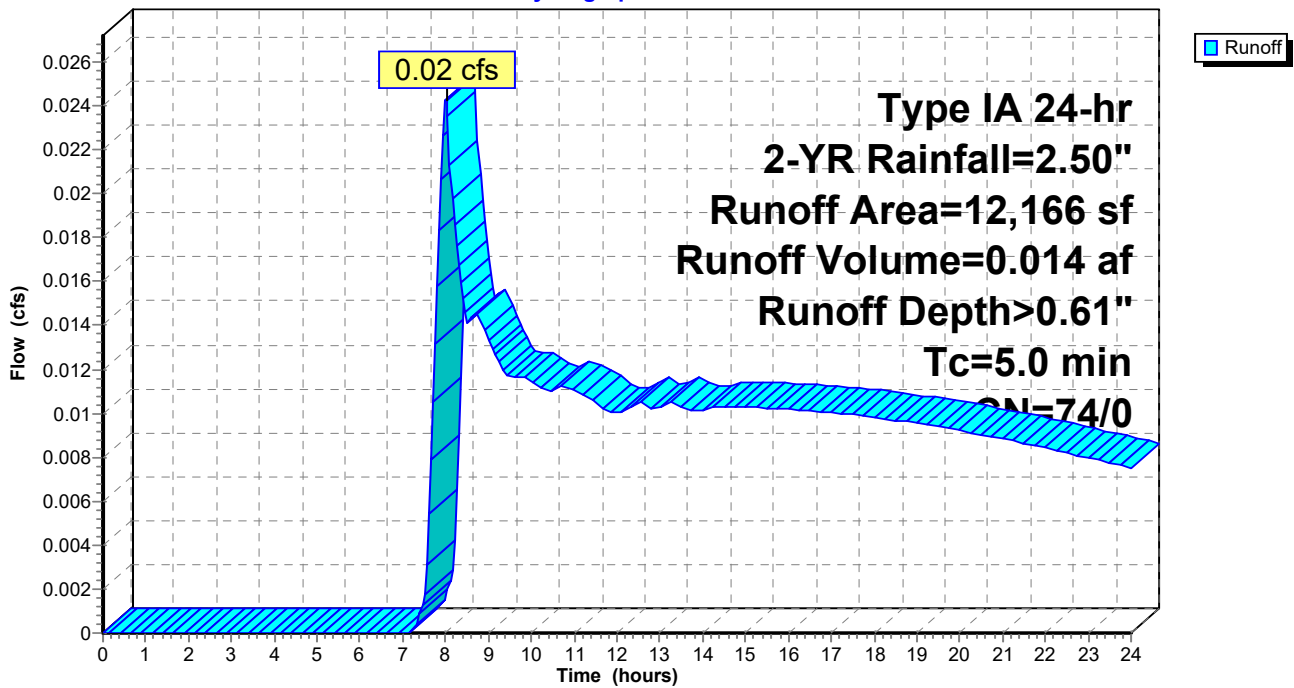
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
12,166	74	>75% Grass cover, Good, HSG C
12,166	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: NORTH PLANTED AREA

Hydrograph



Summary for Subcatchment 4S: SOUTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.01 cfs @ 8.01 hrs, Volume= 0.007 af, Depth> 0.61"

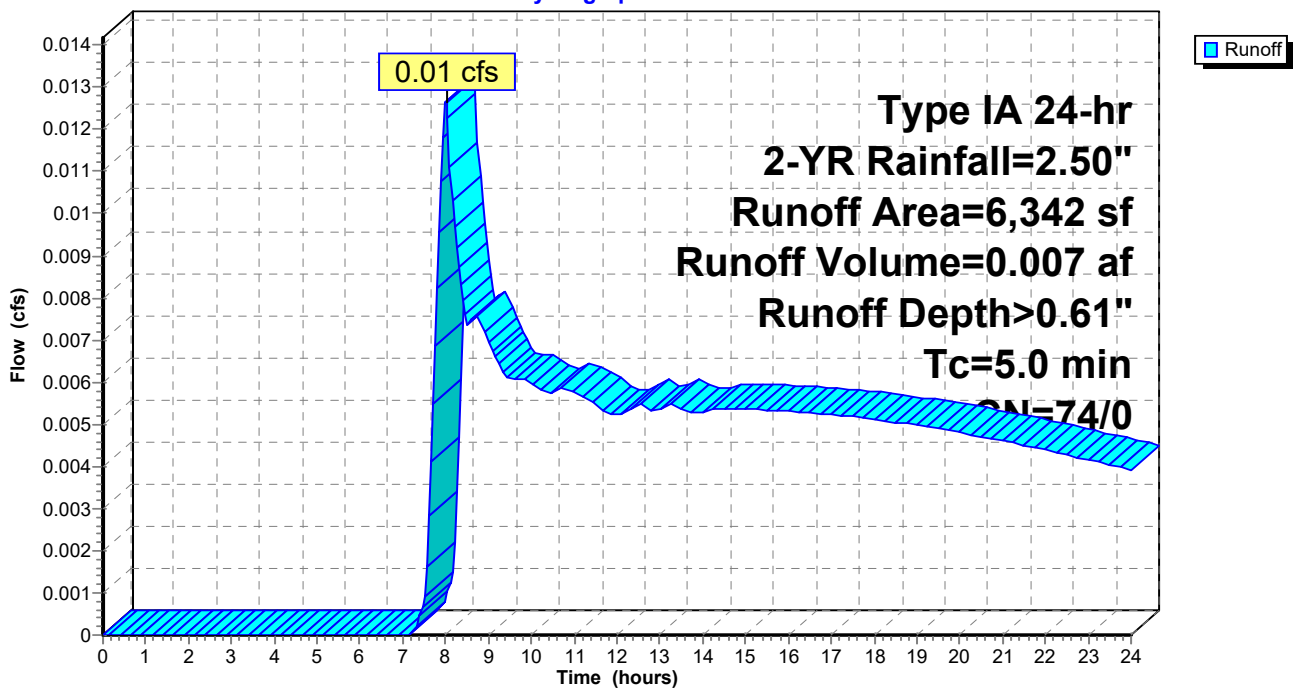
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 2-YR Rainfall=2.50"

Area (sf)	CN	Description
6,342	74	>75% Grass cover, Good, HSG C
6,342	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: SOUTH PLANTED AREA

Hydrograph



Summary for Reach 1R: PROPOSED 10" HDPE

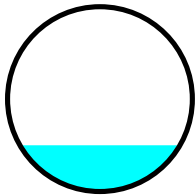
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 2.27" for 2-YR event
 Inflow = 0.42 cfs @ 7.90 hrs, Volume= 0.139 af
 Outflow = 0.42 cfs @ 7.90 hrs, Volume= 0.139 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 3.98 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

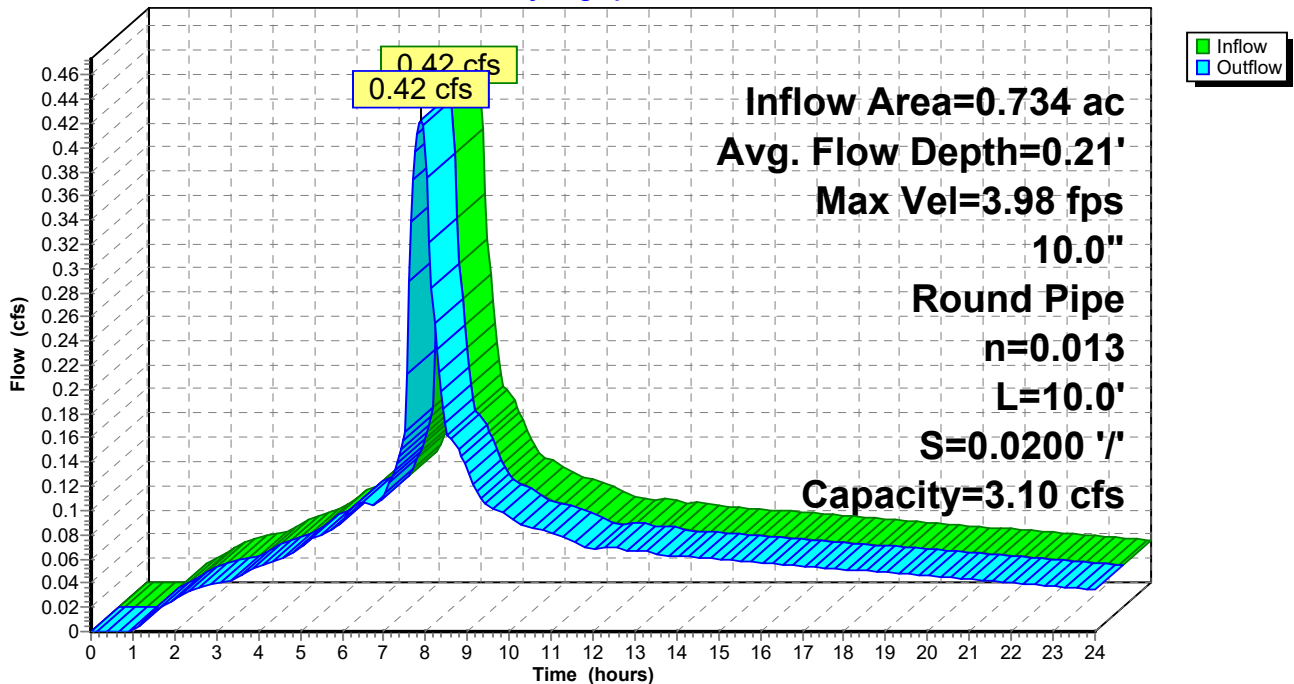
Peak Storage= 1 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.21'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HDPE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 236.00', Outlet Invert= 235.80'



Reach 1R: PROPOSED 10" HDPE

Hydrograph



Summary for Reach 2R: PROPOSED 10" HDPE

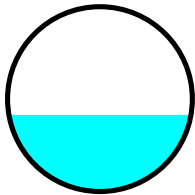
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 2.27" for 2-YR event
 Inflow = 1.11 cfs @ 7.90 hrs, Volume= 0.364 af
 Outflow = 1.11 cfs @ 7.90 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.21 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 3.01 fps, Avg. Travel Time= 0.1 min

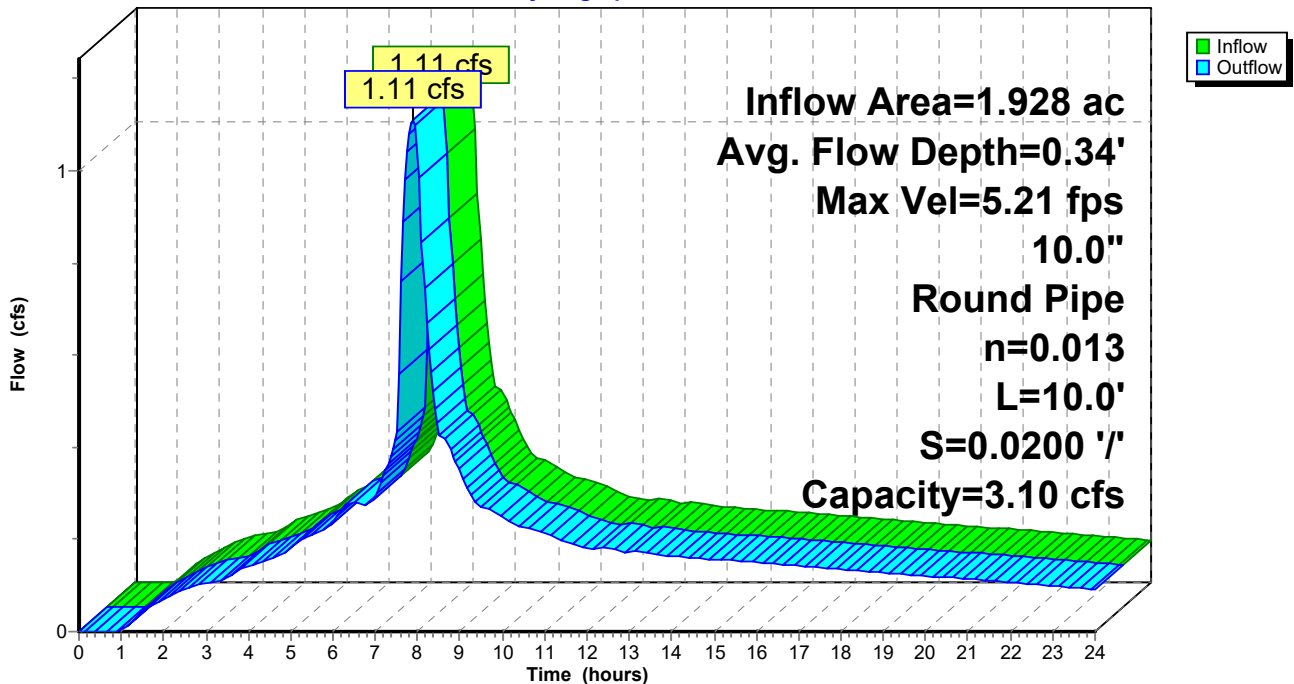
Peak Storage= 2 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.34'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HPDE
 Length= 10.0' Slope= 0.0200 '/
 Inlet Invert= 238.40', Outlet Invert= 238.20'



Reach 2R: PROPOSED 10" HDPE

Hydrograph



Summary for Pond 1P: NORTH DETENTION

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 2.27" for 2-YR event
 Inflow = 0.42 cfs @ 7.90 hrs, Volume= 0.139 af
 Outflow = 0.26 cfs @ 8.19 hrs, Volume= 0.138 af, Atten= 38%, Lag= 17.3 min
 Primary = 0.26 cfs @ 8.19 hrs, Volume= 0.138 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 235.00' @ 8.19 hrs Surf.Area= 0.006 ac Storage= 0.010 af

Plug-Flow detention time= 9.6 min calculated for 0.138 af (100% of inflow)
 Center-of-Mass det. time= 8.3 min (680.9 - 672.5)

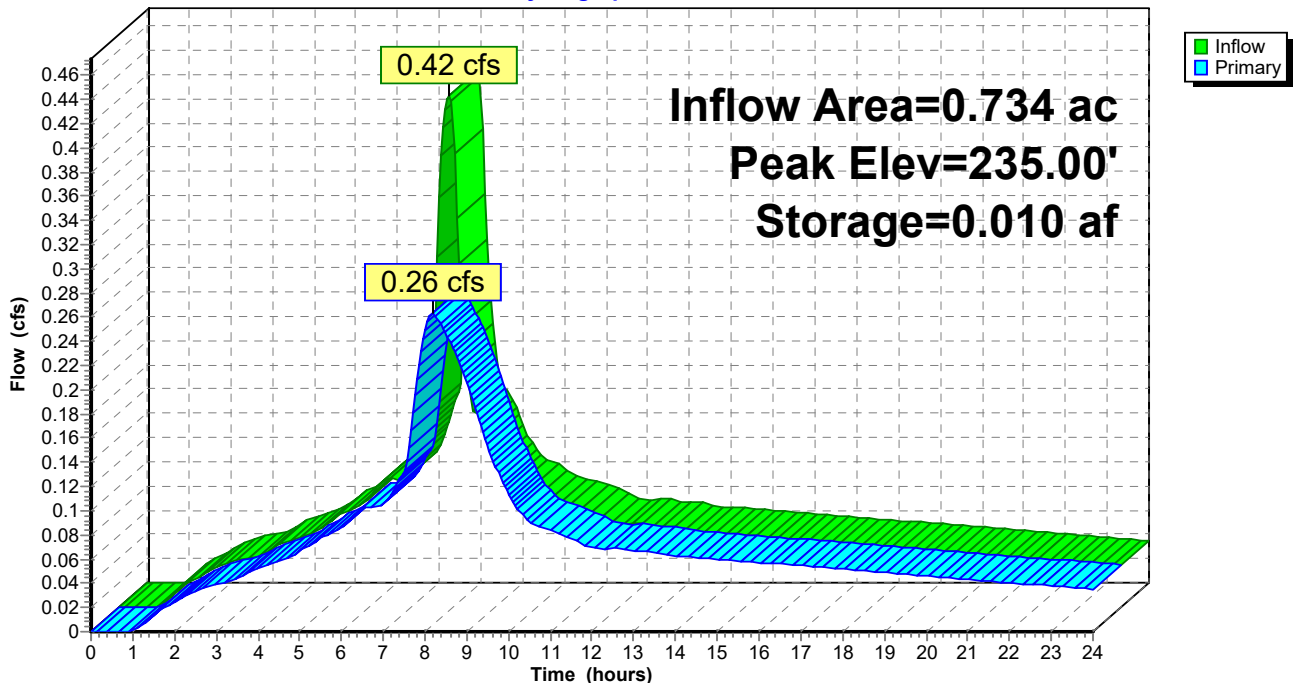
Volume	Invert	Avail.Storage	Storage Description
#1	233.00'	0.020 af	48.0" Round CMP_Round 48" L= 68.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	233.00'	2.7" Vert. Orifice/Grate C= 0.600
#2	Primary	236.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.26 cfs @ 8.19 hrs HW=235.00' TW=0.00' (Dynamic Tailwater)
 1=Orifice/Grate (Orifice Controls 0.26 cfs @ 6.61 fps)
 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: NORTH DETENTION

Hydrograph



Summary for Pond 2P: SOUTH DETENTION

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 2.27" for 2-YR event
 Inflow = 1.11 cfs @ 7.90 hrs, Volume= 0.364 af
 Outflow = 0.50 cfs @ 8.37 hrs, Volume= 0.362 af, Atten= 55%, Lag= 28.5 min
 Primary = 0.50 cfs @ 8.37 hrs, Volume= 0.362 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 236.11' @ 8.37 hrs Surf.Area= 0.025 ac Storage= 0.043 af

Plug-Flow detention time= 28.8 min calculated for 0.362 af (99% of inflow)
 Center-of-Mass det. time= 25.0 min (697.5 - 672.5)

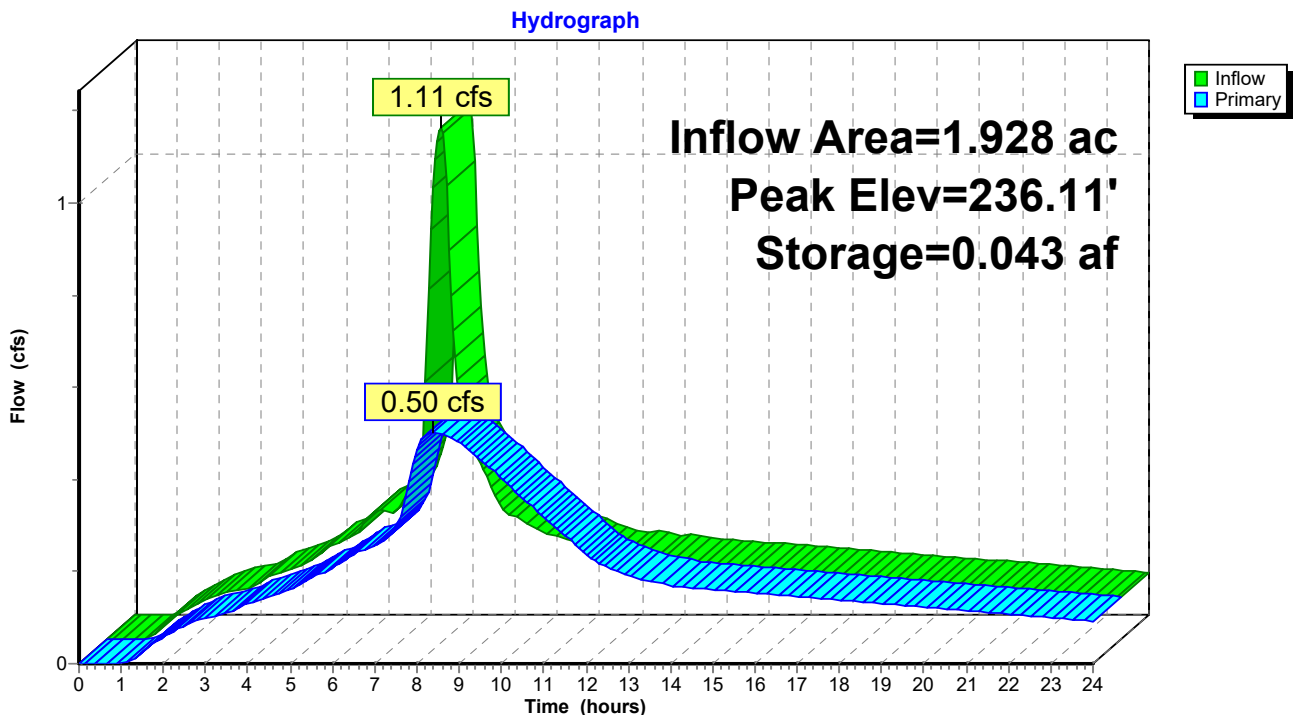
Volume	Invert	Avail.Storage	Storage Description
#1	234.00'	0.080 af	48.0" Round CMP_Round 48" L= 277.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	234.00'	3.7" Vert. Orifice/Grate C= 0.600
#2	Primary	237.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.50 cfs @ 8.37 hrs HW=236.11' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.50 cfs @ 6.73 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 2P: SOUTH DETENTION

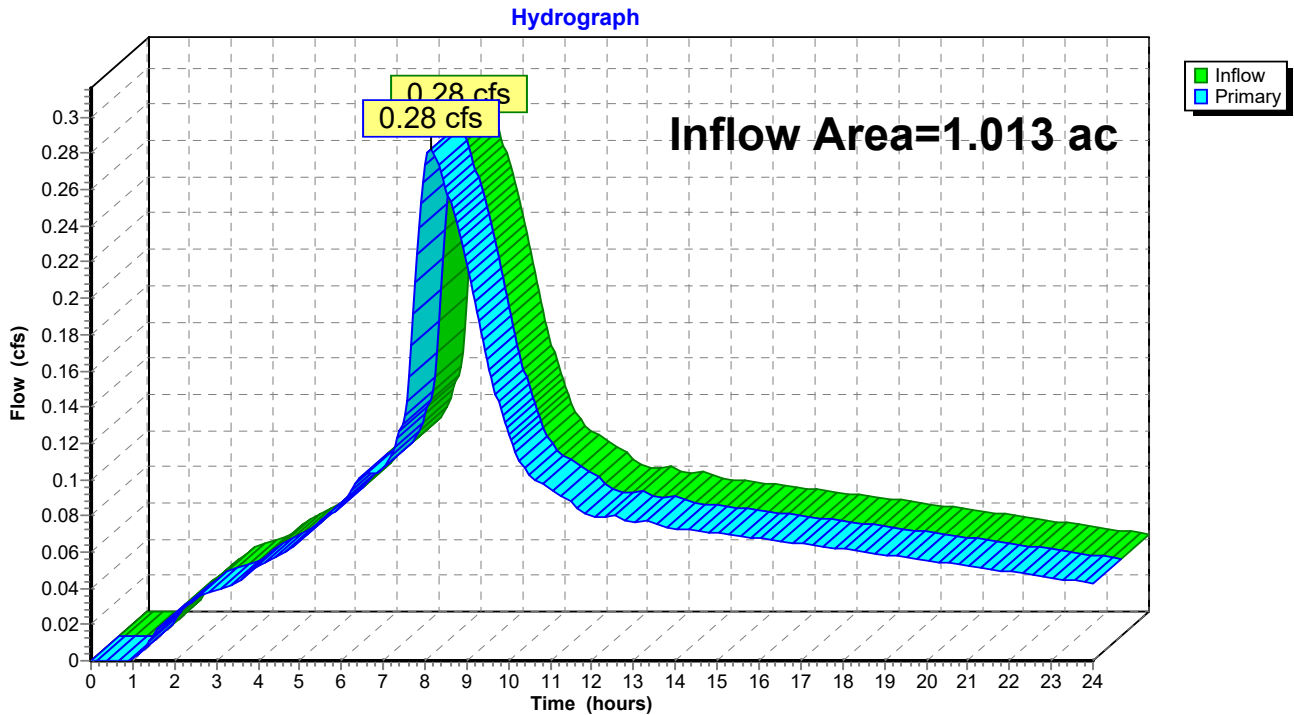


Summary for Link 1L: TOTAL OUTFLOW NORTH

Inflow Area = 1.013 ac, 72.42% Impervious, Inflow Depth > 1.81" for 2-YR event
 Inflow = 0.28 cfs @ 8.14 hrs, Volume= 0.152 af
 Primary = 0.28 cfs @ 8.14 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW NORTH

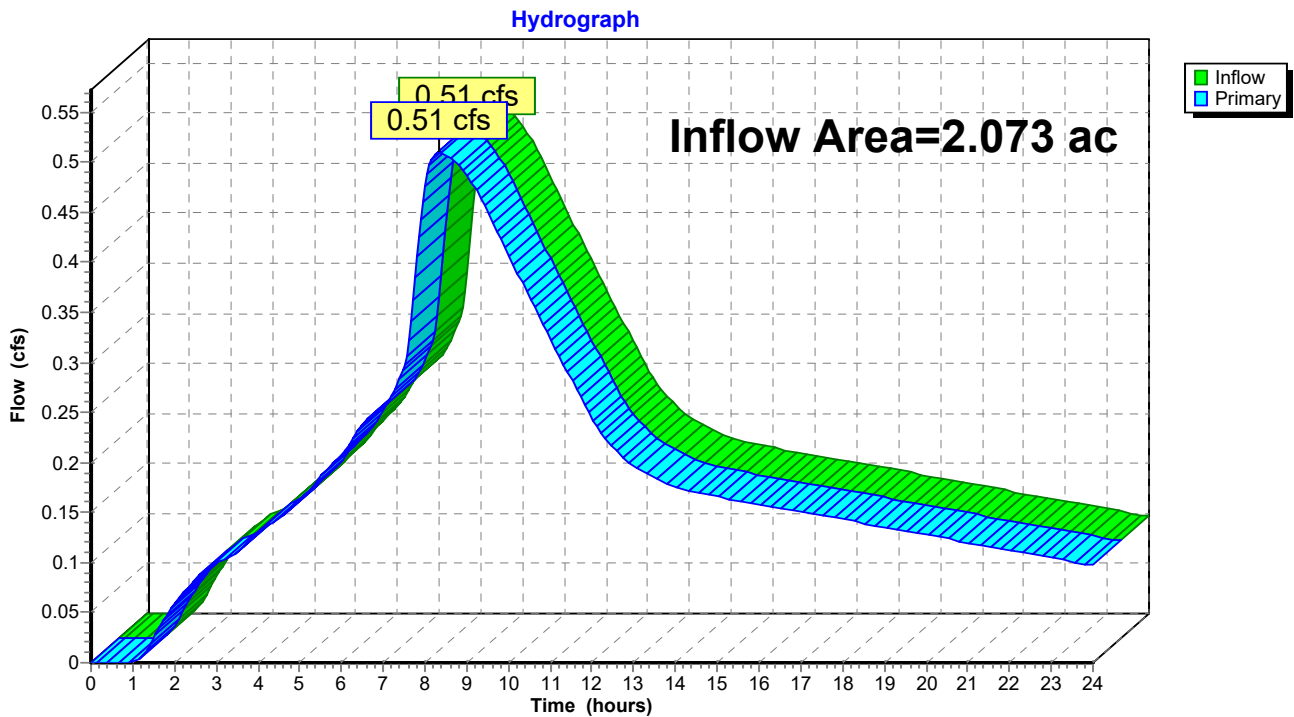


Summary for Link 2L: TOTAL OUTFLOW SOUTH

Inflow Area = 2.073 ac, 92.98% Impervious, Inflow Depth > 2.14" for 2-YR event
Inflow = 0.51 cfs @ 8.35 hrs, Volume= 0.370 af
Primary = 0.51 cfs @ 8.35 hrs, Volume= 0.370 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: TOTAL OUTFLOW SOUTH

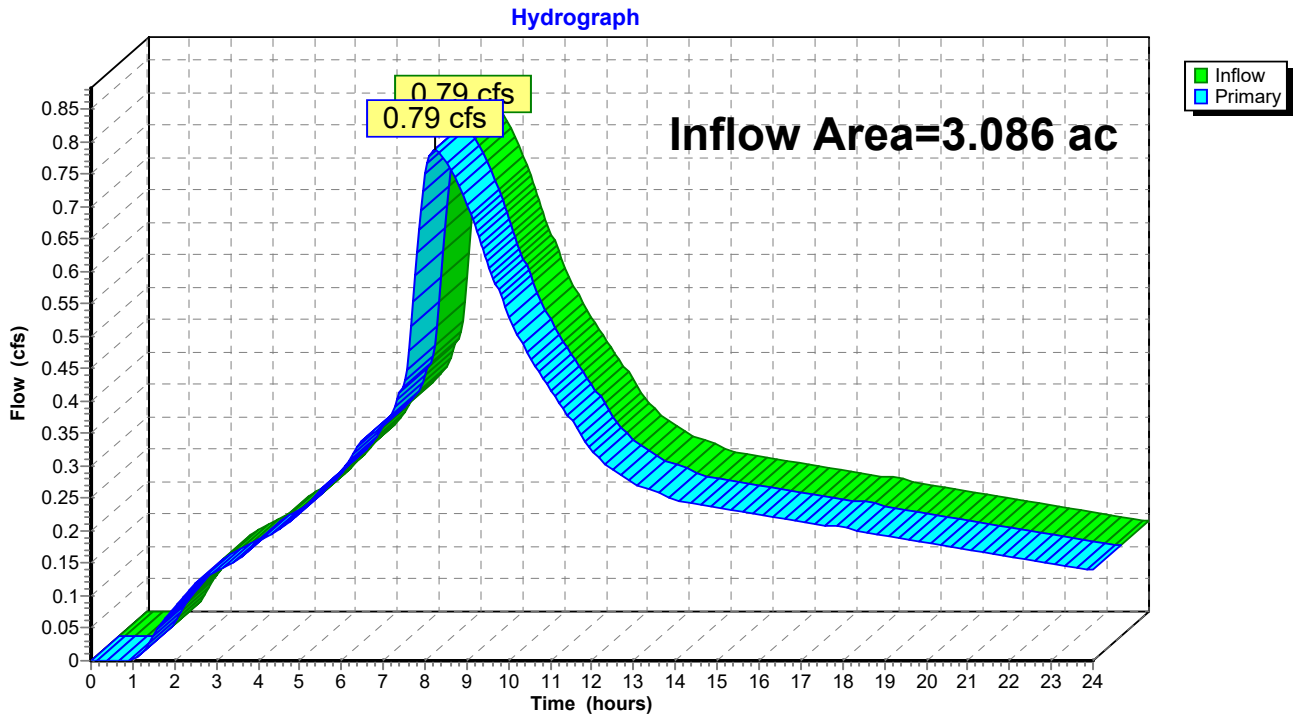


Summary for Link 3L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 86.23% Impervious, Inflow Depth > 2.03" for 2-YR event
Inflow = 0.79 cfs @ 8.24 hrs, Volume= 0.522 af
Primary = 0.79 cfs @ 8.24 hrs, Volume= 0.522 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: TOTAL OUTFLOW



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH GRAVEL AREA Runoff Area=31,952 sf 100.00% Impervious Runoff Depth>2.86"
 Tc=5.0 min CN=0/98 Runoff=0.53 cfs 0.175 af

Subcatchment 2S: SOUTH GRAVEL AREA Runoff Area=83,964 sf 100.00% Impervious Runoff Depth>2.86"
 Tc=5.0 min CN=0/98 Runoff=1.39 cfs 0.460 af

Subcatchment 3S: NORTH PLANTED AREA Runoff Area=12,166 sf 0.00% Impervious Runoff Depth>0.97"
 Tc=5.0 min CN=74/0 Runoff=0.05 cfs 0.023 af

Subcatchment 4S: SOUTH PLANTED AREA Runoff Area=6,342 sf 0.00% Impervious Runoff Depth>0.97"
 Tc=5.0 min CN=74/0 Runoff=0.03 cfs 0.012 af

Reach 1R: PROPOSED 10" HDPE Avg. Flow Depth=0.23' Max Vel=4.24 fps Inflow=0.53 cfs 0.175 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=0.53 cfs 0.175 af

Reach 2R: PROPOSED 10" HDPE Avg. Flow Depth=0.39' Max Vel=5.53 fps Inflow=1.39 cfs 0.460 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=1.39 cfs 0.460 af

Pond 1P: NORTH DETENTION Peak Elev=235.69' Storage=0.014 af Inflow=0.53 cfs 0.175 af
 Outflow=0.31 cfs 0.175 af

Pond 2P: SOUTH DETENTION Peak Elev=236.80' Storage=0.060 af Inflow=1.39 cfs 0.460 af
 Outflow=0.59 cfs 0.458 af

Link 1L: TOTAL OUTFLOW NORTH Inflow=0.34 cfs 0.197 af
 Primary=0.34 cfs 0.197 af

Link 2L: TOTAL OUTFLOW SOUTH Inflow=0.60 cfs 0.469 af
 Primary=0.60 cfs 0.469 af

Link 3L: TOTAL OUTFLOW Inflow=0.94 cfs 0.667 af
 Primary=0.94 cfs 0.667 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.669 af Average Runoff Depth = 2.60"
13.77% Pervious = 0.425 ac 86.23% Impervious = 2.661 ac

Summary for Subcatchment 1S: NORTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.53 cfs @ 7.90 hrs, Volume= 0.175 af, Depth> 2.86"

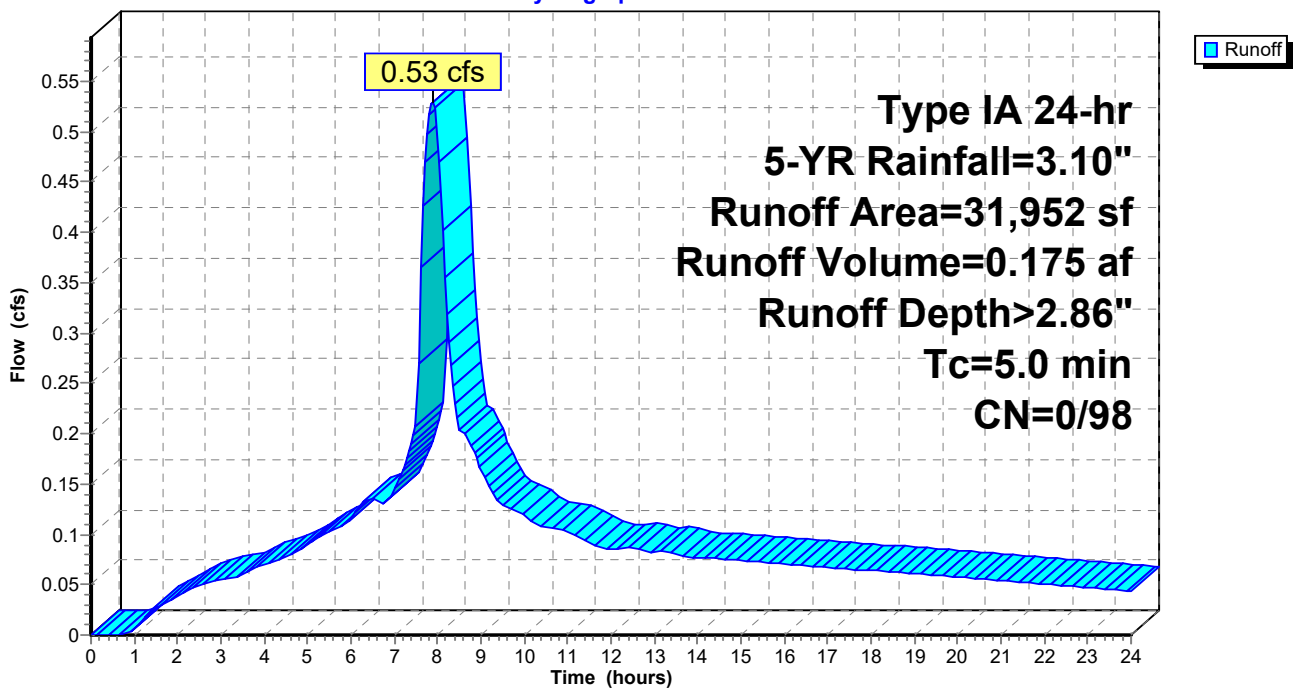
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
* 31,952	98	Gravel Staging Area, HSG C
31,952	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: NORTH GRAVEL AREA

Hydrograph



Summary for Subcatchment 2S: SOUTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

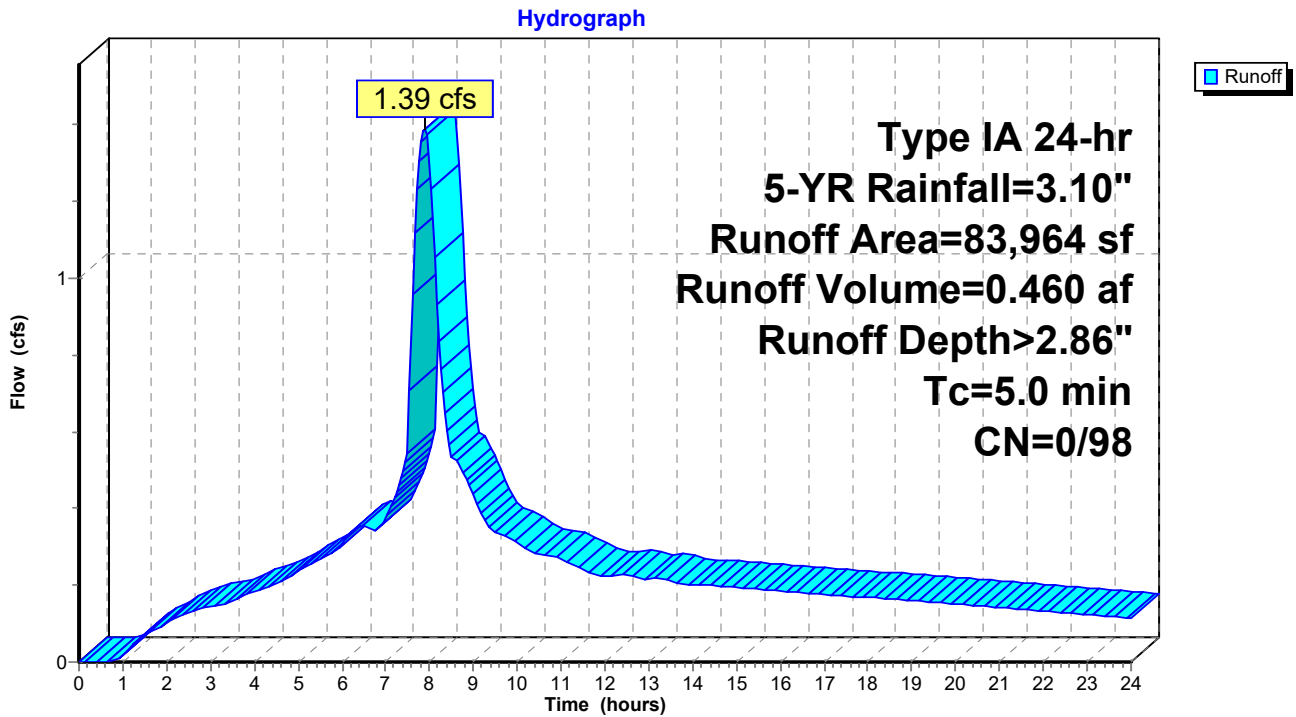
Runoff = 1.39 cfs @ 7.90 hrs, Volume= 0.460 af, Depth> 2.86"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
* 83,964	98	Gravel Staging Area and New Storage Building, HSG C
83,964	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: SOUTH GRAVEL AREA



Summary for Subcatchment 3S: NORTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

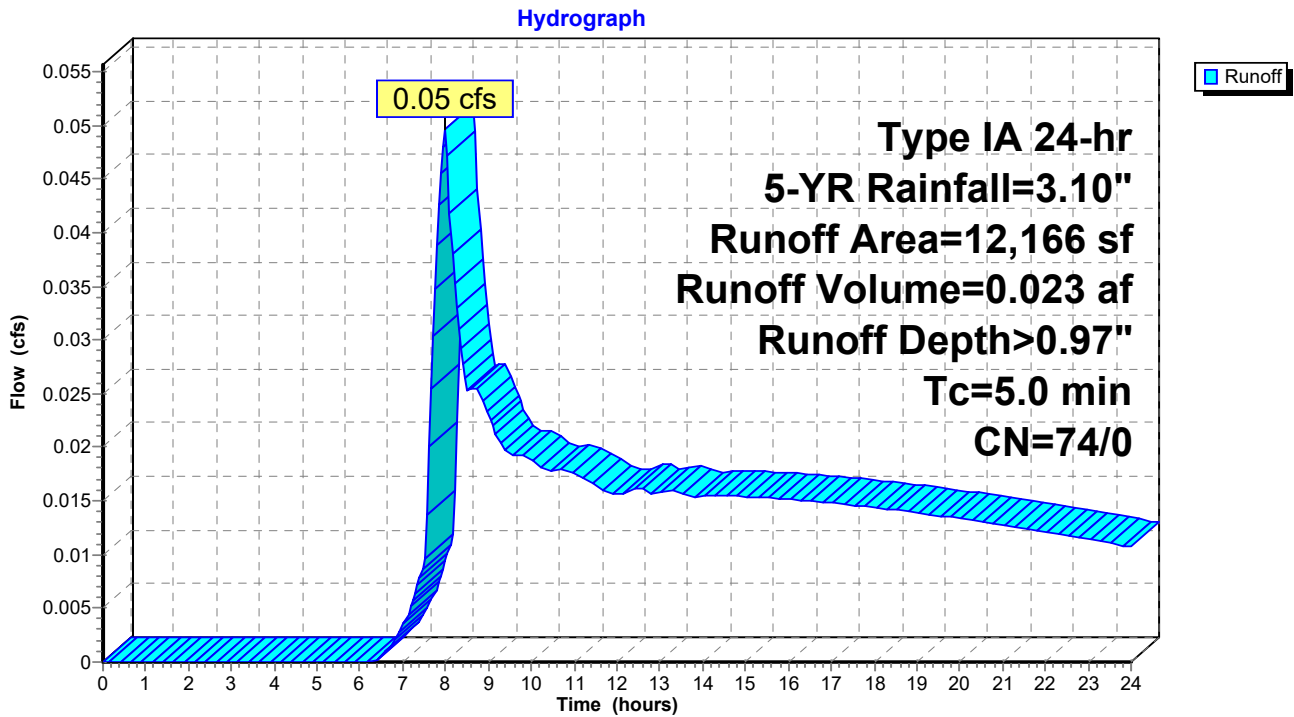
Runoff = 0.05 cfs @ 7.99 hrs, Volume= 0.023 af, Depth> 0.97"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
12,166	74	>75% Grass cover, Good, HSG C
12,166	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: NORTH PLANTED AREA



Summary for Subcatchment 4S: SOUTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.03 cfs @ 7.99 hrs, Volume= 0.012 af, Depth> 0.97"

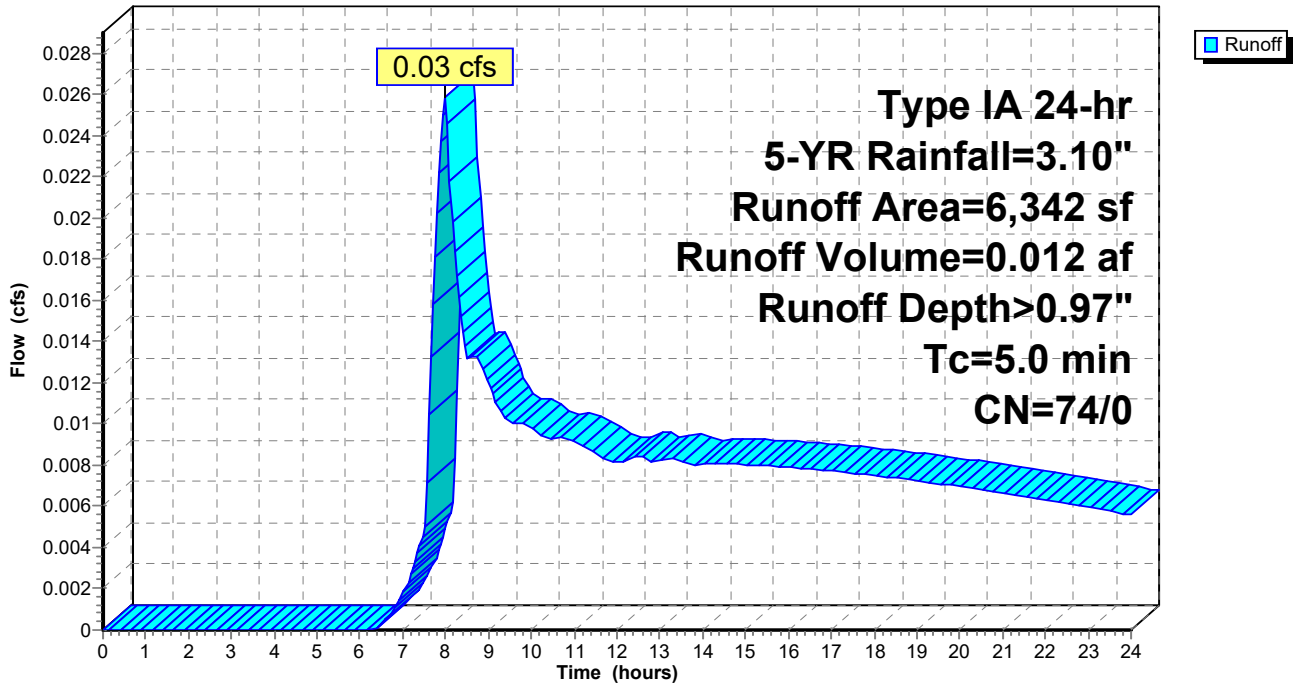
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 5-YR Rainfall=3.10"

Area (sf)	CN	Description
6,342	74	>75% Grass cover, Good, HSG C
6,342	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: SOUTH PLANTED AREA

Hydrograph



Summary for Reach 1R: PROPOSED 10" HDPE

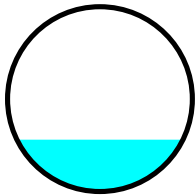
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 2.86" for 5-YR event
 Inflow = 0.53 cfs @ 7.90 hrs, Volume= 0.175 af
 Outflow = 0.53 cfs @ 7.90 hrs, Volume= 0.175 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 4.24 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 2.42 fps, Avg. Travel Time= 0.1 min

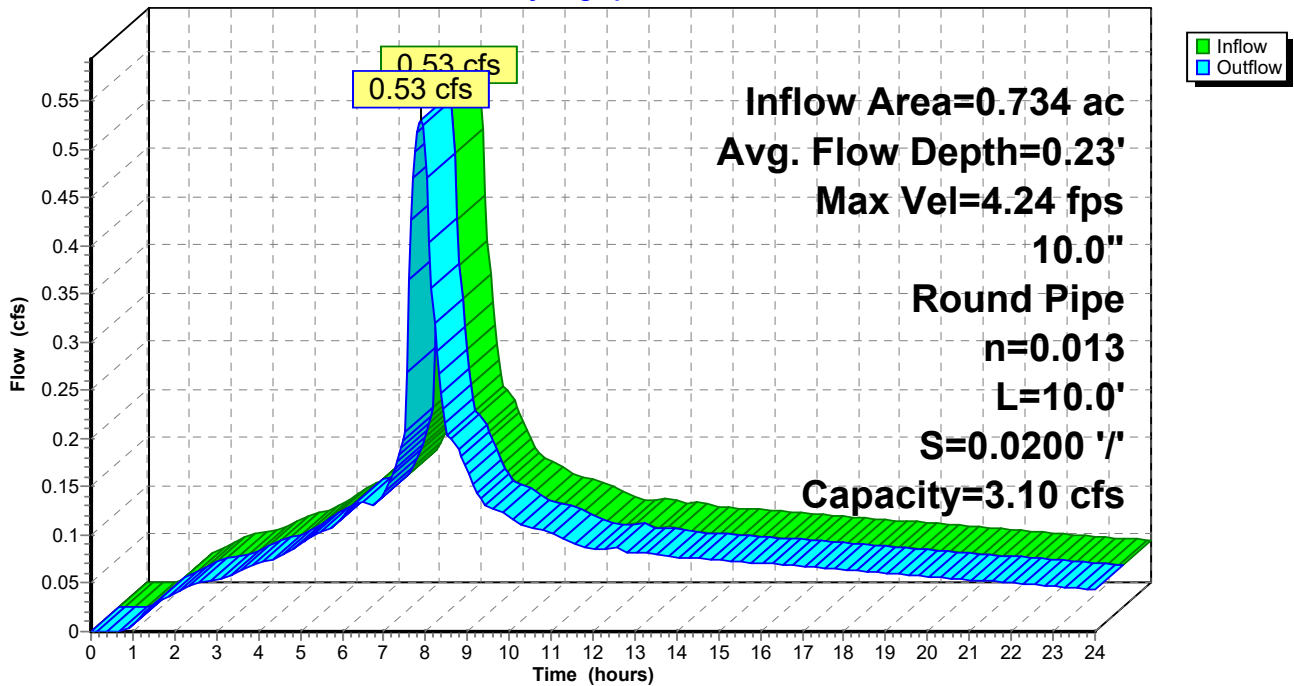
Peak Storage= 1 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.23'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HDPE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 236.00', Outlet Invert= 235.80'



Reach 1R: PROPOSED 10" HDPE

Hydrograph



Summary for Reach 2R: PROPOSED 10" HDPE

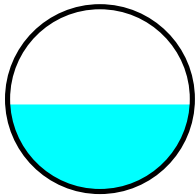
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 2.86" for 5-YR event
 Inflow = 1.39 cfs @ 7.90 hrs, Volume= 0.460 af
 Outflow = 1.39 cfs @ 7.90 hrs, Volume= 0.460 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.53 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 3.21 fps, Avg. Travel Time= 0.1 min

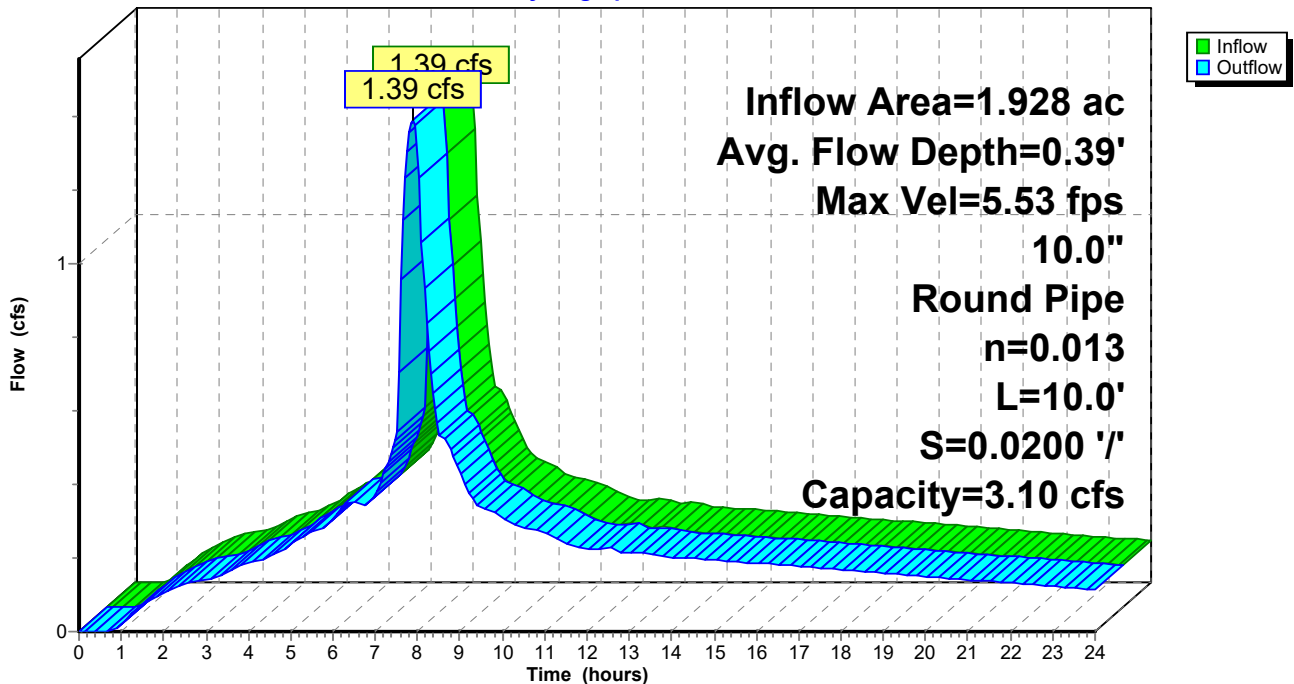
Peak Storage= 3 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.39'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HPDE
 Length= 10.0' Slope= 0.0200 '/
 Inlet Invert= 238.40', Outlet Invert= 238.20'



Reach 2R: PROPOSED 10" HDPE

Hydrograph



Summary for Pond 1P: NORTH DETENTION

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 2.86" for 5-YR event
 Inflow = 0.53 cfs @ 7.90 hrs, Volume= 0.175 af
 Outflow = 0.31 cfs @ 8.22 hrs, Volume= 0.175 af, Atten= 42%, Lag= 19.4 min
 Primary = 0.31 cfs @ 8.22 hrs, Volume= 0.175 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 235.69' @ 8.22 hrs Surf.Area= 0.006 ac Storage= 0.014 af

Plug-Flow detention time= 11.9 min calculated for 0.174 af (100% of inflow)
 Center-of-Mass det. time= 10.7 min (676.7 - 666.0)

Volume	Invert	Avail.Storage	Storage Description
#1	233.00'	0.020 af	48.0" Round CMP_Round 48" L= 68.0'

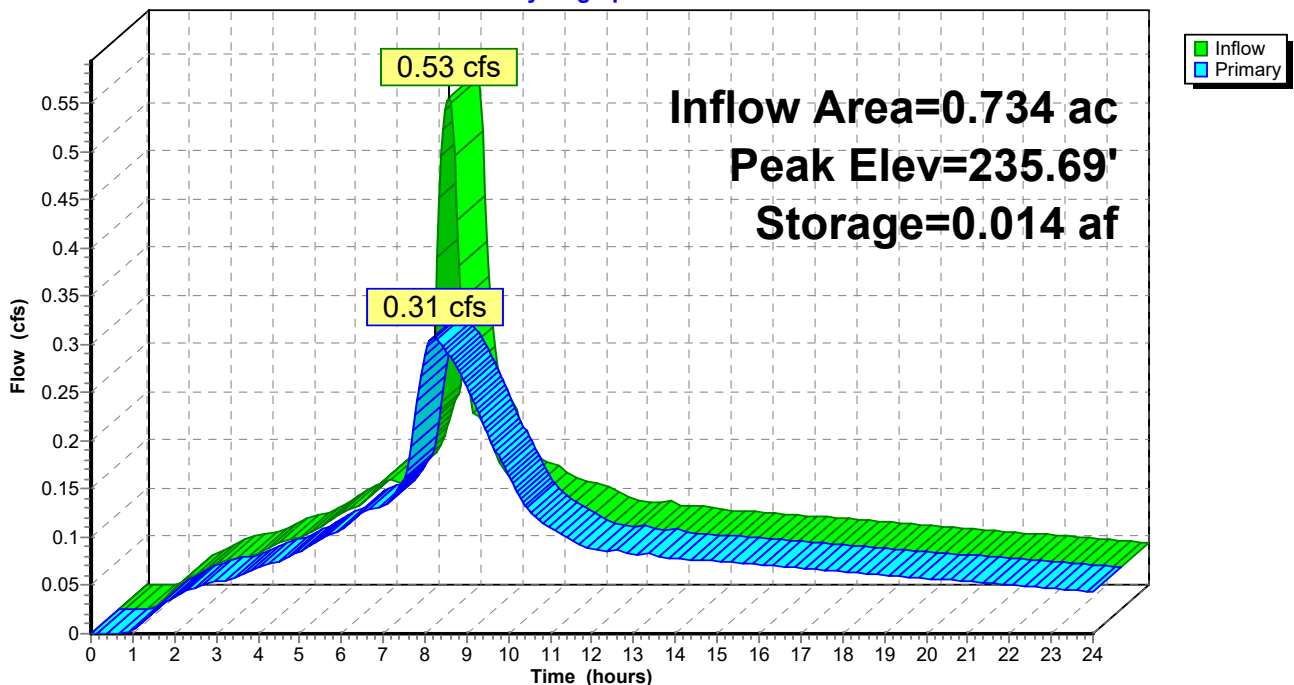
Device	Routing	Invert	Outlet Devices
#1	Primary	233.00'	2.7" Vert. Orifice/Grate C= 0.600
#2	Primary	236.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.31 cfs @ 8.22 hrs HW=235.69' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.31 cfs @ 7.72 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: NORTH DETENTION

Hydrograph



Summary for Pond 2P: SOUTH DETENTION

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 2.86" for 5-YR event
 Inflow = 1.39 cfs @ 7.90 hrs, Volume= 0.460 af
 Outflow = 0.59 cfs @ 8.43 hrs, Volume= 0.458 af, Atten= 58%, Lag= 31.7 min
 Primary = 0.59 cfs @ 8.43 hrs, Volume= 0.458 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 236.80' @ 8.43 hrs Surf.Area= 0.023 ac Storage= 0.060 af

Plug-Flow detention time= 35.8 min calculated for 0.457 af (99% of inflow)
 Center-of-Mass det. time= 32.1 min (698.1 - 666.0)

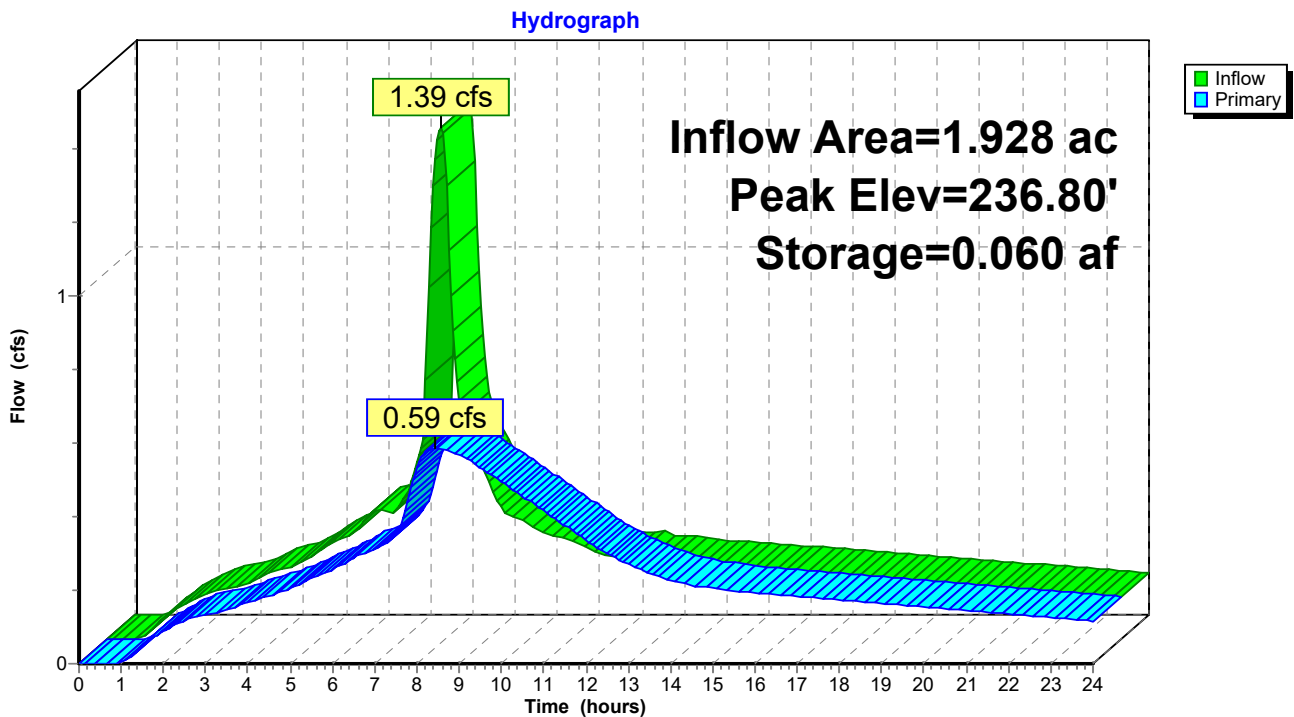
Volume	Invert	Avail.Storage	Storage Description
#1	234.00'	0.080 af	48.0" Round CMP_Round 48" L= 277.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	234.00'	3.7" Vert. Orifice/Grate C= 0.600
#2	Primary	237.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.59 cfs @ 8.43 hrs HW=236.80' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.59 cfs @ 7.84 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 2P: SOUTH DETENTION

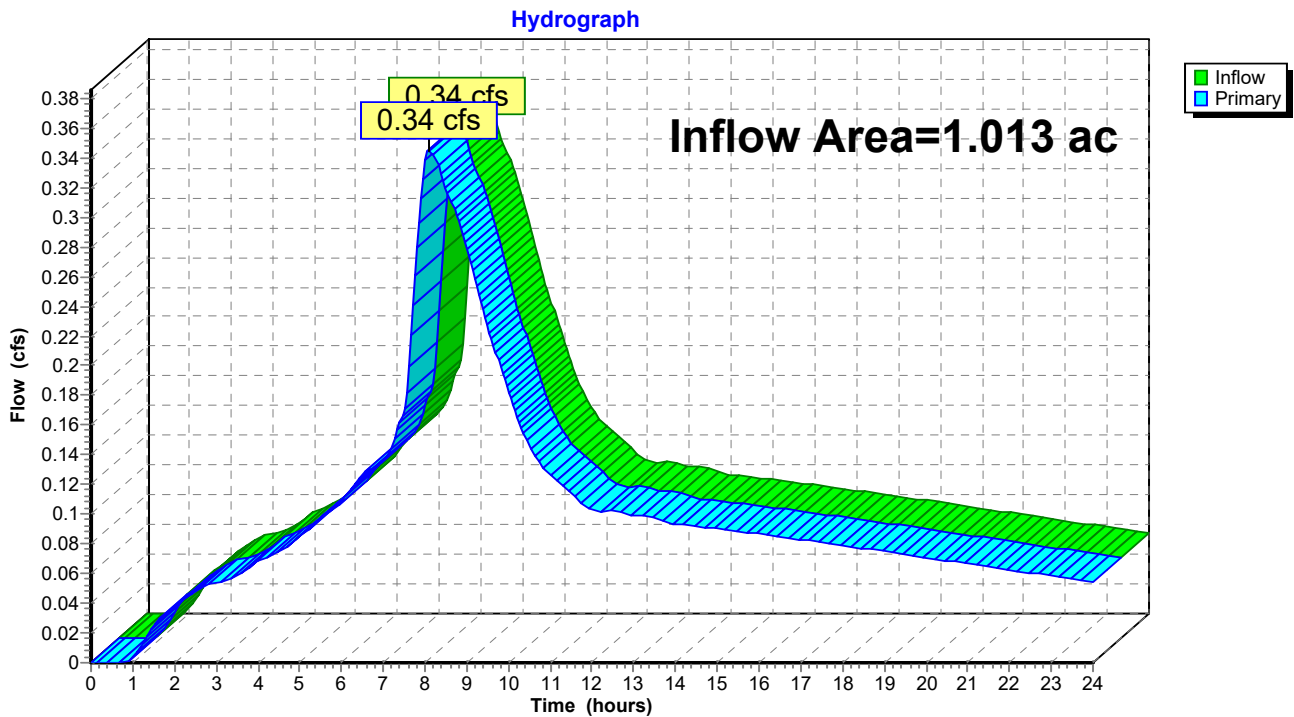


Summary for Link 1L: TOTAL OUTFLOW NORTH

Inflow Area = 1.013 ac, 72.42% Impervious, Inflow Depth > 2.34" for 5-YR event
Inflow = 0.34 cfs @ 8.10 hrs, Volume= 0.197 af
Primary = 0.34 cfs @ 8.10 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW NORTH

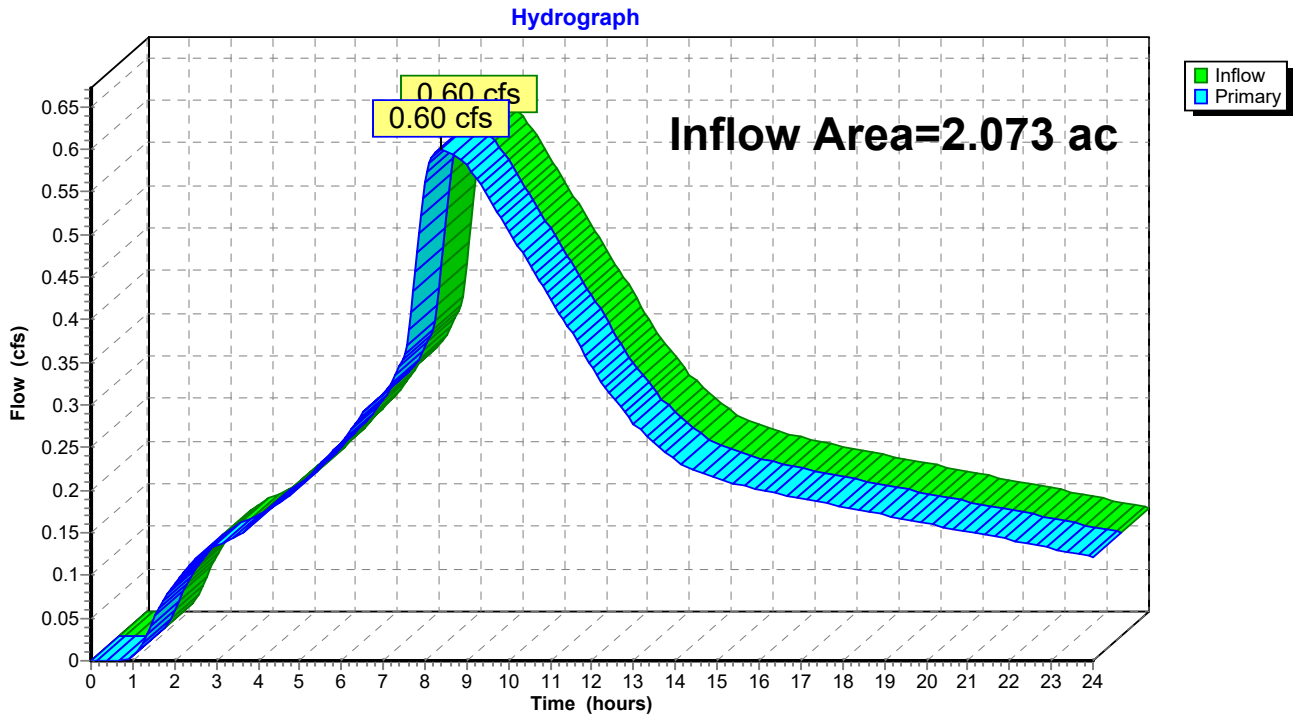


Summary for Link 2L: TOTAL OUTFLOW SOUTH

Inflow Area = 2.073 ac, 92.98% Impervious, Inflow Depth > 2.72" for 5-YR event
 Inflow = 0.60 cfs @ 8.38 hrs, Volume= 0.469 af
 Primary = 0.60 cfs @ 8.38 hrs, Volume= 0.469 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: TOTAL OUTFLOW SOUTH

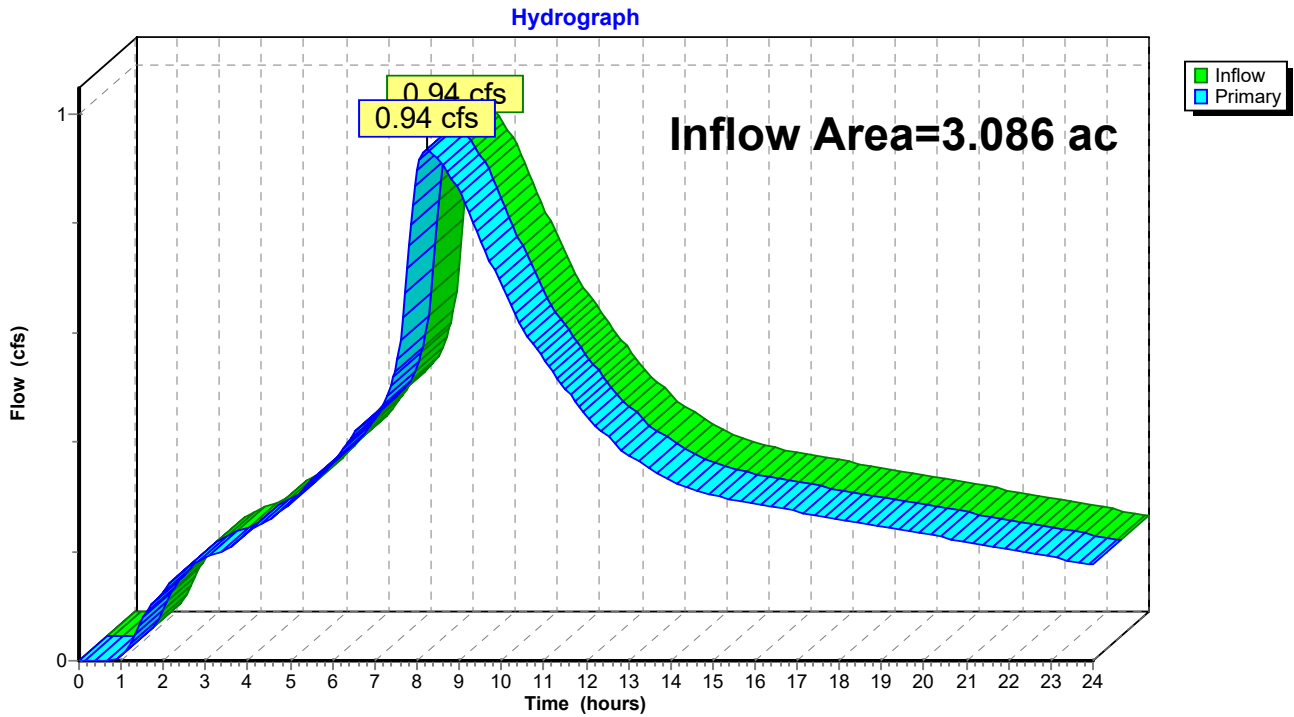


Summary for Link 3L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 86.23% Impervious, Inflow Depth > 2.59" for 5-YR event
Inflow = 0.94 cfs @ 8.25 hrs, Volume= 0.667 af
Primary = 0.94 cfs @ 8.25 hrs, Volume= 0.667 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: TOTAL OUTFLOW



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH GRAVEL AREA Runoff Area=31,952 sf 100.00% Impervious Runoff Depth>3.21"
 Tc=5.0 min CN=0/98 Runoff=0.59 cfs 0.196 af

Subcatchment 2S: SOUTH GRAVEL AREA Runoff Area=83,964 sf 100.00% Impervious Runoff Depth>3.21"
 Tc=5.0 min CN=0/98 Runoff=1.56 cfs 0.516 af

Subcatchment 3S: NORTH PLANTED AREA Runoff Area=12,166 sf 0.00% Impervious Runoff Depth>1.20"
 Tc=5.0 min CN=74/0 Runoff=0.07 cfs 0.028 af

Subcatchment 4S: SOUTH PLANTED AREA Runoff Area=6,342 sf 0.00% Impervious Runoff Depth>1.20"
 Tc=5.0 min CN=74/0 Runoff=0.03 cfs 0.015 af

Reach 1R: PROPOSED 10" HDPE Avg. Flow Depth=0.25' Max Vel=4.38 fps Inflow=0.59 cfs 0.196 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=0.59 cfs 0.196 af

Reach 2R: PROPOSED 10" HDPE Avg. Flow Depth=0.42' Max Vel=5.69 fps Inflow=1.56 cfs 0.516 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=1.56 cfs 0.516 af

Pond 1P: NORTH DETENTION Peak Elev=236.16' Storage=0.017 af Inflow=0.59 cfs 0.196 af
 Outflow=0.33 cfs 0.196 af

Pond 2P: SOUTH DETENTION Peak Elev=237.29' Storage=0.070 af Inflow=1.56 cfs 0.516 af
 Outflow=0.64 cfs 0.513 af

Link 1L: TOTAL OUTFLOW NORTH Inflow=0.38 cfs 0.224 af
 Primary=0.38 cfs 0.224 af

Link 2L: TOTAL OUTFLOW SOUTH Inflow=0.66 cfs 0.528 af
 Primary=0.66 cfs 0.528 af

Link 3L: TOTAL OUTFLOW Inflow=1.03 cfs 0.752 af
 Primary=1.03 cfs 0.752 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.755 af Average Runoff Depth = 2.93"
13.77% Pervious = 0.425 ac 86.23% Impervious = 2.661 ac

Summary for Subcatchment 1S: NORTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.59 cfs @ 7.90 hrs, Volume= 0.196 af, Depth> 3.21"

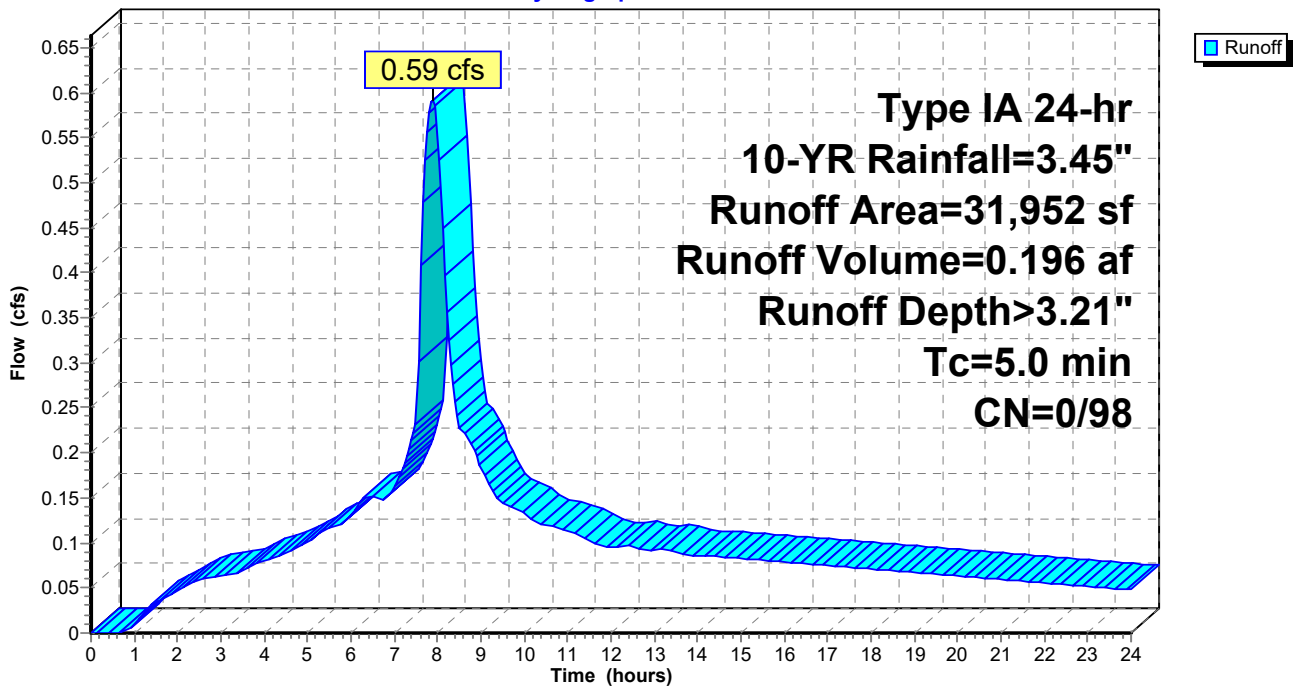
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
* 31,952	98	Gravel Staging Area, HSG C
31,952	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: NORTH GRAVEL AREA

Hydrograph



Summary for Subcatchment 2S: SOUTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

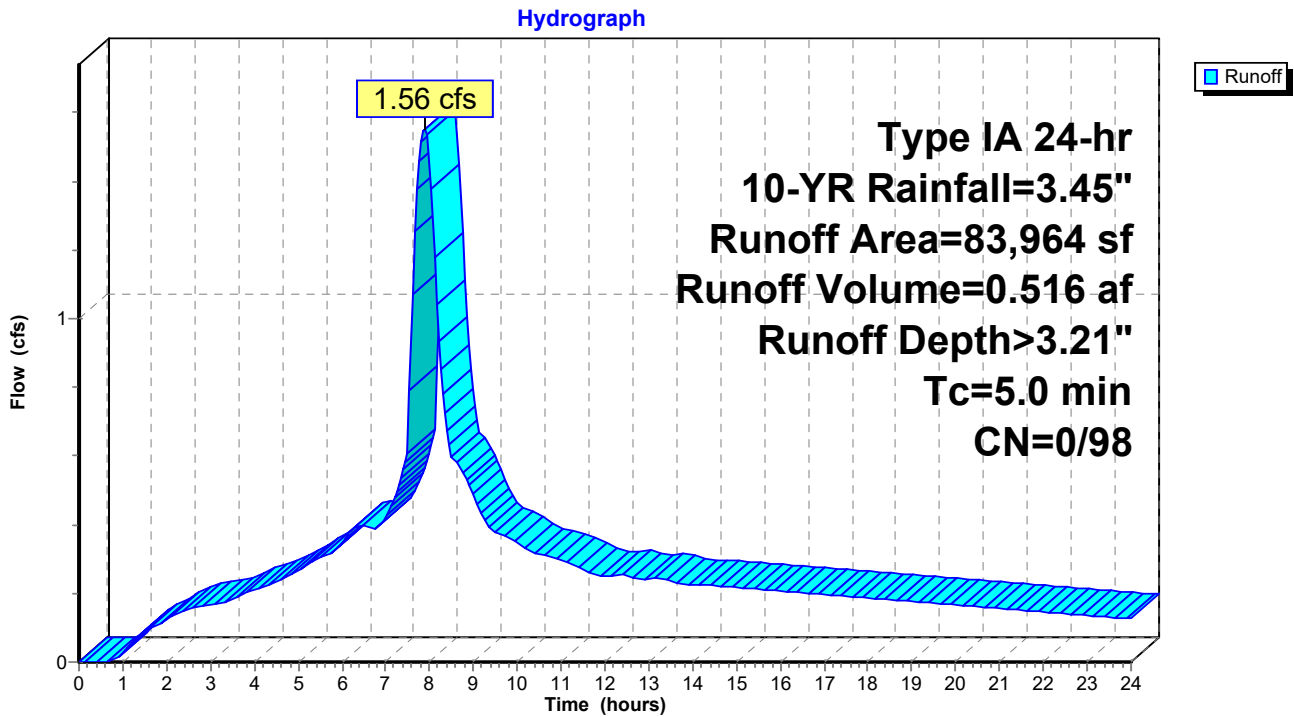
Runoff = 1.56 cfs @ 7.90 hrs, Volume= 0.516 af, Depth> 3.21"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
* 83,964	98	Gravel Staging Area and New Storage Building, HSG C
83,964	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: SOUTH GRAVEL AREA



Summary for Subcatchment 3S: NORTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.07 cfs @ 7.99 hrs, Volume= 0.028 af, Depth> 1.20"

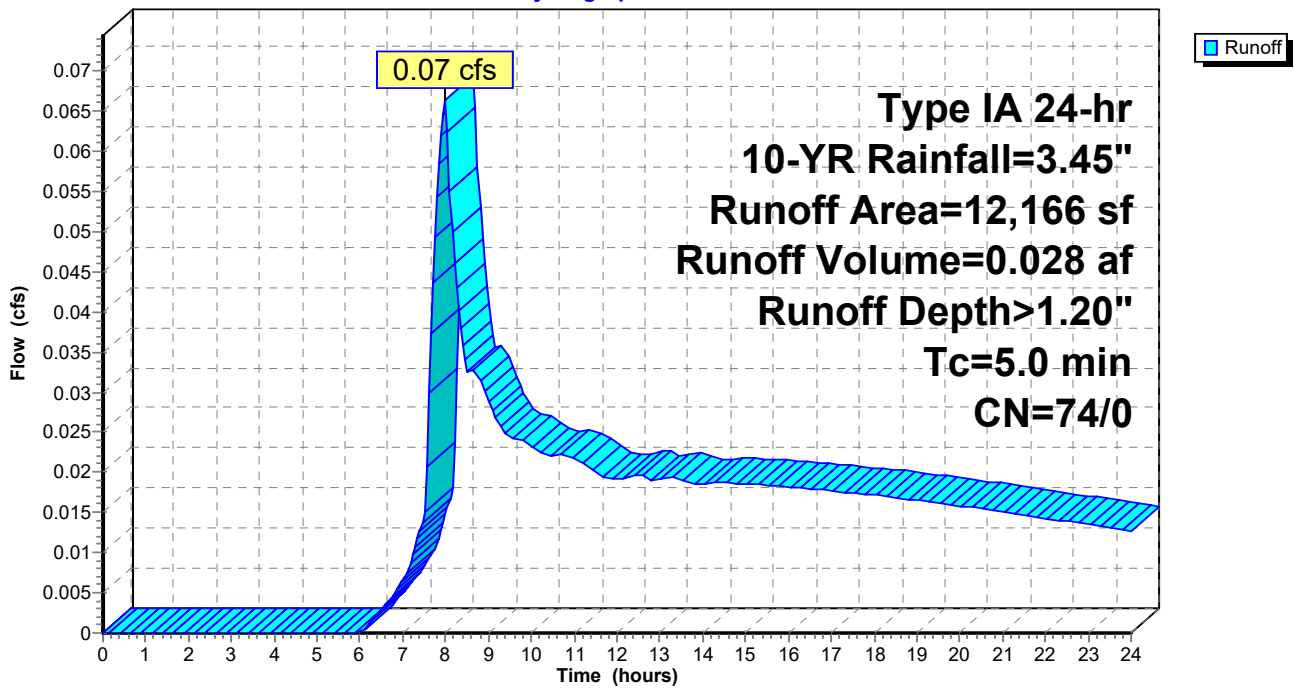
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
12,166	74	>75% Grass cover, Good, HSG C
12,166	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: NORTH PLANTED AREA

Hydrograph



Summary for Subcatchment 4S: SOUTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.03 cfs @ 7.99 hrs, Volume= 0.015 af, Depth> 1.20"

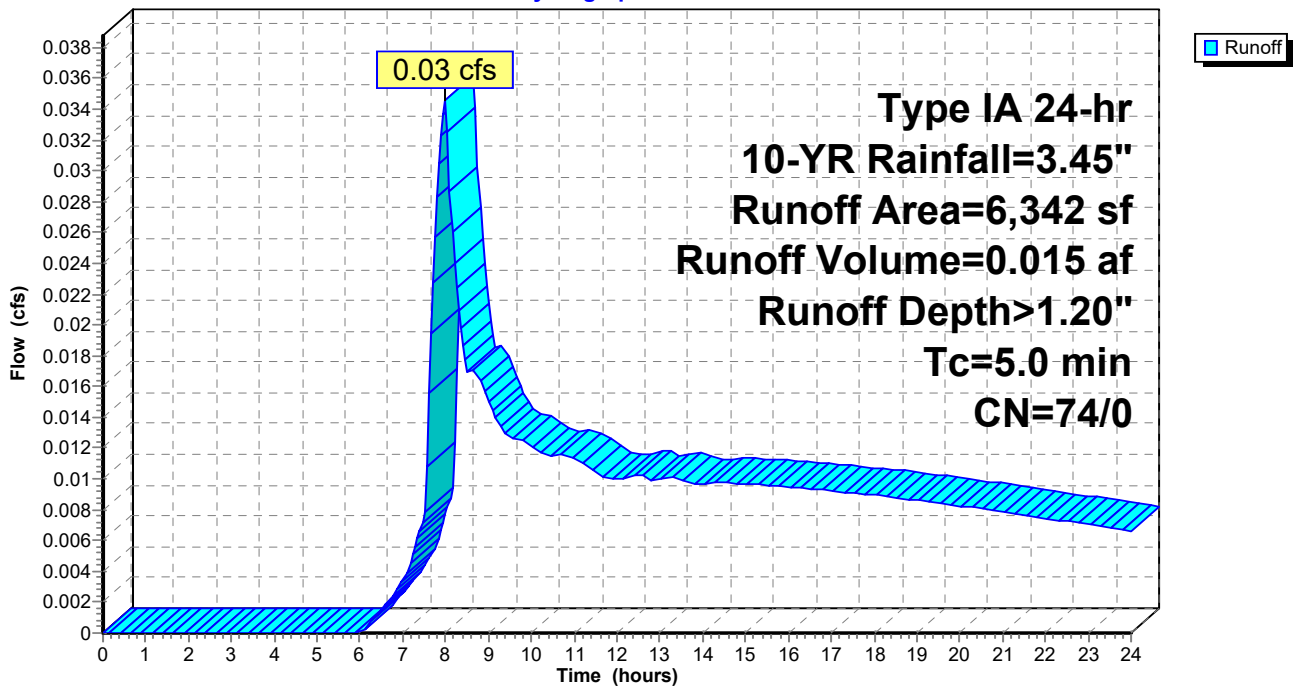
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 10-YR Rainfall=3.45"

Area (sf)	CN	Description
6,342	74	>75% Grass cover, Good, HSG C
6,342	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: SOUTH PLANTED AREA

Hydrograph



Summary for Reach 1R: PROPOSED 10" HDPE

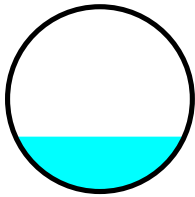
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 3.21" for 10-YR event
 Inflow = 0.59 cfs @ 7.90 hrs, Volume= 0.196 af
 Outflow = 0.59 cfs @ 7.90 hrs, Volume= 0.196 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 4.38 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 2.50 fps, Avg. Travel Time= 0.1 min

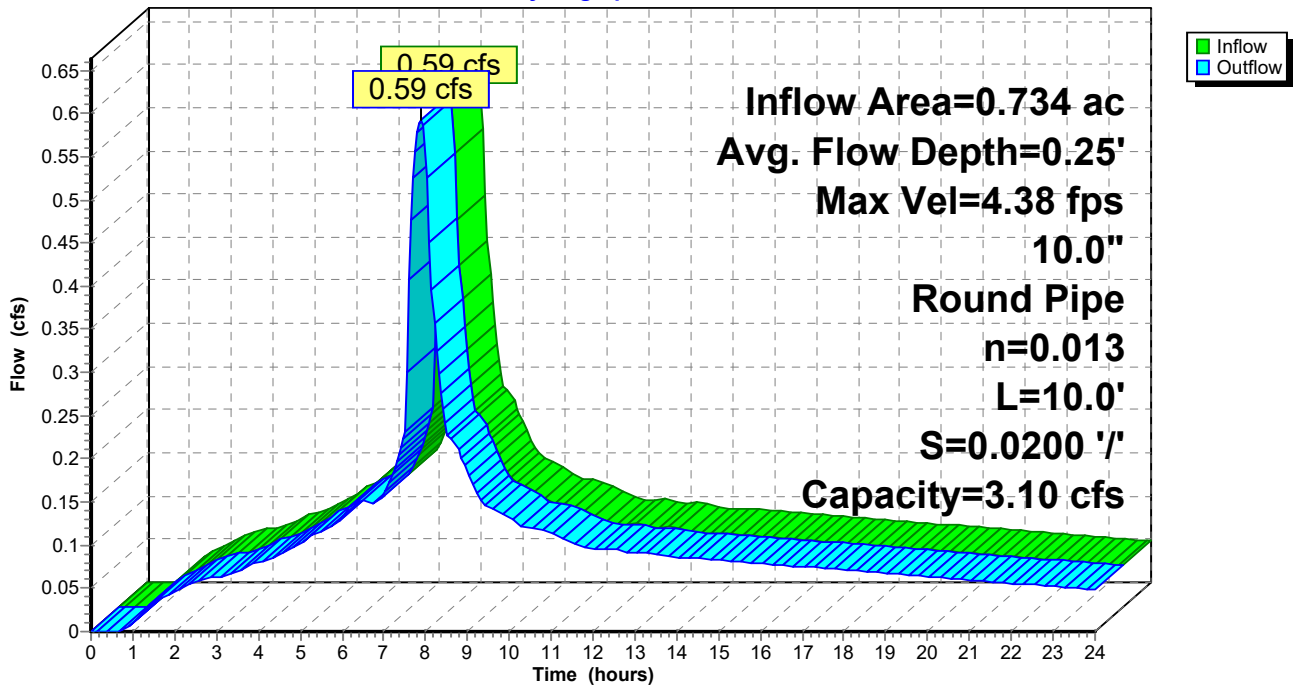
Peak Storage= 1 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.25'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HDPE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 236.00', Outlet Invert= 235.80'



Reach 1R: PROPOSED 10" HDPE

Hydrograph



Summary for Reach 2R: PROPOSED 10" HDPE

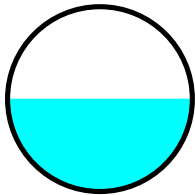
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 3.21" for 10-YR event
 Inflow = 1.56 cfs @ 7.90 hrs, Volume= 0.516 af
 Outflow = 1.56 cfs @ 7.90 hrs, Volume= 0.516 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.69 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 3.32 fps, Avg. Travel Time= 0.1 min

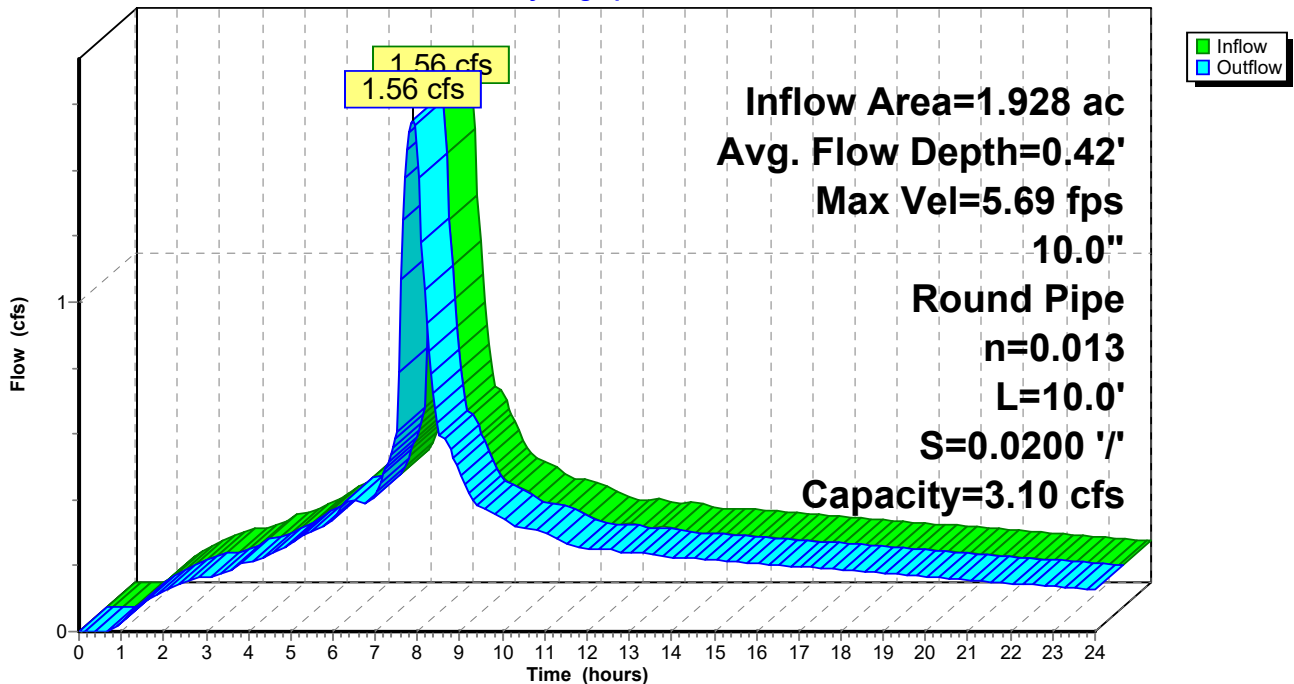
Peak Storage= 3 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.42'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HPDE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 238.40', Outlet Invert= 238.20'



Reach 2R: PROPOSED 10" HDPE

Hydrograph



Summary for Pond 1P: NORTH DETENTION

[62] Hint: Exceeded Reach 1R OUTLET depth by 0.18' @ 8.25 hrs

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 3.21" for 10-YR event
 Inflow = 0.59 cfs @ 7.90 hrs, Volume= 0.196 af
 Outflow = 0.33 cfs @ 8.24 hrs, Volume= 0.196 af, Atten= 44%, Lag= 20.3 min
 Primary = 0.33 cfs @ 8.24 hrs, Volume= 0.196 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 236.16' @ 8.24 hrs Surf.Area= 0.005 ac Storage= 0.017 af

Plug-Flow detention time= 13.3 min calculated for 0.196 af (100% of inflow)
 Center-of-Mass det. time= 12.1 min (675.2 - 663.1)

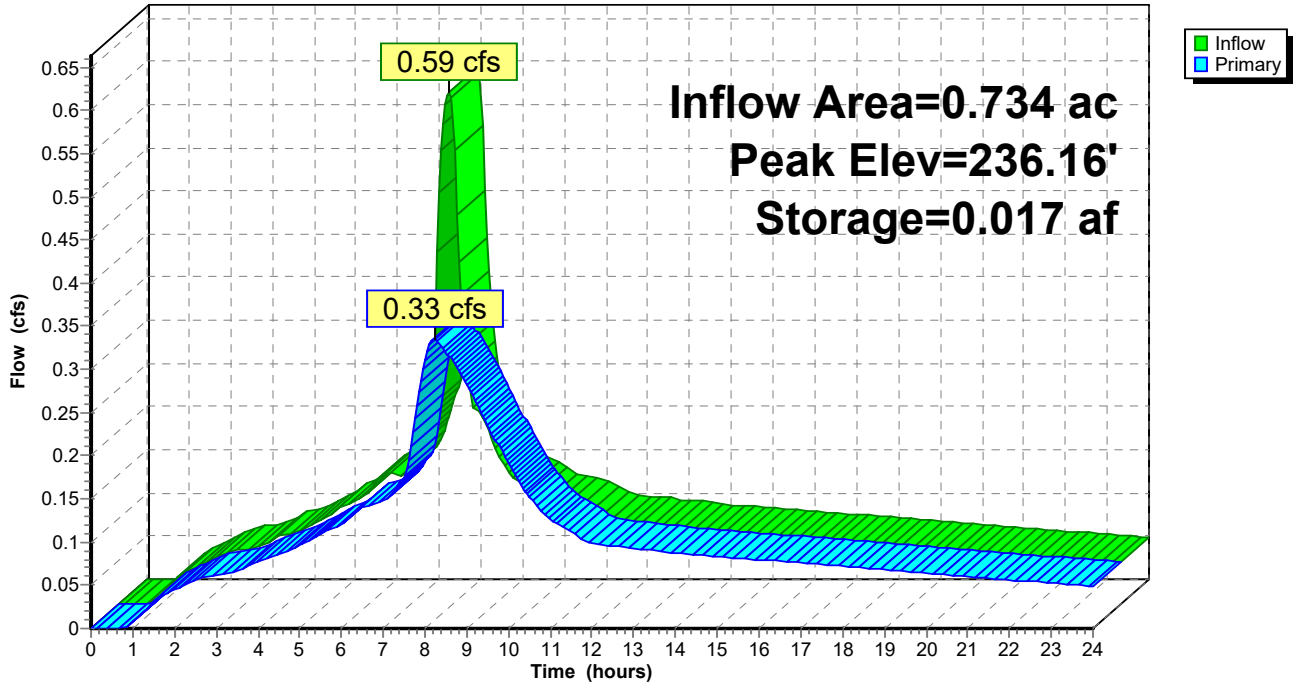
Volume	Invert	Avail.Storage	Storage Description
#1	233.00'	0.020 af	48.0" Round CMP_Round 48" L= 68.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	233.00'	2.7" Vert. Orifice/Grate C= 0.600
#2	Primary	236.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.33 cfs @ 8.24 hrs HW=236.16' TW=0.00' (Dynamic Tailwater)
 1=Orifice/Grate (Orifice Controls 0.33 cfs @ 8.40 fps)
 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: NORTH DETENTION

Hydrograph



Summary for Pond 2P: SOUTH DETENTION

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 3.21" for 10-YR event
 Inflow = 1.56 cfs @ 7.90 hrs, Volume= 0.516 af
 Outflow = 0.64 cfs @ 8.45 hrs, Volume= 0.513 af, Atten= 59%, Lag= 33.0 min
 Primary = 0.64 cfs @ 8.45 hrs, Volume= 0.513 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 237.29' @ 8.45 hrs Surf.Area= 0.019 ac Storage= 0.070 af

Plug-Flow detention time= 39.9 min calculated for 0.513 af (100% of inflow)
 Center-of-Mass det. time= 36.2 min (699.3 - 663.1)

Volume	Invert	Avail.Storage	Storage Description
#1	234.00'	0.080 af	48.0" Round CMP_Round 48" L= 277.0'

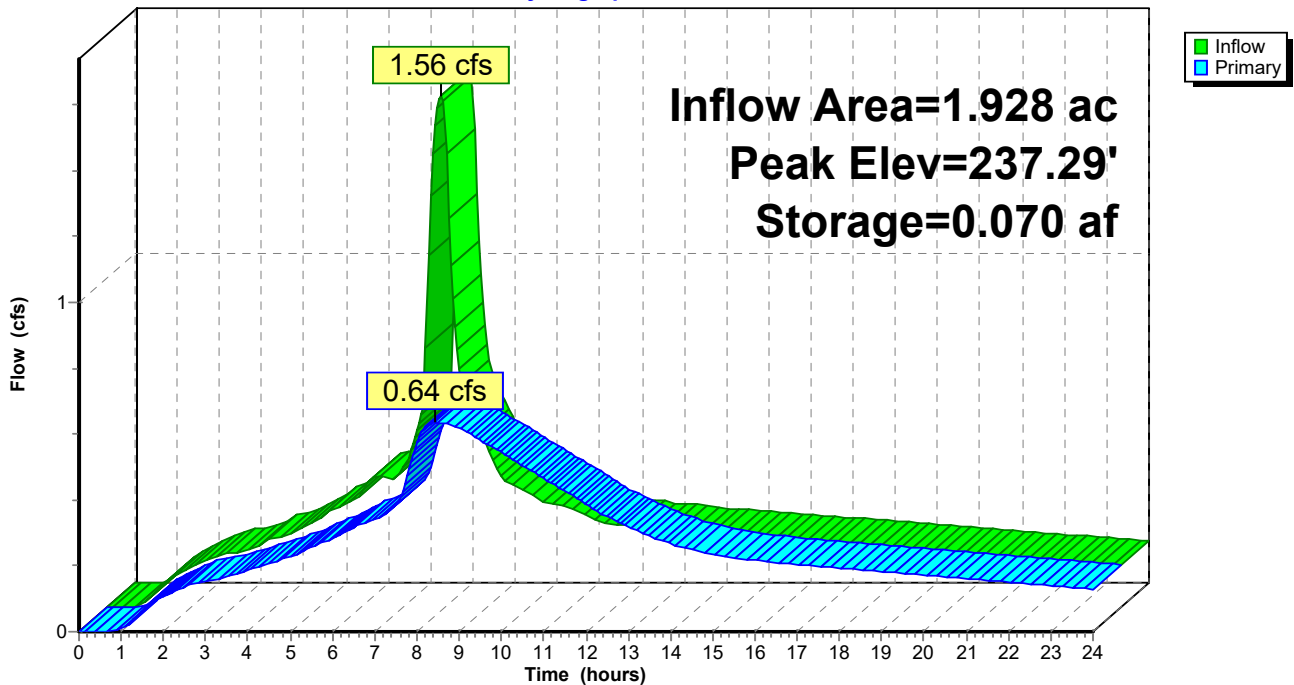
Device	Routing	Invert	Outlet Devices
#1	Primary	234.00'	3.7" Vert. Orifice/Grate C= 0.600
#2	Primary	237.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.64 cfs @ 8.45 hrs HW=237.29' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.64 cfs @ 8.53 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 2P: SOUTH DETENTION

Hydrograph

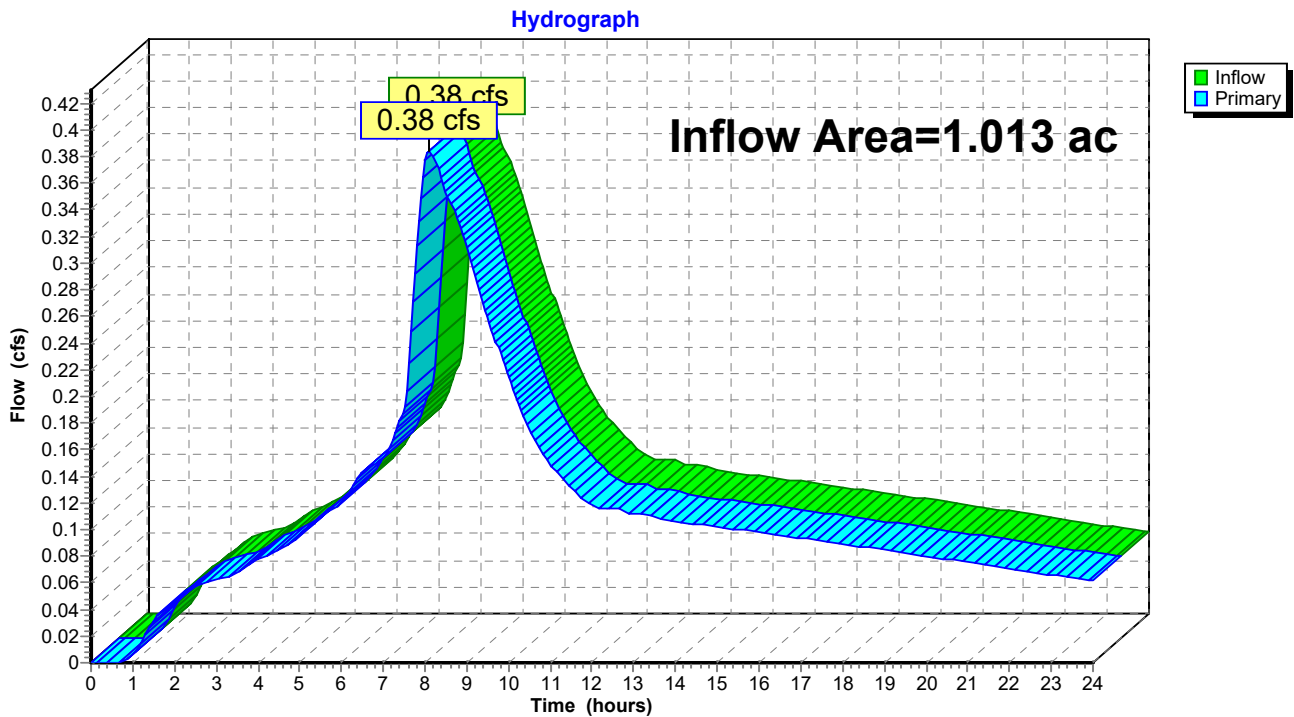


Summary for Link 1L: TOTAL OUTFLOW NORTH

Inflow Area = 1.013 ac, 72.42% Impervious, Inflow Depth > 2.65" for 10-YR event
Inflow = 0.38 cfs @ 8.07 hrs, Volume= 0.224 af
Primary = 0.38 cfs @ 8.07 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW NORTH

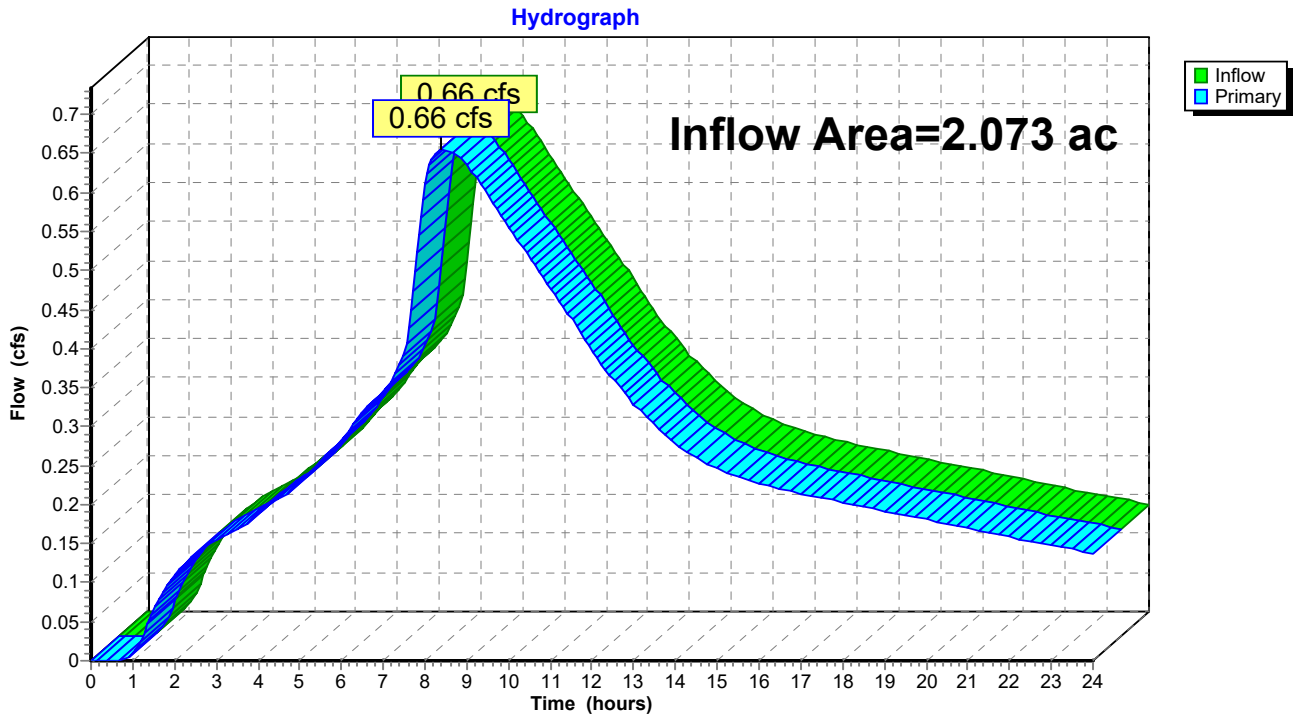


Summary for Link 2L: TOTAL OUTFLOW SOUTH

Inflow Area = 2.073 ac, 92.98% Impervious, Inflow Depth > 3.06" for 10-YR event
Inflow = 0.66 cfs @ 8.39 hrs, Volume= 0.528 af
Primary = 0.66 cfs @ 8.39 hrs, Volume= 0.528 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: TOTAL OUTFLOW SOUTH

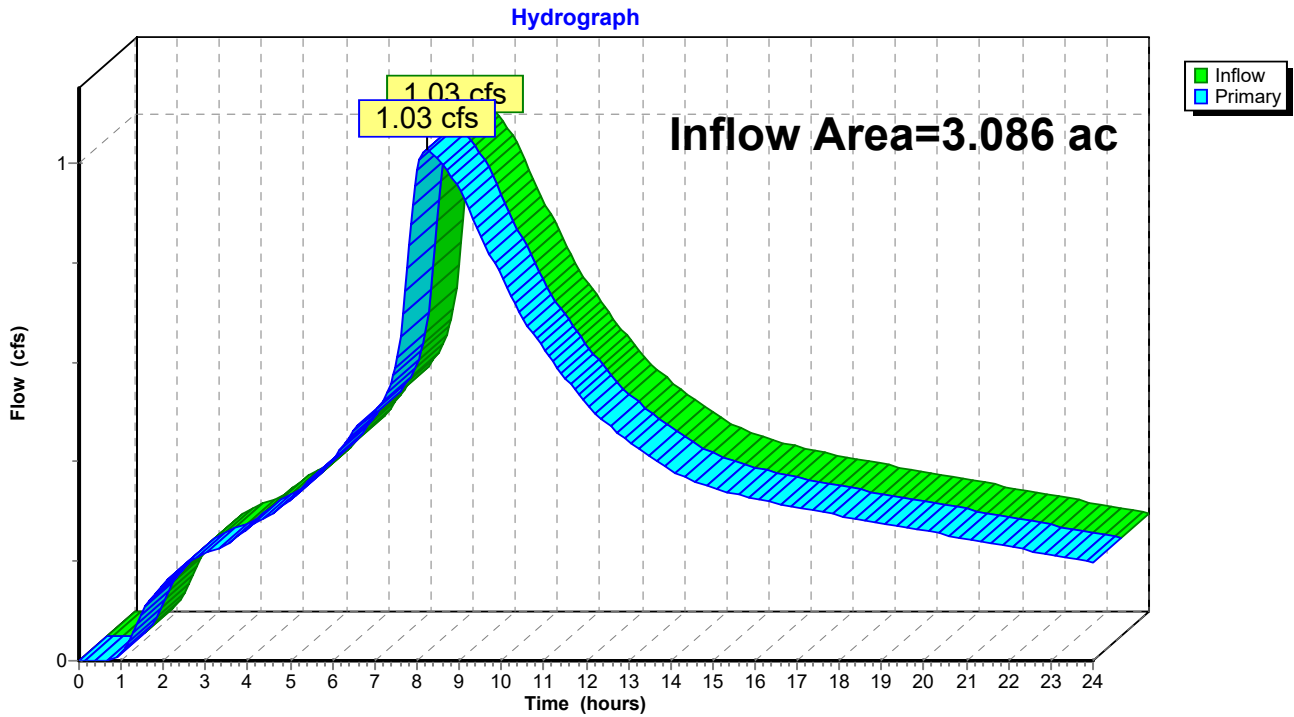


Summary for Link 3L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 86.23% Impervious, Inflow Depth > 2.92" for 10-YR event
Inflow = 1.03 cfs @ 8.25 hrs, Volume= 0.752 af
Primary = 1.03 cfs @ 8.25 hrs, Volume= 0.752 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: TOTAL OUTFLOW



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: NORTH GRAVEL AREA Runoff Area=31,952 sf 100.00% Impervious Runoff Depth>3.66"
 Tc=5.0 min CN=0/98 Runoff=0.67 cfs 0.224 af

Subcatchment 2S: SOUTH GRAVEL AREA Runoff Area=83,964 sf 100.00% Impervious Runoff Depth>3.66"
 Tc=5.0 min CN=0/98 Runoff=1.77 cfs 0.588 af

Subcatchment 3S: NORTH PLANTED AREA Runoff Area=12,166 sf 0.00% Impervious Runoff Depth>1.52"
 Tc=5.0 min CN=74/0 Runoff=0.09 cfs 0.035 af

Subcatchment 4S: SOUTH PLANTED AREA Runoff Area=6,342 sf 0.00% Impervious Runoff Depth>1.52"
 Tc=5.0 min CN=74/0 Runoff=0.05 cfs 0.018 af

Reach 1R: PROPOSED 10" HDPE Avg. Flow Depth=0.26' Max Vel=4.54 fps Inflow=0.67 cfs 0.224 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=0.67 cfs 0.224 af

Reach 2R: PROPOSED 10" HDPE Avg. Flow Depth=0.45' Max Vel=5.87 fps Inflow=1.77 cfs 0.588 af
 10.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/ Capacity=3.10 cfs Outflow=1.77 cfs 0.588 af

Pond 1P: NORTH DETENTION Peak Elev=236.94' Storage=0.020 af Inflow=0.67 cfs 0.224 af
 Outflow=0.46 cfs 0.223 af

Pond 2P: SOUTH DETENTION Peak Elev=238.01' Storage=0.080 af Inflow=1.77 cfs 0.588 af
 Outflow=1.15 cfs 0.585 af

Link 1L: TOTAL OUTFLOW NORTH Inflow=0.53 cfs 0.259 af
 Primary=0.53 cfs 0.259 af

Link 2L: TOTAL OUTFLOW SOUTH Inflow=1.18 cfs 0.603 af
 Primary=1.18 cfs 0.603 af

Link 3L: TOTAL OUTFLOW Inflow=1.65 cfs 0.862 af
 Primary=1.65 cfs 0.862 af

Total Runoff Area = 3.086 ac Runoff Volume = 0.865 af Average Runoff Depth = 3.36"
13.77% Pervious = 0.425 ac 86.23% Impervious = 2.661 ac

Summary for Subcatchment 1S: NORTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.67 cfs @ 7.90 hrs, Volume= 0.224 af, Depth> 3.66"

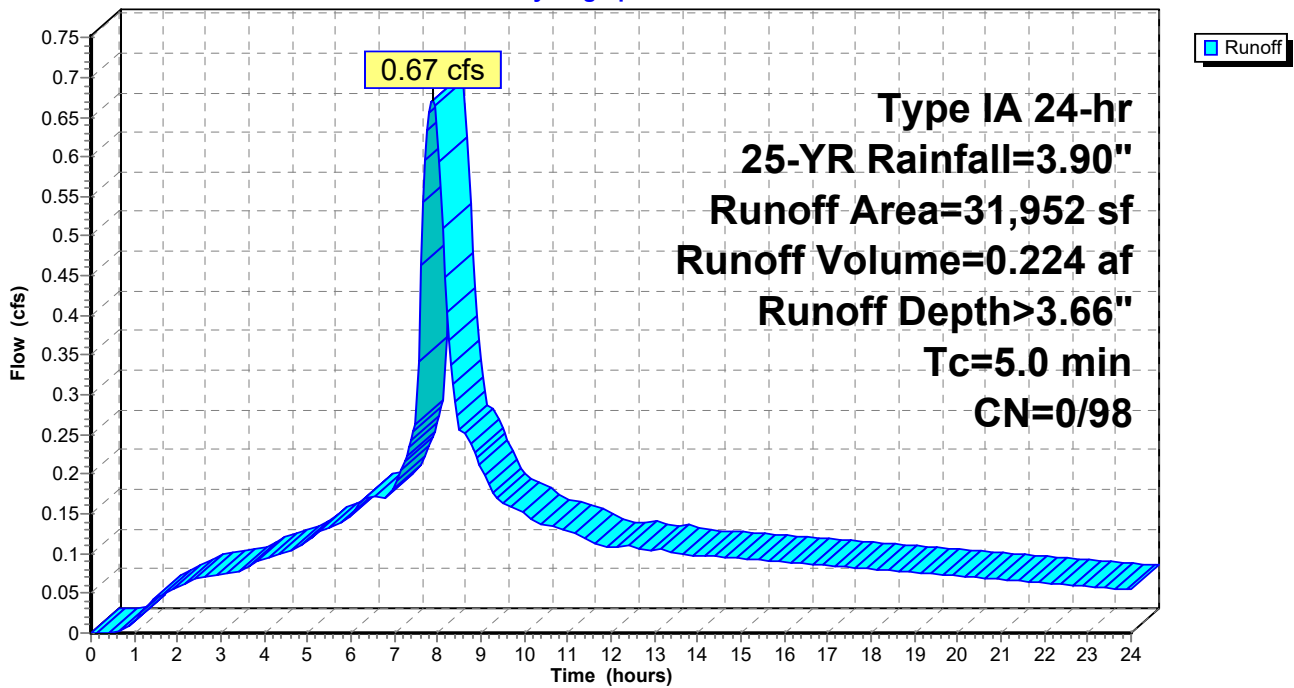
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
* 31,952	98	Gravel Staging Area, HSG C
31,952	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: NORTH GRAVEL AREA

Hydrograph



Summary for Subcatchment 2S: SOUTH GRAVEL AREA

[49] Hint: Tc<2dt may require smaller dt

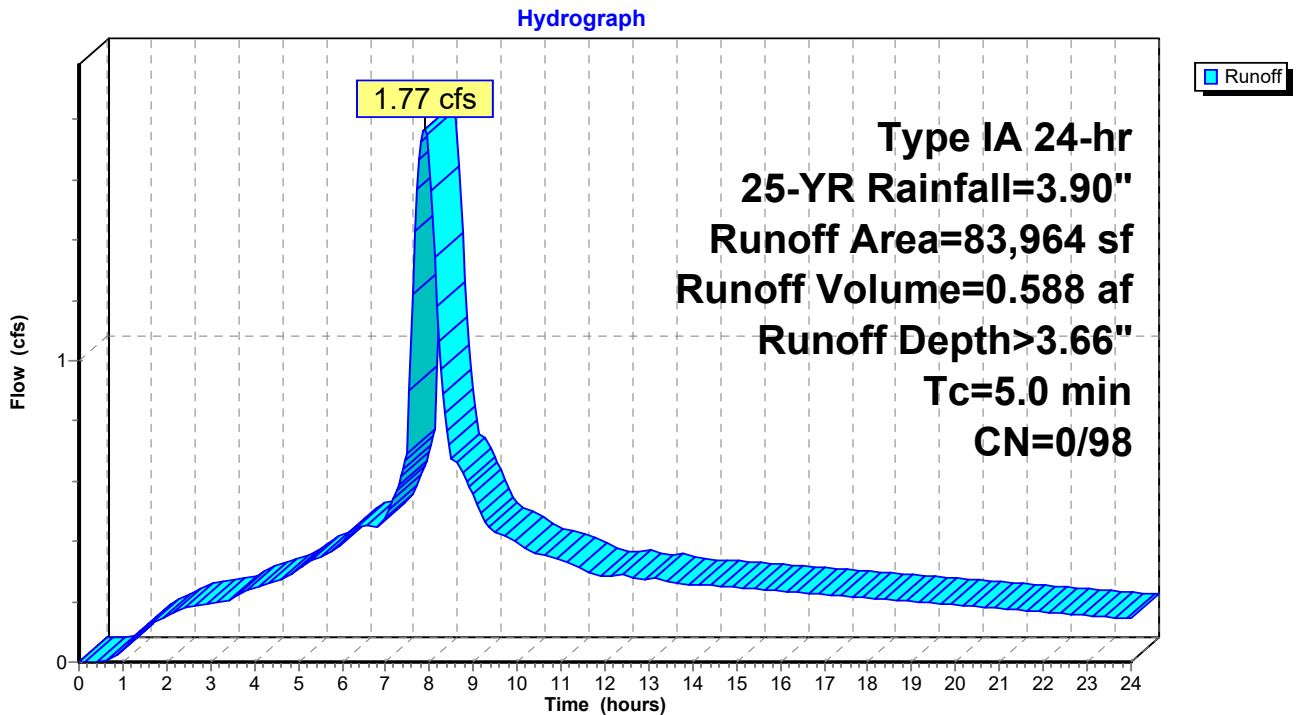
Runoff = 1.77 cfs @ 7.90 hrs, Volume= 0.588 af, Depth> 3.66"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
* 83,964	98	Gravel Staging Area and New Storage Building, HSG C
83,964	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: SOUTH GRAVEL AREA



Summary for Subcatchment 3S: NORTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.09 cfs @ 7.99 hrs, Volume= 0.035 af, Depth> 1.52"

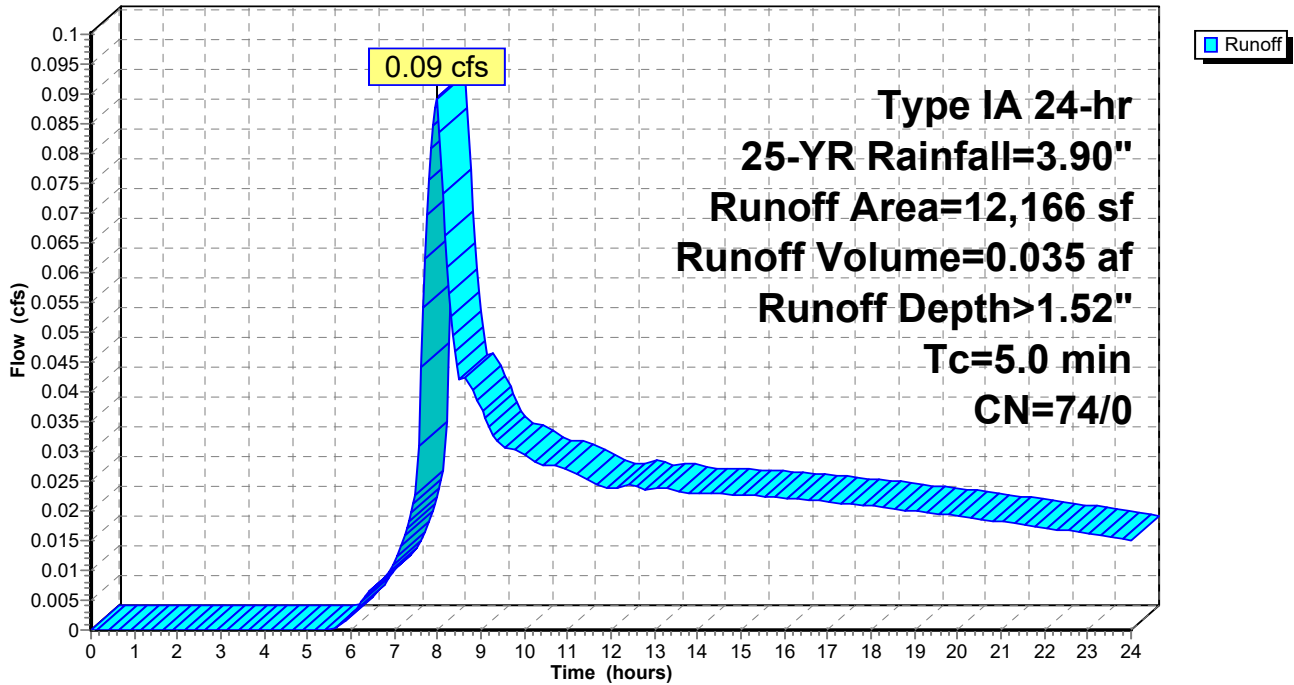
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
12,166	74	>75% Grass cover, Good, HSG C
12,166	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: NORTH PLANTED AREA

Hydrograph



Summary for Subcatchment 4S: SOUTH PLANTED AREA

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.05 cfs @ 7.99 hrs, Volume= 0.018 af, Depth> 1.52"

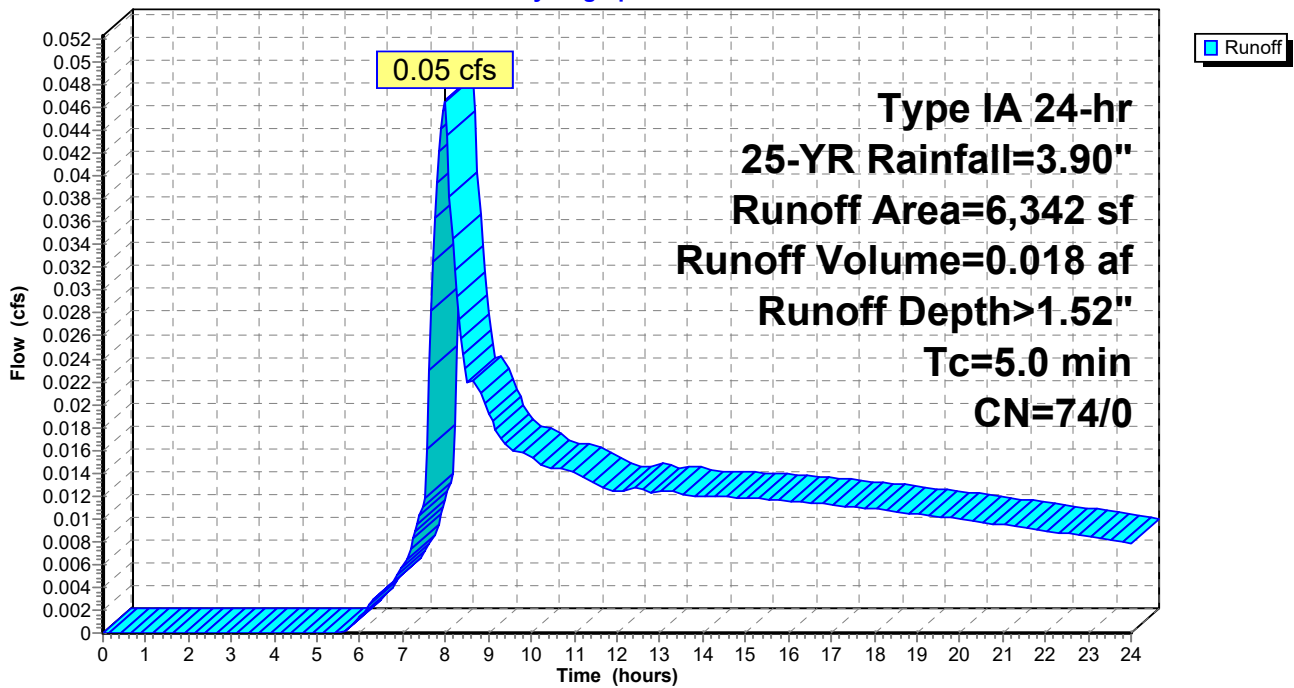
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

Area (sf)	CN	Description
6,342	74	>75% Grass cover, Good, HSG C
6,342	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: SOUTH PLANTED AREA

Hydrograph



Summary for Reach 1R: PROPOSED 10" HDPE

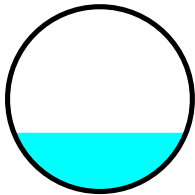
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 3.66" for 25-YR event
 Inflow = 0.67 cfs @ 7.90 hrs, Volume= 0.224 af
 Outflow = 0.67 cfs @ 7.90 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 4.54 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 2.60 fps, Avg. Travel Time= 0.1 min

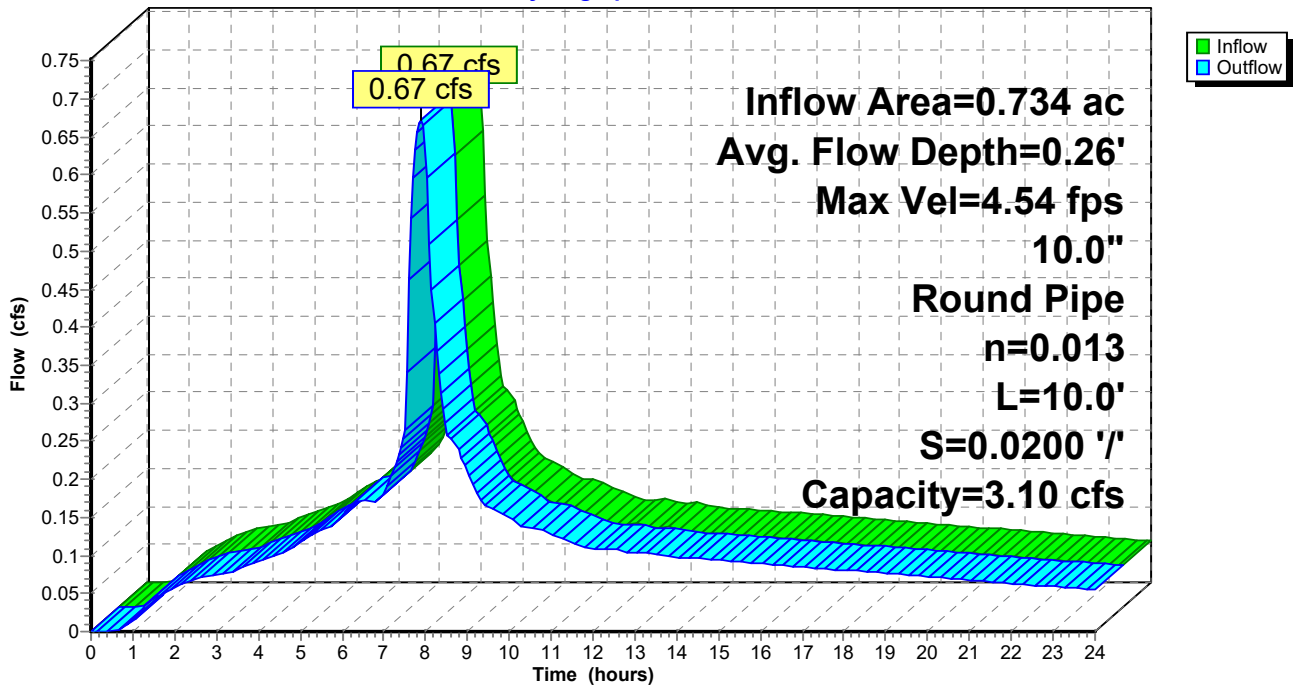
Peak Storage= 1 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.26'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HDPE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 236.00', Outlet Invert= 235.80'



Reach 1R: PROPOSED 10" HDPE

Hydrograph



Summary for Reach 2R: PROPOSED 10" HDPE

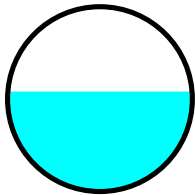
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 3.66" for 25-YR event
 Inflow = 1.77 cfs @ 7.90 hrs, Volume= 0.588 af
 Outflow = 1.77 cfs @ 7.90 hrs, Volume= 0.588 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.87 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 3.45 fps, Avg. Travel Time= 0.0 min

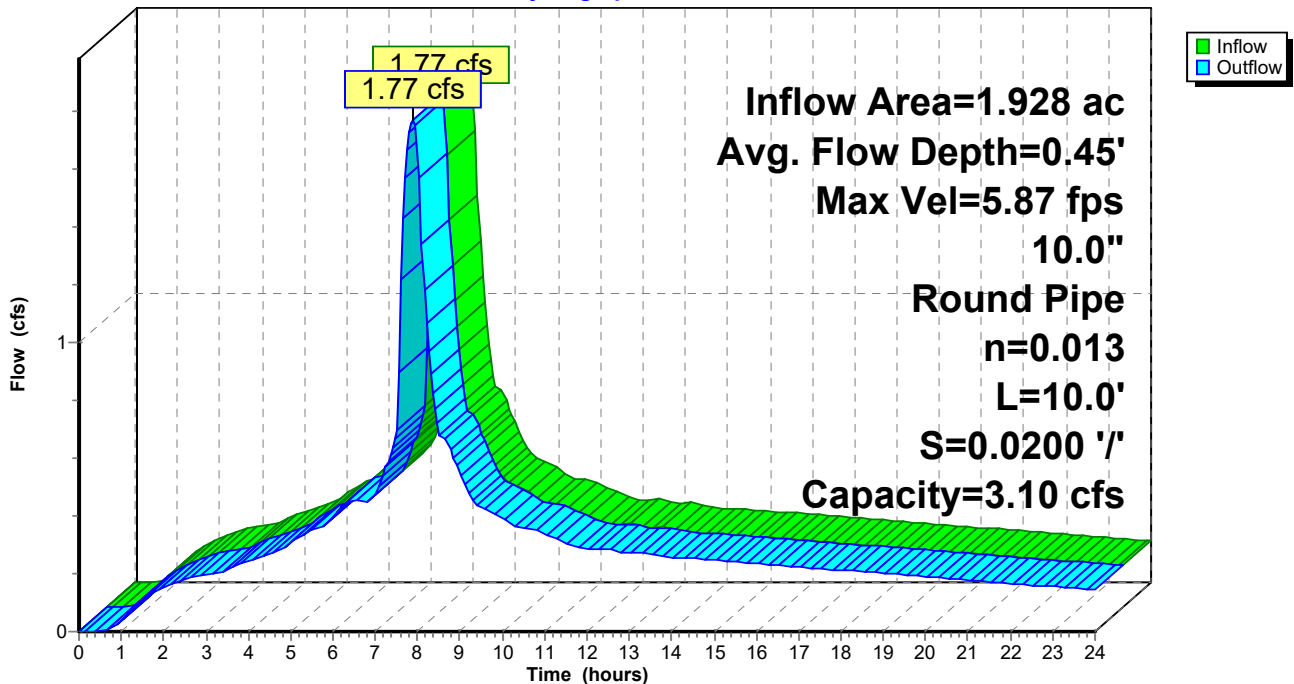
Peak Storage= 3 cf @ 7.90 hrs
 Average Depth at Peak Storage= 0.45'
 Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 3.10 cfs

10.0" Round Pipe
 n= 0.013 HPDE
 Length= 10.0' Slope= 0.0200 '/'
 Inlet Invert= 238.40', Outlet Invert= 238.20'



Reach 2R: PROPOSED 10" HDPE

Hydrograph



Summary for Pond 1P: NORTH DETENTION

[63] Warning: Exceeded Reach 1R INLET depth by 0.72' @ 8.15 hrs

Inflow Area = 0.734 ac, 100.00% Impervious, Inflow Depth > 3.66" for 25-YR event
 Inflow = 0.67 cfs @ 7.90 hrs, Volume= 0.224 af
 Outflow = 0.46 cfs @ 8.16 hrs, Volume= 0.223 af, Atten= 31%, Lag= 15.6 min
 Primary = 0.46 cfs @ 8.16 hrs, Volume= 0.223 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 236.94' @ 8.17 hrs Surf.Area= 0.001 ac Storage= 0.020 af

Plug-Flow detention time= 14.9 min calculated for 0.223 af (100% of inflow)
 Center-of-Mass det. time= 13.7 min (673.8 - 660.1)

Volume	Invert	Avail.Storage	Storage Description
#1	233.00'	0.020 af	48.0" Round CMP_Round 48" L= 68.0'

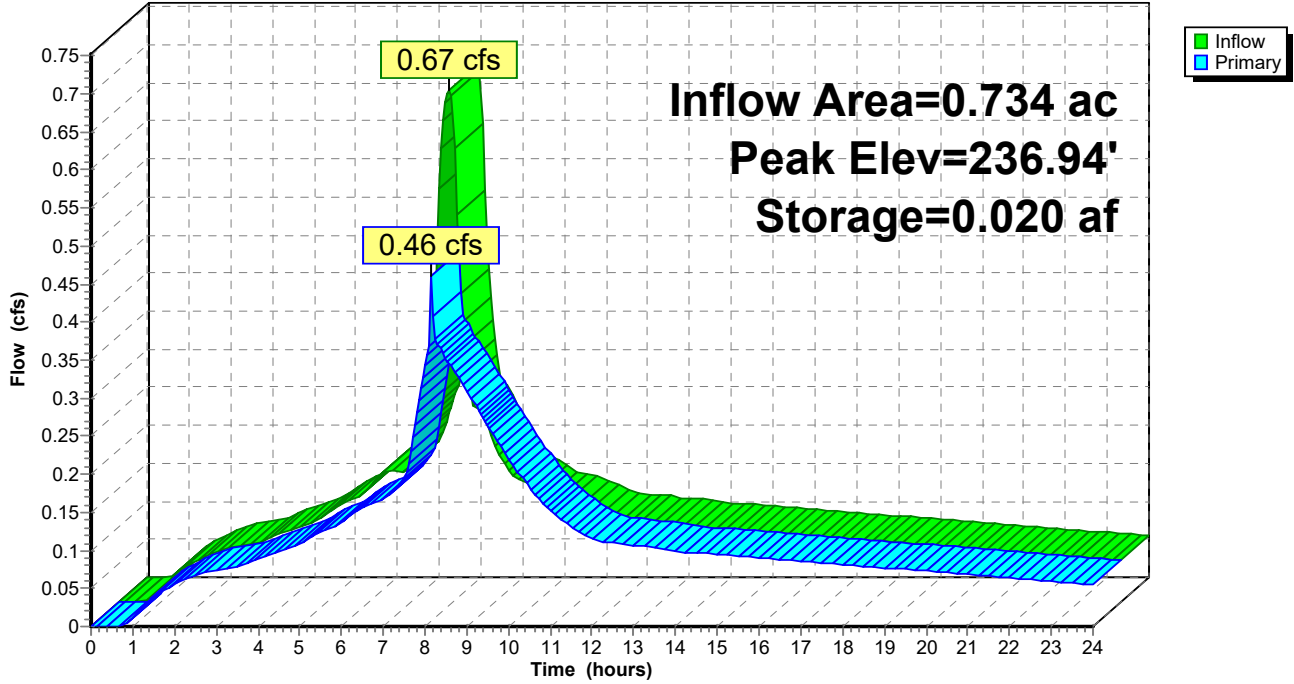
Device	Routing	Invert	Outlet Devices
#1	Primary	233.00'	2.7" Vert. Orifice/Grate C= 0.600
#2	Primary	236.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.45 cfs @ 8.16 hrs HW=236.93' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.37 cfs @ 9.41 fps)
- 2=Broad-Crested Rectangular Weir (Weir Controls 0.08 cfs @ 0.49 fps)

Pond 1P: NORTH DETENTION

Hydrograph



Summary for Pond 2P: SOUTH DETENTION

[93] Warning: Storage range exceeded by 0.01'

Inflow Area = 1.928 ac, 100.00% Impervious, Inflow Depth > 3.66" for 25-YR event
 Inflow = 1.77 cfs @ 7.90 hrs, Volume= 0.588 af
 Outflow = 1.15 cfs @ 8.21 hrs, Volume= 0.585 af, Atten= 35%, Lag= 18.8 min
 Primary = 1.15 cfs @ 8.21 hrs, Volume= 0.585 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 238.01' @ 8.22 hrs Surf.Area= 0.000 ac Storage= 0.080 af

Plug-Flow detention time= 43.9 min calculated for 0.584 af (99% of inflow)
 Center-of-Mass det. time= 39.8 min (699.9 - 660.1)

Volume	Invert	Avail.Storage	Storage Description
#1	234.00'	0.080 af	48.0" Round CMP_Round 48" L= 277.0'

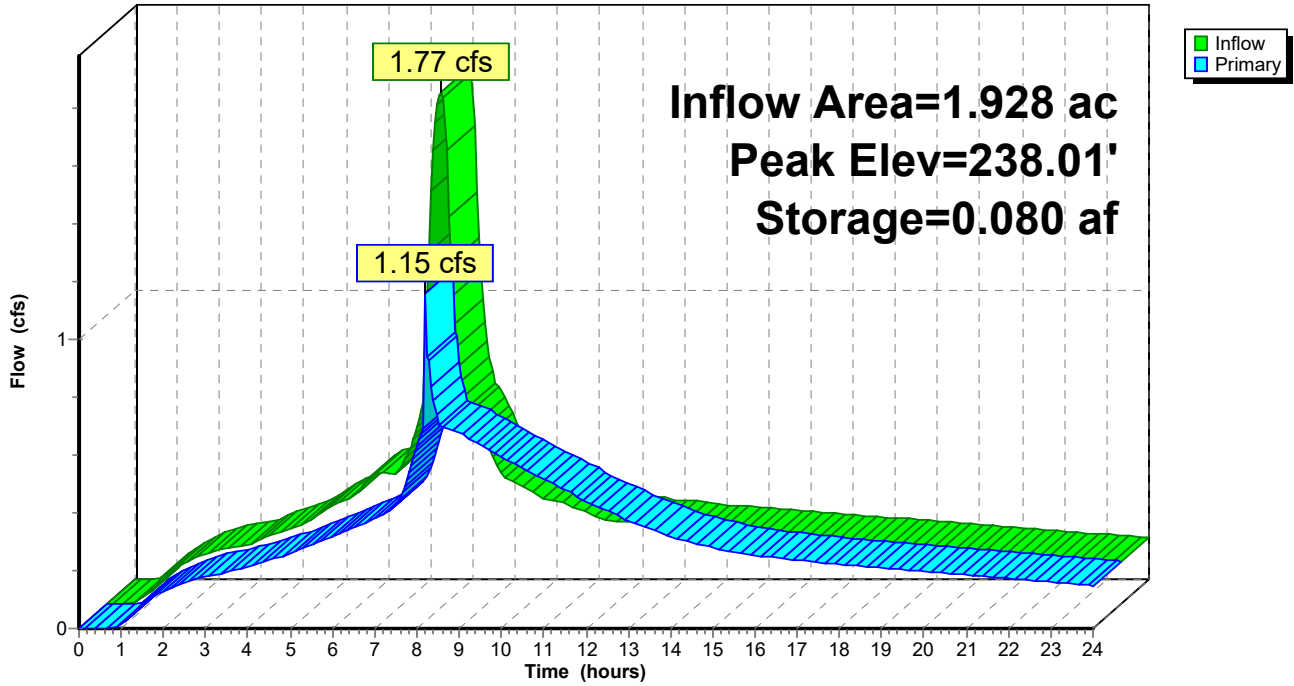
Device	Routing	Invert	Outlet Devices
#1	Primary	234.00'	3.7" Vert. Orifice/Grate C= 0.600
#2	Primary	237.90'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.10 cfs @ 8.21 hrs HW=237.99' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.70 cfs @ 9.43 fps)
- 2=Broad-Crested Rectangular Weir (Weir Controls 0.40 cfs @ 0.85 fps)

Pond 2P: SOUTH DETENTION

Hydrograph

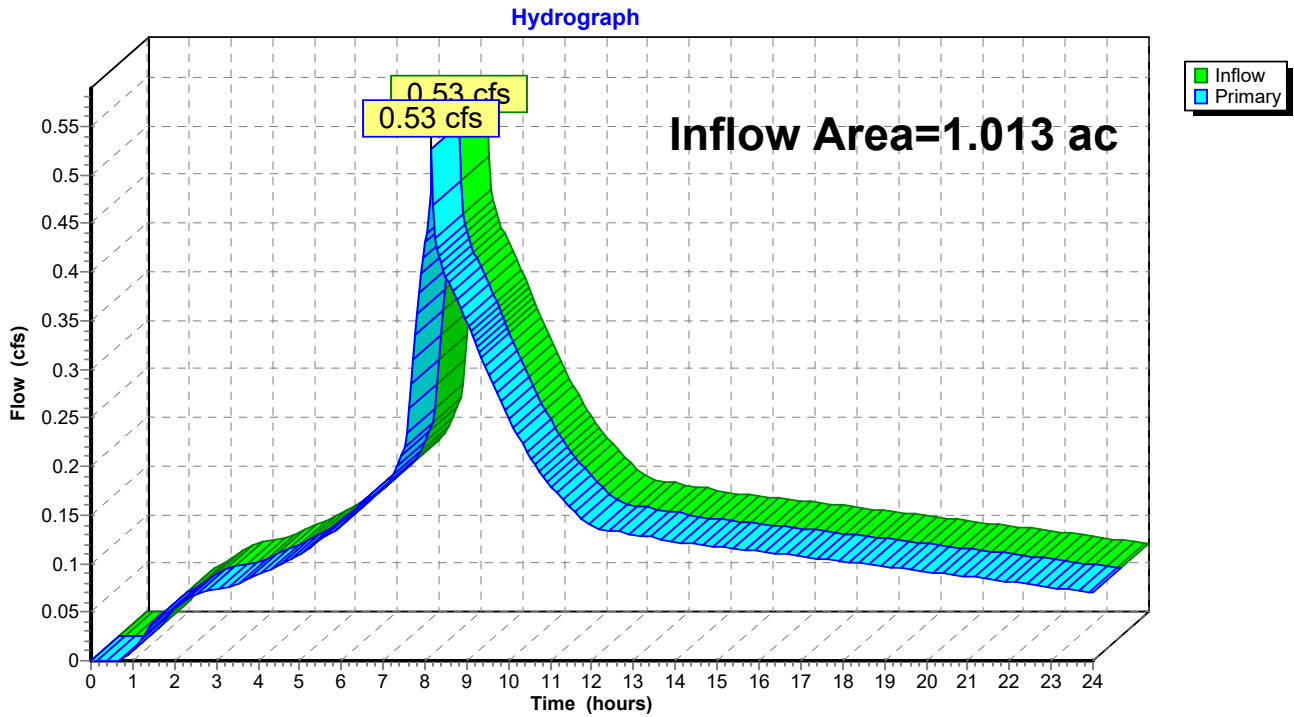


Summary for Link 1L: TOTAL OUTFLOW NORTH

Inflow Area = 1.013 ac, 72.42% Impervious, Inflow Depth > 3.06" for 25-YR event
Inflow = 0.53 cfs @ 8.15 hrs, Volume= 0.259 af
Primary = 0.53 cfs @ 8.15 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: TOTAL OUTFLOW NORTH

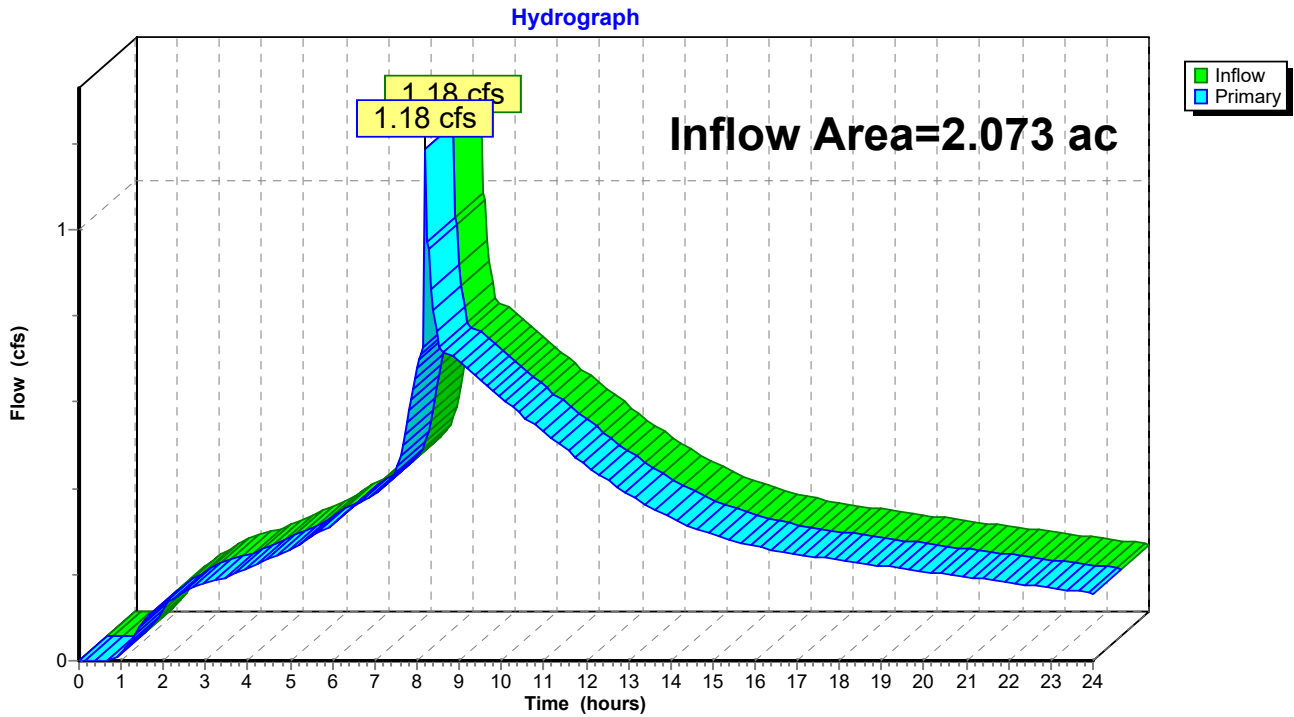


Summary for Link 2L: TOTAL OUTFLOW SOUTH

Inflow Area = 2.073 ac, 92.98% Impervious, Inflow Depth > 3.49" for 25-YR event
Inflow = 1.18 cfs @ 8.21 hrs, Volume= 0.603 af
Primary = 1.18 cfs @ 8.21 hrs, Volume= 0.603 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: TOTAL OUTFLOW SOUTH

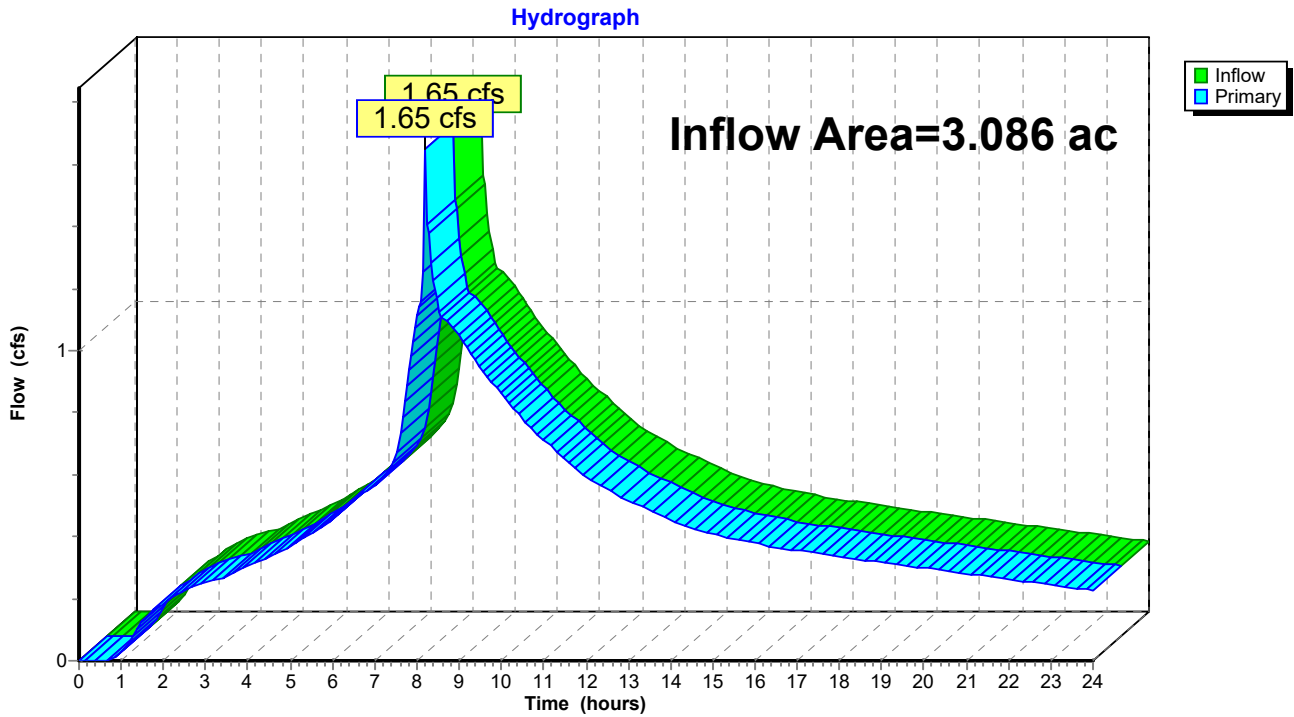


Summary for Link 3L: TOTAL OUTFLOW

Inflow Area = 3.086 ac, 86.23% Impervious, Inflow Depth > 3.35" for 25-YR event
Inflow = 1.65 cfs @ 8.21 hrs, Volume= 0.862 af
Primary = 1.65 cfs @ 8.21 hrs, Volume= 0.862 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: TOTAL OUTFLOW



ATTACHMENT G

TR55 RUNOFF CURVE NUMBERS

Table 2-2a Runoff curve numbers for urban areas ^{1/}

Cover description	Average percent impervious area ^{2/}	Curve numbers for hydrologic soil group			
		A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ^{3/} :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ^{4/}		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ^{5/}					
		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

¹ Average runoff condition, and $I_a = 0.2S$.

² The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

³ CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

⁴ Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

⁵ Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2b Runoff curve numbers for cultivated agricultural lands ^{1/}

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment ^{2/}	Hydrologic condition ^{3/}	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
C&T+ CR	Poor	65	73	79	81	
	Good	61	70	77	80	
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T+ CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

¹ Average runoff condition, and $I_a=0.2S$

² Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

³ Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good $\geq 20\%$), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2c Runoff curve numbers for other agricultural lands ^{1/}

Cover description	Hydrologic condition	Curve numbers for hydrologic soil group			
		A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. ^{2/}	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. ^{3/}	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 ^{4/}	48	65	73
Woods—grass combination (orchard or tree farm). ^{5/}	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. ^{6/}	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 ^{4/}	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

¹ Average runoff condition, and $I_a = 0.2S$.

² *Poor*: <50% ground cover or heavily grazed with no mulch.

Fair: 50 to 75% ground cover and not heavily grazed.

Good: > 75% ground cover and lightly or only occasionally grazed.

³ *Poor*: <50% ground cover.

Fair: 50 to 75% ground cover.

Good: >75% ground cover.

⁴ Actual curve number is less than 30; use CN = 30 for runoff computations.

⁵ CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

⁶ *Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

Fair: Woods are grazed but not burned, and some forest litter covers the soil.

Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 2-2d Runoff curve numbers for arid and semiarid rangelands ^{1/}

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition ^{2/}	A ^{3/}	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹ Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use table 2-2c.

² Poor: <30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: > 70% ground cover.

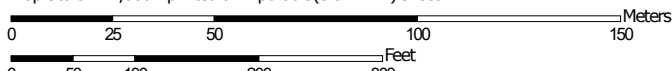
³ Curve numbers for group A have been developed only for desert shrub.

Soil Map—Washington County, Oregon



Soil Map may not be valid at this scale.

Map Scale: 1:1,860 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Oregon

Survey Area Data: Version 23, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	0.1	0.6%
37B	Quatama loam, 3 to 7 percent slopes	4.1	23.4%
38B	Saum silt loam, 2 to 7 percent slopes	0.4	2.4%
38C	Saum silt loam, 7 to 12 percent slopes	8.3	47.3%
38D	Saum silt loam, 12 to 20 percent slopes	1.4	8.0%
38E	Saum silt loam, 20 to 30 percent slopes	0.2	1.0%
43	Wapato silty clay loam	3.0	17.2%
Totals for Area of Interest		17.6	100.0%

Washington County, Oregon

38B—Saum silt loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: 21zq

Elevation: 250 to 1,200 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Saum and similar soils: 80 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills

Landform position (two-dimensional): Summit, toeslope

Landform position (three-dimensional): Interfluve, base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 23 inches: silty clay loam

H3 - 23 to 50 inches: stony silty clay loam

H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 7 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F002XB006OR - Foothill Group

Forage suitability group: Well drained < 15% Slopes
(G002XY002OR)

Other vegetative classification: Well drained < 15% Slopes
(G002XY002OR)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Washington County, Oregon

Survey Area Data: Version 23, Sep 7, 2023

Washington County, Oregon

38C—Saum silt loam, 7 to 12 percent slopes

Map Unit Setting

National map unit symbol: 21zr

Elevation: 250 to 1,200 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Saum and similar soils: 80 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluve, base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 23 inches: silty clay loam

H3 - 23 to 50 inches: stony silty clay loam

H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 7 to 12 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F002XB006OR - Foothill Group

Forage suitability group: Well drained < 15% Slopes
(G002XY002OR)

Other vegetative classification: Well drained < 15% Slopes
(G002XY002OR)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Washington County, Oregon

Survey Area Data: Version 23, Sep 7, 2023

Washington County, Oregon

38D—Saum silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 21zs

Elevation: 250 to 1,200 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Saum and similar soils: 80 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saum

Setting

Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed loess, old alluvium, and residuum weathered from basalt

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 23 inches: silty clay loam

H3 - 23 to 50 inches: stony silty clay loam

H4 - 50 to 54 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: F002XB006OR - Foothill Group

Forage suitability group: Well Drained > 15% Slopes
(G002XY001OR)

Other vegetative classification: Well Drained > 15% Slopes
(G002XY001OR)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Washington County, Oregon

Survey Area Data: Version 23, Sep 7, 2023

Washington County, Oregon

37B—Quatama loam, 3 to 7 percent slopes

Map Unit Setting

National map unit symbol: 21zm

Elevation: 140 to 250 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Quatama and similar soils: 85 percent

Minor components: 4 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quatama

Setting

Landform: Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy alluvium

Typical profile

H1 - 0 to 15 inches: loam

H2 - 15 to 30 inches: clay loam

H3 - 30 to 62 inches: loam

Properties and qualities

Slope: 3 to 7 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 24 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: R002XC008OR - Valley Terrace Group

Forage suitability group: Moderately Well Drained < 15% Slopes (G002XY004OR)

Other vegetative classification: Moderately Well Drained < 15%
Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Huberly

Percent of map unit: 4 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Washington County, Oregon
Survey Area Data: Version 23, Sep 7, 2023

Memorandum

To: Sean Emrick, Brown Contracting
Copy: Marie Holladay, AKS Engineering & Forestry
From: Melissa Webb, PE
Date: May 30, 2024
Subject: Brown Contracting, Inc – Sight Distance Analysis



Introduction

This memorandum reports the findings of a sight distance analysis performed at two access driveways for the Brown Contracting facility, located at 9675 SW Day Road within unincorporated Washington County, Oregon. This analysis was performed to examine sight lines along SW Day Road and to determine whether adequate sight distance is available to allow for safe operation of the access intersections.

Project Location & Description

The subject site is located north of SW Day Road and west of SW Boones Ferry Road within unincorporated Washington County. The existing Brown Contracting establishment is located on tax lot 309 of Map 3S102B. In addition, the company also owns four adjacent lots to the west (tax lots 302, 303, 310, and 311). Three of these lots have a single-family dwelling on site that is rented to company employees (tax lots 303, 310, and 311).

The project involves expanding the existing contractor's establishment to incorporate portions of the four adjacent tax lots for a graveled storage and equipment area for the business. In addition, a covered/open air storage building is planned on tax lot 309.

There are two primary existing access locations for this project. The first access is the main contractor's establishment entrance located on tax lot 309. The second access is located on tax lot 302. Both locations allow for access onto SW Day Road.

Vicinity Roadway

SW Day Road is under the jurisdiction of the City of Wilsonville and is classified as a Major Arterial. The roadway has a 3-4 lane cross section with a posted speed of 40 mph along the site frontage. On-street parking is not permitted/available along both sides of the roadway. Curbs and sidewalks are available intermittently along both sides of the roadway, and bicycle lanes are available along both sides of the roadway.

The project site is shown in Figure 1. A site plan showing the access locations is included as an attachment to this memorandum.

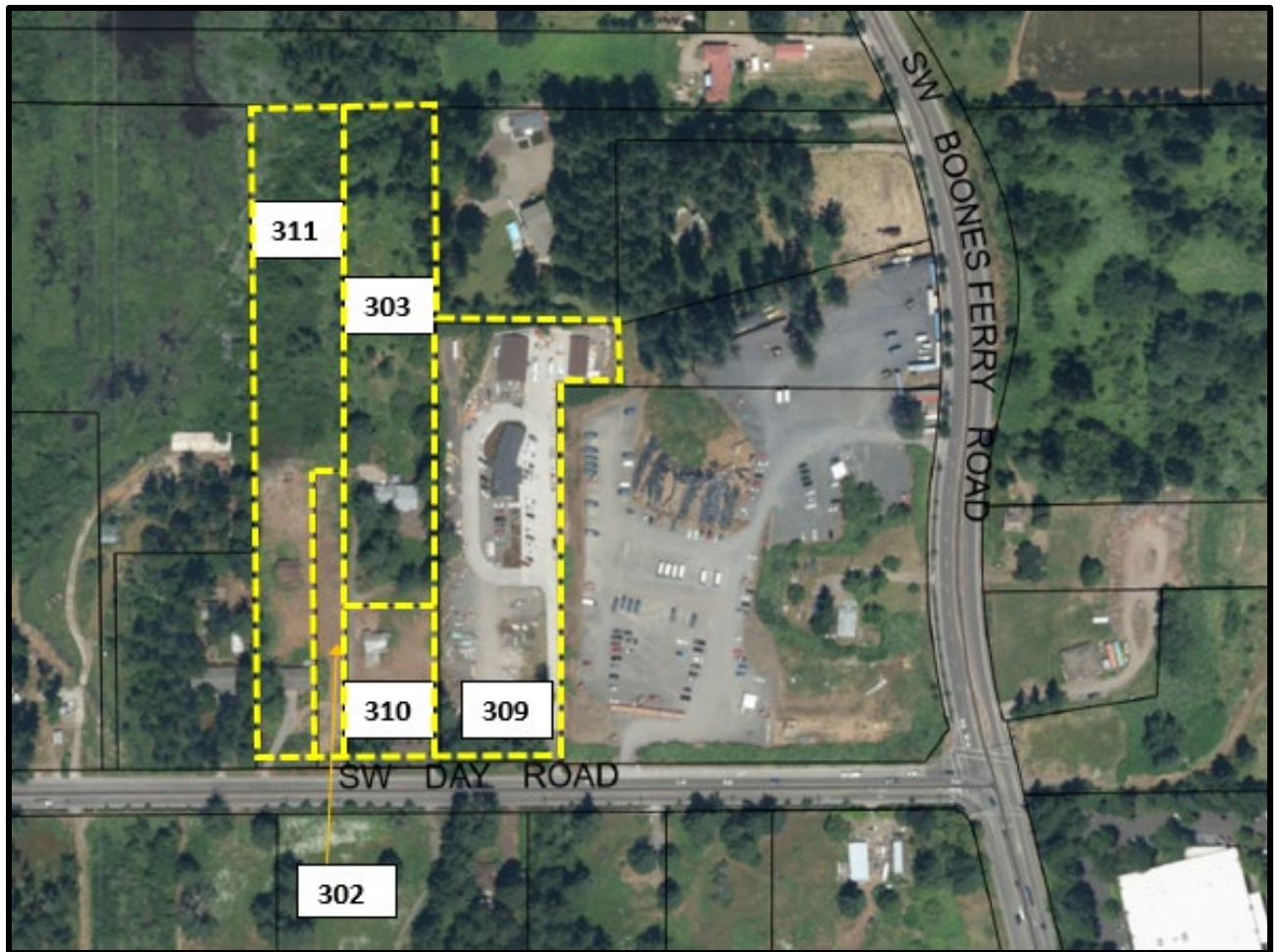


Figure 1: Project Location (image from Google Earth)

Sight Distance Definitions & Methodologies

A sight distance analysis was conducted at the existing driveway access locations on tax lots 309 and 302. Both intersection sight distance (ISD) and stopping sight distance (SSD) were assessed. The ISD is an operational measure, intended to provide sufficient line of sight along the major street so that a driver can turn from the minor street without impeding the flow of through traffic. The SSD is the minimum requirement to allow for safe operation of the roadway and allows an oncoming driver to see a hazard in the roadway, react, and come to a complete stop, if necessary, to avoid a collision.

According to Washington County Code 501-8.5, intersection sight distance shall be based on an eye height of 3.5 feet and an object height of 4.25 feet above the road and be assumed to be 15 feet from the near edge of pavement. Based on a posted speed of 40 mph along SW Day Road, the minimum ISD shall be equal to ten times the vehicular speed of the roadway (i.e. 400 feet). This standard was applied to a typical passenger car.



A previous report submitted by DKS Associates¹ referenced intersection sight distance requirements for single-unit trucks based on standards established in the AASHTO manual *A Policy of Geometric Design of Highways and Streets*², but did not provide any measurements taken at the project site. Washington County sight distance standards do not have a separate methodology for single-unit trucks: therefore, the sight distance measurements for single-unit trucks were taken in accordance with the AASHTO standards. Using these standards, the driver's eye is assumed to be 14.5 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 7.6 feet above the minor-street approach pavement for a single-unit truck. The oncoming vehicle driver's eye height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement. For a single-unit truck, based on a posted speed of 40 mph along SW Day Road, the recommended ISD is 560 feet, and the required SSD is 305 feet to both the east (looking left) and west (looking right).

Sight Distance Measurements

East Access Driveway (tax lot 309)

The east access driveway for this project provides access to tax lot 309 and is located approximately 15 feet west of the site's southeast property corner, onto SW Day Road. This location is the main access driveway for the Brown Contracting facility.

Based on a posted speed of 40 mph along SW Day Road, the minimum recommended intersection sight distance is as follows:

- Washington County Standards – 400 feet (passenger car with a driver's eye height of 3.5 feet)
- AASHTO standards for a single-unit truck – 560 feet (driver's eye height of 7.6 feet)

According to AASHTO standards, the required SSD is 305 feet to both the east and the west.

Sight distance was measured to the east and the west for both vehicle types:

- To the east
 - Sight distance was measured to be 450 feet for a passenger car. This measurement meets both the Washington County sight distance standard (400 feet) and the AASHTO required SSD standard (305 feet).
 - Sight distance was measured to be 600 feet for a single-unit truck. This measurement meets both the AASHTO recommended ISD standard (560 feet) and the required SSD standard (305 feet).
- To the west
 - Sight distance was measured to be in excess of 900 feet. This measurement meets the Washington County sight distance standard (400 feet) for a passenger car and meets both the

¹ DKS Associates, Technical Memorandum: Brown Contracting – Traffic Impact Study Criteria, May 13, 2024

² American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018.



AASHTO recommended ISD standard (560 feet) and the required SSD standard (305 feet) for a single-unit truck.

Based on the field measurements taken at the site access point to tax lot 309, there is adequate intersection sight distance for both passenger cars and single-unit trucks to make a left turn and a right turn from the accesses onto SW Day Road. In addition, all measurements meet the AASHTO required SSD standard. We recommend trimming and/or removing vegetation along both sides of the access point to tax lot 309 to maintain adequate clear views to the east and west.

Images depicting field measurements conducted at the site are included as an attachment to this memorandum.

West Access Driveway (tax lot 302)

The west access driveway for this project provides access to tax lot 302 is located approximately 350 feet west of the site's southeast property corner, onto SW Day Road. This location is planned to be a construction access.

Based on a posted speed of 40 mph along SW Day Road, the minimum recommended intersection sight distance is as follows:

- Washington County Standards – 400 feet (passenger car with a driver's eye height of 3.5 feet)
- AASHTO standards for a single-unit truck – 560 feet (driver's eye height of 7.6 feet)

According to AASHTO standards, the required SSD is 305 feet to both the east and the west.

Sight distance was measured to the east and the west for both vehicle types:

- To the east
 - Sight distance was measured to be 560 feet for a passenger car. This measurement meets both the Washington County sight distance standard (400 feet) and the AASHTO required SSD standard (305 feet).
 - Sight distance was measured to be approximately 280 feet for a single-unit truck due to overhanging branches along the roadway. If the overhanging branches are adequately trimmed, then a sight distance of 640 feet can be obtained.
- To the west
 - Sight distance was measured to be in excess of 900 feet. This measurement meets the Washington County sight distance standard (400 feet) for a passenger car and meets both the AASHTO recommended ISD standard (560 feet) and the required SSD standard (305 feet) for a single-unit truck.

At the access point to tax lot 302, there is adequate intersection sight distance to the west for both passenger cars and single-unit trucks. To the east, there is adequate intersection sight distance for a passenger car, but not for a single-unit truck due to overhanging branches along the roadway. If the trees along the right-of-way on SW Day Road between the two access locations are trimmed, then adequate sight distances can be obtained for a single-unit truck, and all measurements will meet the AASHTO required SSD standard.



Images depicting field measurements conducted at the site are included as an attachment to this memorandum.

Conclusions

Guidelines for sight distance requirements were based on Washington County sight distance standards for passenger cars as well as AASHTO sight distance standards for a single-unit truck.

Sight distance measurements were taken in the field at the existing site access points to tax lot 309 (main Brown Contracting facility entrance) and tax lot 302 (construction access). Measurements were taken for both a standard passenger car as well as a single-unit truck.

Based on the field measurements taken at the site access points to tax lots 309 and 302, there is adequate intersection sight distance for both passenger cars and single-unit trucks to make a left turn and a right turn from the accesses onto SW Day Road, subject to the following improvement:

1. Tree branches trimmed back along property frontage of tax lot 310

We also recommend trimming and/or removing vegetation along both sides of the access point to tax lot 309 to maintain adequate clear views to the east and west.

As previously stated, the SSD is the minimum requirement to allow for safe operation of the roadway and allows an oncoming driver to see a hazard in the roadway, react, and come to a complete stop, if necessary, to avoid a collision. At both site access locations, with the trimming of overhanging branches and vegetation along either side of the access, there is available sight distance to exceed the required SSD standard.

With the above improvements made, the intersection is expected to operate safely and efficiently with regards to sight distance. No other sight distance mitigation is recommended.

Attachments

AKS Site Plan

Sight Distance PDF

Sight Distance Images





PRELIMINARY CONSTRUCTION

DATE: 3/9/2022
 DESIGNED BY: DJS
 DRAWN BY: CHJ
 CHECKED BY: BBS

P7

PRELIMINARY SITE CIRCULATION PLAN
9675, 9775, 9779 & 9805 SW DAY ROAD
BROWN CONTRACTING, INC.
WASHINGTON COUNTY, OREGON

AKS ENGINEERING & FORESTRY, LLC
 2777 NW LOLO DR, STE 150
 BEND, OR 97703
 541-377-8459
 WWW.AKS-ENG.COM

AKS

ENGINEERING • SURVEYING • NATURAL RESOURCES
 FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

Intersection Sight Distance

	<i>Left Turn Looking Left</i>	<i>Left Turn Looking Right</i>	<i>Right Turn Looking Left</i>
Approach Speed	40 mph	40 mph	40 mph
Number of Lanes	2 lanes	2 lanes	2 lanes
Vehicle Type (P/S/C)	P Passenger Car	P Passenger Car	P Passenger Car
Extra Crossing Lanes	0	0	0
Time Gap	7.5 seconds	7.5 seconds	6.5 seconds
AASHTO Intersection Sight Distance	445 feet	445 feet	385 feet
Washington County Sight Distance	400 feet	400 feet	400 feet

Notes:

- 1) For Approach speed, posted speed of 40 mph was used
- 2) For Time Gap, use 7.5 seconds for passenger cars and 9.5 seconds for single-unit trucks
- 3) Per AASHTO guidance, Time Gap can be decreased by 1.0 s for right-turn maneuvers

Intersection Sight Distance

	<i>Left Turn Looking Left</i>	<i>Left Turn Looking Right</i>	<i>Right Turn Looking Left</i>
Approach Speed	40 mph	40 mph	40 mph
Number of Lanes	2 lanes	2 lanes	2 lanes
Vehicle Type (P/S/C)	S Single Unit Truck	S Single Unit Truck	S Single Unit Truck
Extra Crossing Lanes	0	0	0
Time Gap	9.5 seconds	9.5 seconds	8.5 seconds
AASHTO Intersection Sight Distance	560 feet	560 feet	500 feet
Washington County Sight Distance	400 feet	400 feet	400 feet

Notes:

- 1) For Approach speed, posted speed of 40 mph was used
- 2) For Time Gap, use 7.5 seconds for passenger cars and 9.5 seconds for single-unit trucks
- 3) Per AASHTO guidance, Time Gap can be decreased by 1.0 s for right-turn maneuvers

Sight Distance Images

Location 1 – Existing Driveway Access to Brown Contracting Facility (tax lot 309)

From site access looking east (passenger car)



From site access looking west (passenger car)



From site access looking east (single-use truck)



From site access looking west (single-use truck)



Sight Distance Images

Location 2 – Existing Driveway Access (tax lot 302)

From site access looking east (passenger car)



From site access looking west (passenger car)



From site access looking east (single-use truck)



From site access looking west (single-use truck)





WASHINGTON COUNTY
 Dept. of Land Use & Transportation
 Planning and Development Services
 Current Planning
 155 N. 1st Avenue, #350-13
 Hillsboro, OR 97124
 Ph. (503) 846-8761 Fax (503) 846-2908
 http://www.co.washington.or.us

**Request For Statement Of Service
 Availability For Sheriff / Police Services**

PRE-APPLICATION DATE: 12/13/2023

**Service Provider: PLEASE RETURN THIS FORM TO:
 APPLICANT:**

COMPANY: AKS Engineering & Forestry, LLC
 CONTACT: Marie Holladay
 ADDRESS: 12965 SW Herman Road, Suite 100
Tualatin, OR 97062
 PHONE: (503) 563-6151

WASHINGTON COUNTY SHERIFF

OWNER(S):

NAME: Emrick Investments, LLC
 ADDRESS: 2953 Airport Road
Eugene, OR 97402
 PHONE: Please contact applicant, above
 Property Desc.: Tax Map(s): 3S102B Lot Number(s): 302, 303, 309, 310, 311

Site Size: ±10.78 combined acres

Site Address: 9675, 9775, 9779, 9805 SW Day Road
 Nearest cross street (or directions to site):
SW Boones Ferry Road

PROPOSED PROJECT NAME: Brown Contractor's Establishment

PROPOSED DEVELOPMENT ACTION: (DEVELOPMENT REVIEW, SUBDIVISION, MINOR PARTITION, SPECIAL USE)

Development review for a contractor's establishment and construction of a ±7,500sf open-air storage structure.

EXISTING USE: Industrial (contractor's establishment)

PROPOSED USE: Industrial (contractor's establishment)

IF RESIDENTIAL:

NO. OF DWELLING UNITS: _____
 SINGLE FAM. _____ MULTI-FAM. _____

IF INDUSTRIAL/COMMERCIAL:

TYPE OF USE: Industrial
 NO. OF SQ. FT. (GROSS FLOOR AREA) ±7,500 sf

IF INSTITUTIONAL:

NO. SQ. FT. _____
 NO. STUDENTS/EMPLOYEES/MEMBERS: _____

******* ATTENTION SERVICE PROVIDER *******

**PLEASE INDICATE THE LEVEL OF SERVICE AVAILABLE TO THE SITE (ADEQUATE OR INADEQUATE).
 RETURN THIS COMPLETED FORM TO THE APPLICANT AS LISTED ABOVE.**

(Do NOT return this form to Washington County. The applicant will submit the completed form with their Land Development Application submittal).

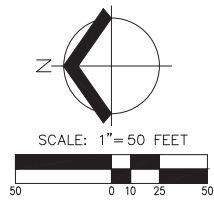
SERVICE LEVEL IS **ADEQUATE** TO SERVE THE PROPOSED PROJECT. (Use additional sheets if necessary.)
 Please indicate what improvements, or revisions to the proposal are needed for you to provide adequate service to this project.

SIGNATURE: Lieutenant Bob Ray POSITION: _____ DATE: 5/22/24

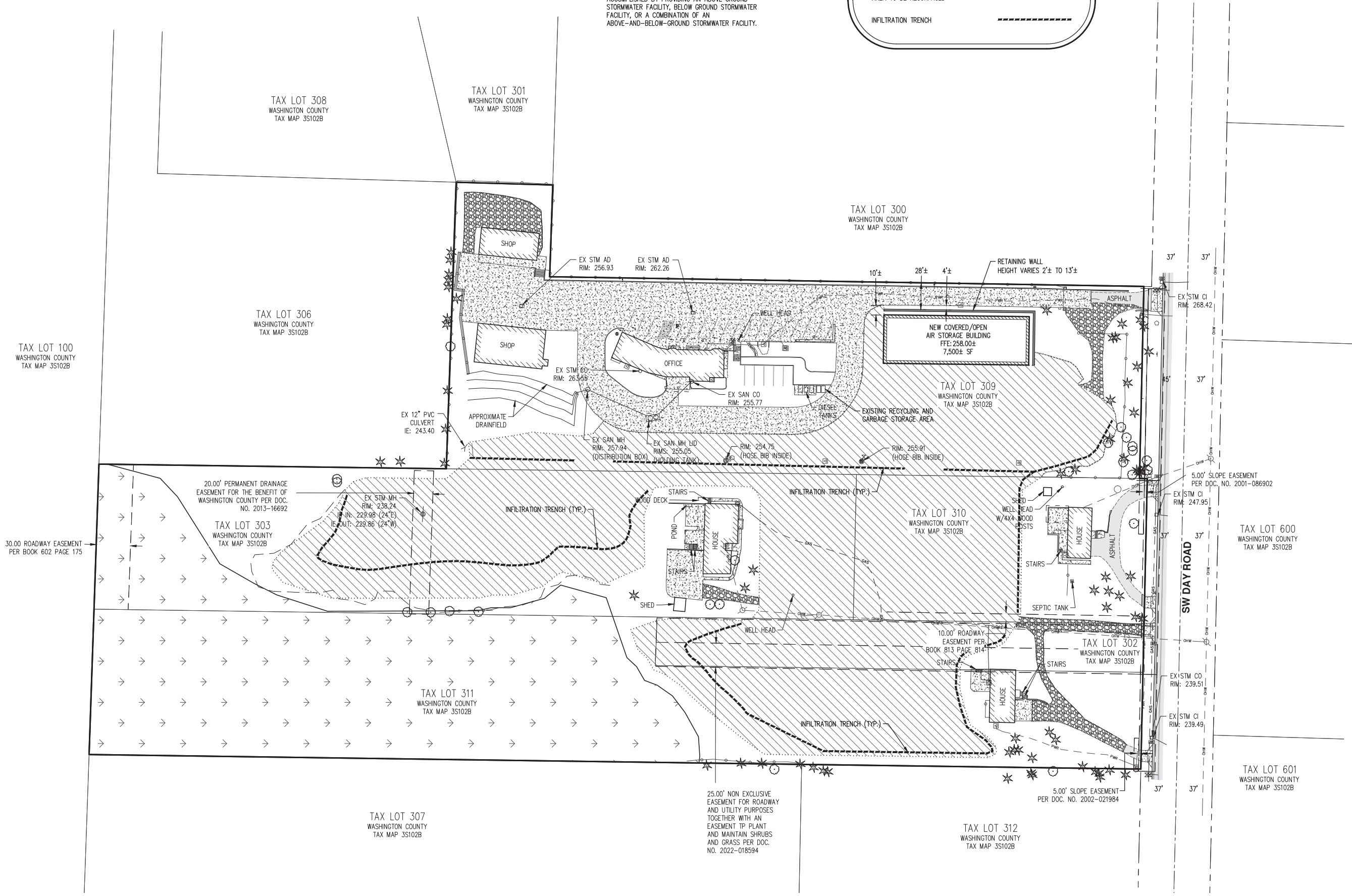
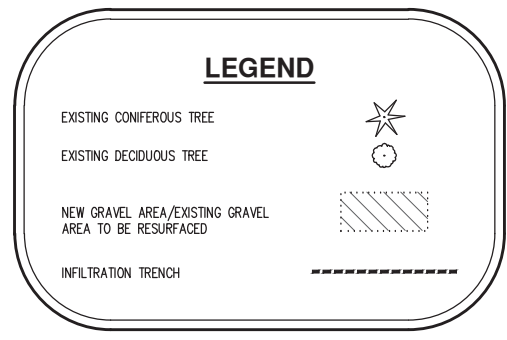
SERVICE LEVEL IS **INADEQUATE** TO SERVICE THE PROPOSED PROJECT.

If the present or future service level is inadequate, please provide information documenting your inability to provide an adequate level of service. Please also provide information regarding whether the use of alternative means can be employed to provide an adequate service level. Documentation of adequacy and alternatives to provide an adequate service level may include but not be limited to the following:
 1. Contracting with private agency; 2. Contracting with other public agency; 3. Impact fees; 4. Any combination of these or other alternatives.

SIGNATURE: _____ POSITION: _____ DATE: _____



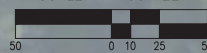
- NOTES:**
- EXISTING HOMES TO REMAIN UNTIL AT SUCH TIME IN THE FUTURE THEY ARE USED AS A PART OF THE CONTRACTOR'S ESTABLISHMENT.
 - ACCOMMODATIONS FOR STORMWATER RUNOFF FROM THE NEW IMPERVIOUS AREA(S) ARE PLANNED TO BE TREATED AND DETAINED ON-SITE IN ACCORDANCE WITH COUNTY AND STATE STORMWATER MANAGEMENT STANDARDS, AS APPLICABLE. STORMWATER TREATMENT AND DETENTION WILL BE ACCOMPLISHED BY PROVIDING AN ABOVE GROUND STORMWATER FACILITY, BELOW GROUND STORMWATER FACILITY, OR A COMBINATION OF AN ABOVE-AND-BELOW-GROUND STORMWATER FACILITY.



JOB NUMBER:	3916
DATE:	11/1/2023
DESIGNED BY:	DJS
DRAWN BY:	CDH
CHECKED BY:	BRB



SCALE: 1" = 50 FEET



TAX LOT 100
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 306
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 308
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 301
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 300
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 309
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 310
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 302
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 311
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 312
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 600
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 601
WASHINGTON COUNTY
TAX MAP 3S102B

TAX LOT 307
WASHINGTON COUNTY
TAX MAP 3S102B

20.00' PERMANENT DRAINAGE
EASEMENT FOR THE BENEFIT OF
WASHINGTON COUNTY PER DOC.
NO. 2013-16692

30.00' ROADWAY EASEMENT
PER BOOK 602 PAGE 175

25.00' NON EXCLUSIVE
EASEMENT FOR ROADWAY
AND UTILITY PURPOSES
TOGETHER WITH AN
EASEMENT TO PLANT
AND MAINTAIN SHRUBS
AND GRASS PER DOC.
NO. 2022-018594

10.00' ROADWAY
EASEMENT PER
BOOK 813 PAGE 814

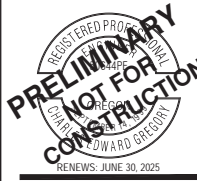
5.00' SLOPE EASEMENT
PER DOC. NO. 2001-086902

5.00' SLOPE EASEMENT
PER DOC. NO. 2002-021984



PRELIMINARY SITE CIRCULATION PLAN

BROWN CONTRACTING, INC.
WASHINGTON COUNTY, OREGON



JOB NUMBER:	3916
DATE:	11/1/2023
DESIGNED BY:	DJS
DRAWN BY:	CDH
CHECKED BY:	BRB

AKS
AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD., STE 100
TUALATIN, OR 97062
503.563.6151
WWW.AKS-ENG.COM

ENGINEERING • SURVEYING • NATURAL RESOURCES
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

TAX LOTS 302, 303, 309, 310, AND 311
WASHINGTON COUNTY TAX MAP 3S102B

Abridged Version

**DETERMINING
TRAFFIC SAFETY
IMPROVEMENTS
UNDER THE
TRAFFIC IMPACT FEE
ORDINANCE**

**PROCESS
DOCUMENTATION**



WASHINGTON COUNTY
DEPARTMENT OF LAND USE
AND TRANSPORTATION

ENGINEERING/SURVEYING DIVISION

AS ADOPTED BY
RESOLUTION AND ORDER NO. 86-95
JULY 22, 1986

DETERMINING TRAFFIC SAFETY IMPROVEMENTS
UNDER THE
TRAFFIC IMPACT FEE ORDINANCE

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4. Assumptions for the Creation of Criteria for Traffic Safety Improvements	2
5. Process Outline	3
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Appendix E: Listing of Hazard Locations	E-1

RECOMMENDATION

The Department recommends that the Board establish Alternative B as the level of traffic safety to be utilized in determining necessary traffic safety improvements that will be required as a condition of development, Alternative B is recommended for the following reasons:

1. Alternative A by itself does not include many locations that are considered to be operating at an unacceptable level of safety.
2. Alternative D was developed to be used as a starting point for determining hazard locations and is the benchmark for comparing the effects of the other alternatives, and includes many intersections that are considered to be operating at an acceptable level of safety.
3. The cutoff point for locations to be included in Alternative B (as opposed to Alternative C) appears to be the point of diminishing returns within the range of alternatives considered; i.e., implementation of Alternative C would reduce the number of expected injuries by less than 10% but would increase the number of locations by over 32%. Implementation of Alternative B will require improvements at locations that are considered to be operating at an unacceptable level of safety; where cost effective solutions are expected to improve the locations to an acceptable level of safety.

INTRODUCTION

This report is a compilation of the various procedures that have been developed to process development applications under the Traffic Impact Fee Ordinance, the core of which is the criteria for traffic safety improvements. In the following narrative, the development and application of the criteria are put into context with the overall process of determining traffic related impacts associated with development and implementation of appropriate improvements.

For an overview of the process and to quickly find in this paper the information that is of interest to the reader, refer to Figure 1, Process Outline, page 4.

The objectives of this report are:

1. Document the procedures process developed by the Department to process development applications, determining safety and capacity deficiencies and identifying necessary improvements.
2. Document the process used to determine the criteria for traffic safety improvements, particularly the Safety Priority Index System (SPIS) analysis.

This report will serve as a source reference for staff involved with processing development applications, and will facilitate future updates of the SPIS analysis. It is also intended for external use, for those interested with the development review process or the technical analysis associated with the developed criteria. A listing of existing hazard locations is included in Appendix E.

BACKGROUND

On October 22, 1985 the County adopted the Traffic Fee Ordinance No. 310. The TIF ordinance significantly changed the method in which developments assure for adequate levels of arterial and major collector road service, and shifted the responsibility of determining needed capacity deficiencies from the applicant through the submission of a Traffic Analysis to staff, and requires staff to make a determination of when and where traffic safety improvements (as defined in the ordinance) are required as a condition of development.

Exhibit "C" of the "Washington County Growth Management Policy" (Task Force, July 24, 1984), (Department of Land Use and Transportation, January 15, 1985) states: "The task force recognized that at times distinctions between safety and convenience issues would be difficult to resolve. The task force was advised, however, that engineering standards exist that may be used as objective indicators of what constitute(s) safety concerns. It is the opinion of the task force that further investigation should be made by staff and County Counsel as to the workability of the safety/convenience distinction and the details of a reimbursement system based in part upon it."

It is the need for a distinction between safety and convenience issues that initiated the development of the criteria documented herein.

The basic approach assumed in determining necessary traffic safety improvements is that 1) there currently exist hazardous locations that present an unacceptable risk to the traveling public's safety, and that increasing accident exposure by significant increases in traffic resulting from development is unacceptable without mitigation measures, and 2) significant increases in traffic resulting from development can create hazardous locations that currently do not exist and mitigating measures are necessary to protect the traveling public.

For the former (1), a comprehensive analysis of accident data for county road intersections was conducted. The determination of what constitutes an unacceptable risk to the traveling public will require a policy decision. This decision will require the selection of one of the four developed SPIS alternatives (Appendix A).

For the latter (2), necessary improvements are determined through the application of accepted traffic engineering procedures, standards, and practices, combined with the determination of unacceptable risk described above (Appendix B).

ASSUMPTIONS FOR THE CREATION OF CRITERIA FOR TRAFFIC SAFETY IMPROVEMENTS

This report is a continuation of previous effects pertaining to the establishment and implementation of the TIF ordinance, "Washington County Growth Management Policy" (Task Force, July 24, 1984), "A Fee-Based Traffic Impact System" (Task Force, July 31, 1985), and "Analysis and Methodology for the Creation of a Fee-Based Traffic Impact System", (DLUT, January 15, 1985). The following assumptions guided the procedures and criteria described herein:

1. Applicants are not required to identify, analyze, or evaluate capacity deficiencies which occur as a result of their development.
2. The Department of Land Use and Transportation ,Engineering Section, will identify, analyze, and monitor needed capacity improvements which occur due to increased traffic resulting from development, necessary for a systematic monitoring and evaluation of the performance of the County transportation system and to aid in prioritization of TIF and other capital improvement projects.
3. A consistent, defensible method for determining necessary traffic safety improvements is needed for: 1) determining improvements necessary for the traveling public's safety, 2) consistency in conditioning developments, and 3) establishing jurisdictional immunity in potential lawsuits concerning the operational safety of the County transportation system.

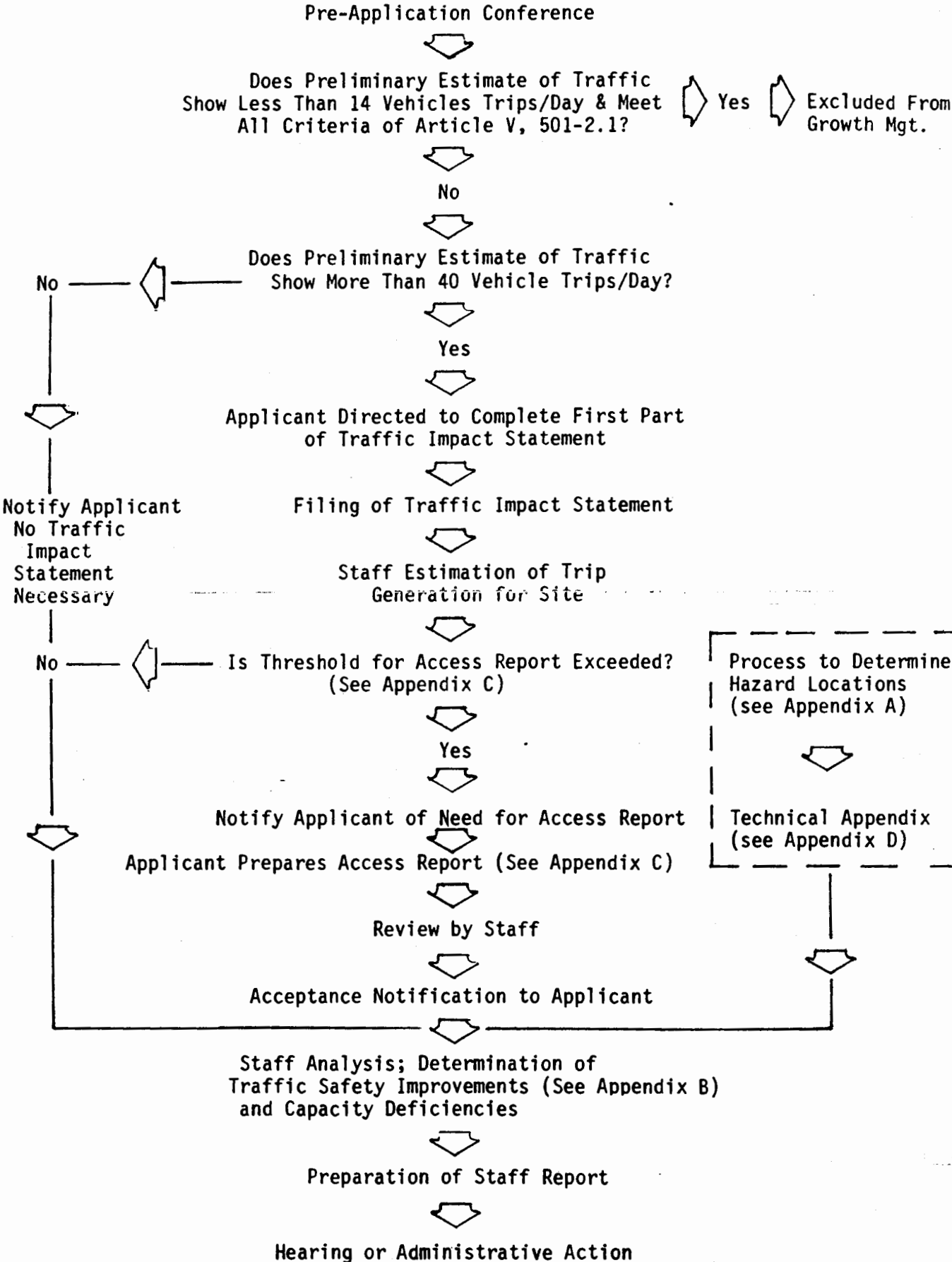
Board approval of the assumptions as stated above will provide staff with a clear directive in applying the procedures that are described in this report.

PROCESS OUTLINE

A general overview of the procedures developed to process development applications is depicted in Figure 1. Procedures developed to process developments under the Traffic Impact Fee Ordinance are noted in the outline and referenced to the appropriate appendix.

FIGURE 1

PROCESS OUTLINE



APPENDIX B

CRITERIA FOR TRAFFIC SAFETY IMPROVEMENTS

This appendix contains the recommended criteria for traffic safety improvements. The SPIS value of the recommended Alternative B is used to determine existing hazard locations.

One of the features of the criteria is in limiting the level of improvement for existing hazard locations, Section C. The cost values used in this section are from ODOT and represent a net monetary loss to society resulting from accidents, and are a standard for estimating the cost effectiveness of safety improvements. The desirable aspects of this feature is that it provides predictability to developers as to the upper limit of their potential improvement costs and limits county discretion in specifying the level of improvements. An undesirable aspect is that it will complicate administration of the criteria.

Figure 1B displays the criteria in a summarized tree structure.

The following criteria will be used to determine when Traffic Safety Improvements, as defined in the Traffic Impact Fee Ordinance #310, will be required as a condition of development. When warranted or specified, all improvements shall conform to County standards. The SPIS value (Section A.2) and the values used in the benefit-cost analysis (Section C.1) will be updated annually.

A. Definitions

1. **Added Traffic:** Traffic generated by developments, or phases of developments, which have been issued a building permit, or in the case of subdivisions have received final development approval, but are not yet occupied.
2. **Existing Hazard Locations:** Locations identified by a SPIS value greater than or equal to 32.24, where there is an existing accident history that currently presents an unacceptable risk to the traveling public's safety.
3. **Existing Traffic:** Traffic volumes measured within the previous 12 months of the development application.
4. **Frontage:** That portion of a site which abuts a public road.
5. **Impact Area:** The impact area for developments will be those road links where site generated traffic equals or exceeds 10% of existing average daily traffic but including at a minimum those access roads lying adjacent to and between the development and the nearest major collector or arterial road. Links within the developments impact area are considered to have a significant increase in traffic.
6. **Link:** A section of roadway which includes the intersection at both ends. The end points of a road link will be at an equally or higher classed roadway.
7. **Predicted Hazard Locations:** Locations identified in the County Transportation Plan as a Geometric or Traffic Safety Concern, or locations where safety improvements are warranted due to increased traffic resulting from development.
8. **Total Traffic:** The sum of existing, added, and site generated traffic.
9. **Traffic Safety Improvements:** Those street improvements including traffic control devices, necessary to protect the travelling public as determined by the Director (Traffic Impact Fee Ordinance #310).

↘ 10% impact area

B. Objective of Traffic Safety Improvements

B.1 For existing hazard locations:

To mitigate the adverse effects of increased traffic resulting from development on existing hazard locations which currently present a significant risk to the traveling public's safety, and where significant increases in additional traffic is unacceptable without improvements.

B.2 For predicted hazard locations:

To prevent future hazards locations by installing improvements where the increased traffic resulting from developments warrant the improvements, and where the existing, pre-development conditions did not warrant the improvements.

C. Level of Improvement

C.1 For existing hazard locations:

Existing hazard locations are identified through an analysis of the previous three years accident data, and have been determined to present an unacceptable risk to the traveling public's safety. Improvements will be required to correct the existing deficiencies. In no case will improvements be required where the benefit-cost ratio of the improvement is less than one (1) as determined by the following formula:

$$B/C = \frac{(\text{Annual Benefits}) * (\text{Series Present Worth Factor (20 yrs @ 10\%)})}{\text{Estimated Improvement Cost}}$$

$$\text{Where Annual Benefits} = \frac{\text{Total Accident Cost}}{3}$$

And where

$$\begin{aligned} \text{Total Accident Costs} = & (\text{Number of Reported PDO* Accidents}) * 2 * \$1,190 + \\ & (\text{Total Number of Injuries}) * \$9,300 + \\ & (\text{Total Number of Fatalities}) * \$220,000 \end{aligned}$$

The total accident costs will be calculated based on the previous three years accident data, on file and available at the Department of Land Use and Transportation.

C.2 For predicted hazard locations:

* Property damage only.

C.2.1 For warranted improvements:

The level and cost of improvement will be that level and cost as specified in Section D, Criteria.

C.2.2 For hazard locations identified in the County Transportation Plan:

The level of improvement will be determined by accepted engineering standards and practices and will be determined based on the impact and benefit of the proposed development.

D. Criteria

Locations will be analyzed to determine if they are existing hazard locations (improvements required under D.1.1 and D.2.1), predicted hazard locations (improvements required under D.1.2 and D.2.2) or other locations that warrant improvements under D.1.2.2 and D.2.2.2. If a location is determined to be an existing and predicted hazard location, both criteria shall apply.

D.1 Frontage Improvements

D.1.1 Existing Hazard Improvements

Existing hazards will be improved as specified in Section C.1 when site generated traffic equals or exceeds 10% of existing traffic.

D.1.2 Predicted Hazard Improvements

D.1.2.1 Hazard locations identified in the County Transportation Plan:

Hazard locations as defined in section A and identified in the County Transportation Plan will be improved as specified in Section C.2.2 when site generated traffic equals or exceeds 10% of existing traffic.

D.1.2.2 Warranted Improvements

Regardless as to whether there is a 10% impact on the frontage road, and regardless of whether situated at a predicted or existing hazard location, the following criteria shall be applied.

1. Frontage road access points that meet any of the signal warrants specified in the "Manual on Uniform Traffic Control Devices" (MUTCD), U.S. Department of Transportation Federal Highway Administration (FHWA), 1978 will be signalized. Level of improvement will provide Level of Service "D" or better at all times with the exception of a twenty (20) minute period in any peak hour when Level of Service "E" will be tolerated as determined using procedures established by the "1985 Highway Capacity Manual", Special Report 209 Transportation Research Board. Total traffic will be considered in establishing Level of Service.

2. Left Turn Refuge Lanes will be installed on frontage roads at the access points when warranted by "A Policy on Geometric Design of Highways and Streets", American Association of State Highway and Transportation Officials (AASHTO), 1984.
3. Sidewalks will be installed along the sites frontage, placed at ultimate location and grade, unless an exception is approved in accordance with the standard of the Community Development Code (CDC) Section 501-5.4.
4. Intersection sight distance at frontage road access point(s) must meet County standards.
5. Intersections that are adjacent to the site and serve as the primary route for traffic to the site will be adequately illuminated with street lighting in accordance with "An Informational Guide for Street Lighting", AASHTO, 1984. Such intersections that are hazardous due to inadequate sight distance will be improved.
6. Frontage road access points will be adequately illuminated with street lighting in accordance with "An Informational Guide for Street Lighting", AASHTO, 1984.

D.2. Impact Area Improvements

D.2.1 Existing Hazard Improvements

1. Unsignalized intersections that currently meet signal warrants (existing traffic) and are identified as an existing hazard location will require improvements and signalization. Level of improvement will provide Level of Service "D" or better at all times with the exception of a twenty (20) minute period in any peak hour when Level of Service "E" will be tolerated as determined using procedures established by the 1985 Highway Capacity Manual and as specified in Section C.1. Total traffic will be considered in establishing Level of Service.
2. Signalized intersections that are identified as a hazard location will require improvements as specified in Section C.1.
3. Unsignalized intersections that do not meet signal warrants considering total traffic but are an existing hazard location will require improvements as specified in Section C.1.

D.2.2 Predicted Hazard Improvements

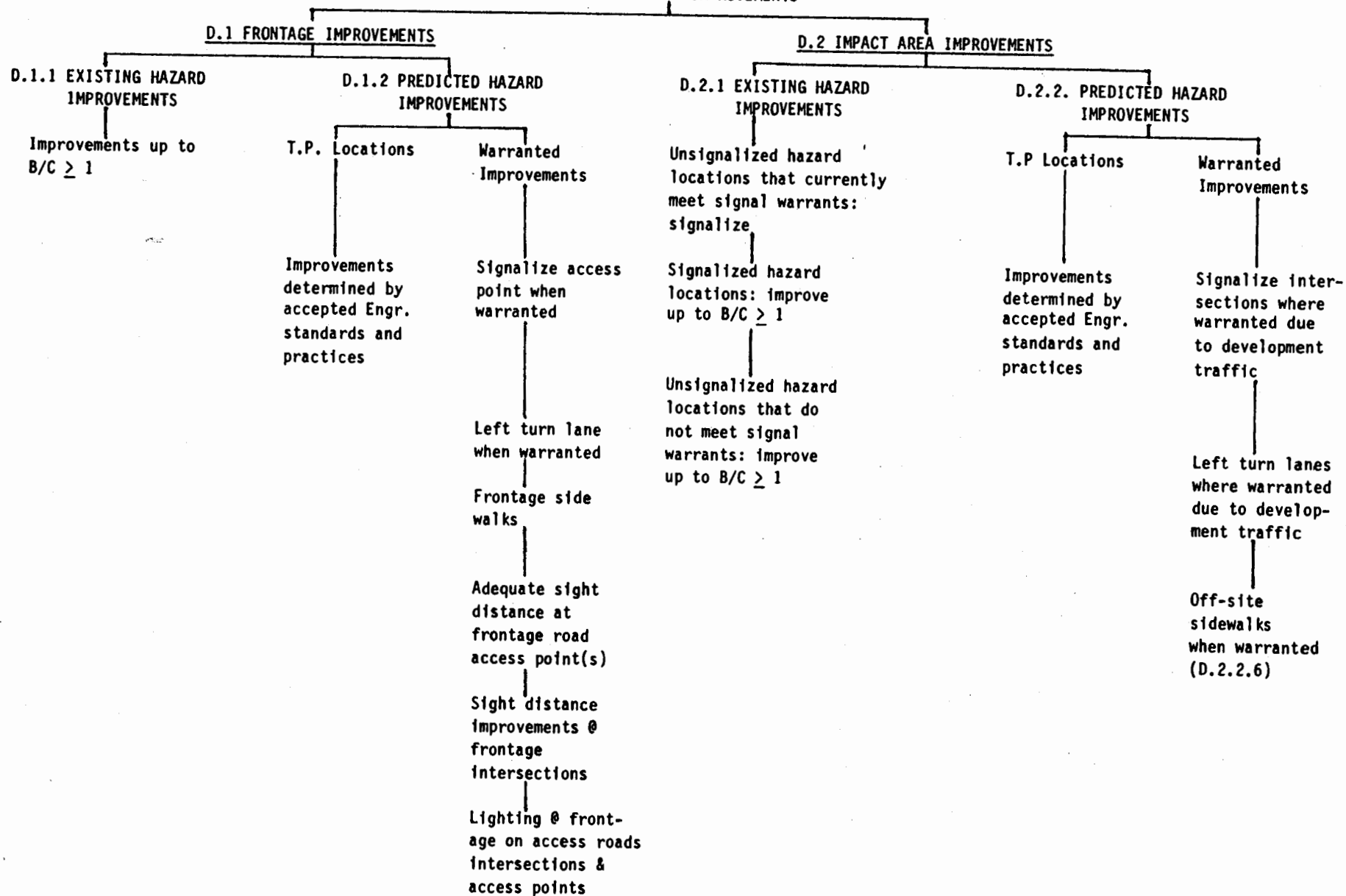
D.2.2.1 Hazard locations identified in the County Transportation Plan

Hazard locations as defined in section A and identified in the County Transportation Plan will be improved as specified in Section C.2.2.

D.2.2.2 Warranted Improvements

1. Unsignalized intersections that currently do not meet signal warrants but will meet signal warrants considering total traffic will require improvements and signalization. Level of improvement will provide Level of Service "D" or better at all times with the exception of a twenty (20) minute period in any peak hour when Level of Service "E" will be tolerated as determined using procedures established by the 1985 Highway Capacity Manual. Total traffic will be considered in establishing Level of Service.
2. Left-turn refuge lanes at intersections within the impact area will be required if existing volumes do not warrant the improvement but the improvement is warranted by AASHTO considering total traffic.
3. Off-site sidewalks which are needed to allow safe pedestrian travel from the development to an existing network of sidewalks or to a area of heavy pedestrian draw, such as a neighborhood commercial development, will be required.

FIGURE 1B
TRAFFIC SAFETY IMPROVEMENTS



APPENDIX C

APPENDIX C

ACCESS REPORT REQUIREMENT

The requirements for access reports, a traffic analysis that is the responsibility of the applicant for some developments, is documented in this appendix. The requirements are included in this paper as they are interrelated with the criteria for traffic safety improvements and associated internal procedures.

The requirements replace the "Traffic Impact Evaluation Procedures" Resolution and Order 83-219, in specifying the requirements for traffic analysis that is the responsibility of the applicant, for developments within the unincorporated areas of the county.

The required analysis is much less stringent than specified in Resolution and Order 83-219, limiting the need, scope, and detail of the analysis. An access report is required only when the development has a considerable increase in traffic compared to the existing traffic at the frontage road. When required, the report need only consider safety at the developments access point and trip generation and assignment to the major collector and arterial road system. Evaluation of capacity is intentionally omitted.

The requirements for access reports have been finalized and administered since May 28, 1986. The requirements are distributed to applicants at the pre-application conference or after the traffic Impact Statement has been completed, when it has been determined that the threshold for a report is met.

REQUIREMENTS FOR ACCESS REPORTS
FOR DEVELOPMENTS WITHIN THE
UNINCORPORATED AREAS OF WASHINGTON COUNTY
May, 1986

A traffic analysis to be titled "Access Report" is required prior to County acceptance of Development Applications when trip generation (Average Weekday Trips) and existing Average Daily Traffic (ADT) of the frontage county road at the point of access of that road fall within the ranges given below (vpd: vehicles per day).

Existing ADT of County Road at Point of Access	Trip Generation of Development
0 - 3000 vpd	2000 vpd or more
3001 - 6000 vpd	1000 vpd or more
Greater than 6001 vpd	500 vpd or more

ACCESS REPORT REQUIREMENTS

Objective

The objective of the Report is to analyze and evaluate access safety, feasibility, operation and performance, considering the movement of site generated traffic in relation to the existing conditions; traffic flow, access points, and intersections within the influence *area. Alternate methods of mitigating identified deficiencies will be established and final recommendations made for improvements necessary for safe and efficient traffic flow. The Access Report will be prepared and certified by a Traffic or Civil Engineer registered in the State of Oregon.

Trip Generation

Estimates of trip generation must be made for peak hour traffic, for design purposes, as opposed to estimates of Average Weekday Traffic used in the calculation of the Traffic Impact Fee. Selection of the design hour used in the analysis will be justified but will include, as a minimum, AM and PM peak hour. Trip generation estimates will be based on the most recent issue of the ITE Trip Generation, An Informational Report. Where trip generation rates are not available in the ITE report, or justification can be made for the use of different rates, approval of the rate(s) must be obtained from the Director prior to use.

Area to be Considered in the Report

At a minimum, the analysis will consider all road segments, access points, and intersections *within the influence area, defined as the sites frontage and the distance "d" extending out from the sites property line with d equaling 1000 feet for major arterials, 600 feet for minor arterials, 100 feet for major collectors, and 50 feet for minor collectors. Verification of compliance to the access spacing standards (CDC 501-5.3) is required. Any variance to the access spacing standards must be identified and justified, including evidence showing that other methods to gain access which does not require a variance are not feasible.

Trip Distribution and Assignment

Traffic generated from the development will be logically distributed and assigned at the frontage road access point(s) and at the point(s) where site generated traffic accesses the county major collector and arterial road system, based on Metro's zoned figures, supplied by staff, or analysis of local traffic patterns based on collected data.

Traffic Volumes to be Used in Analysis

The frontage road access point(s) will be analyzed and evaluated considering "total" traffic, the sum of existing, "added", and site generated traffic. Added traffic is defined as traffic generated by developments, or phases of developments, which have been issued a building permit, or in the case of subdivisions have received final development approval, but are not yet occupied. Added traffic volumes will be supplied by staff. Existing traffic must have been measured within the previous twelve months.

Safety Considerations

The frontage road access point(s) will be evaluated for safety considering existing traffic movements, intersections, and other driveways within the influence area. Potential safety problems resulting from conflicting turning movements with other driveways and intersections within the influence area, and internal traffic circulation, must be addressed.

Any safety or geometric concern, identified in the County Transportation Plan, which is adjacent to the sites frontage will be addressed. Potential solutions will be identified and evaluated, and specific recommendations made to alleviate the safety or geometric concern.

A determination of the need for traffic signals will be made at the frontage road access point(s), based on warrants in the Manual on Uniform Traffic Control Devices. If a traffic signal is warranted, recommendations will be made as to the type of traffic signal control and signal phasing. If storage lanes for right or left turns are required, recommendations will include the amount of storage needed.

Availability of adequate sight distance must be addressed at the proposed frontage road access point(s) for both the existing road configuration and the ultimate road configuration, based on improvements identified in the County Transportation Plan. Entering sight distance will ensure that a driver (eye 3.5 feet above the access road or driveway approach and 10 feet from the extended curb line or edge of pavement of the through street) has a minimum sight distance equal to ten (10) times the speed of the through street, continuously available in either direction, for an object 4.25 feet above the road. The posted speed of the through street (or basic speed rule, if unposted), or the 85th percentile speed (whichever is greater), will be used to establish the distance which must be available.

Acceleration lanes, deceleration lanes, turning lanes, and channelization will be considered, evaluated and recommended when determined necessary by accepted standards and practices.

Access Report Format

In general, the Access Report will devote a section to each of the topics discussed above. Documentation will include: 1) A description of development, intended use, ITE use code and complete documentation of trip generation calculations; 2) Traffic flow diagrams displaying traffic distribution, traffic assignment, existing, added and total traffic; 3) Vicinity map and influence area map displaying the existing road system including road names, functional classification, existing pavement and shoulder width, striping and channelization, and all existing driveways and intersections within the influence area; 4) Turning movements at access point(s) and intersections within the influence area; and 5) Technical appendices and other material necessary to convey a complete understanding to staff of the technical adequacy of the report.

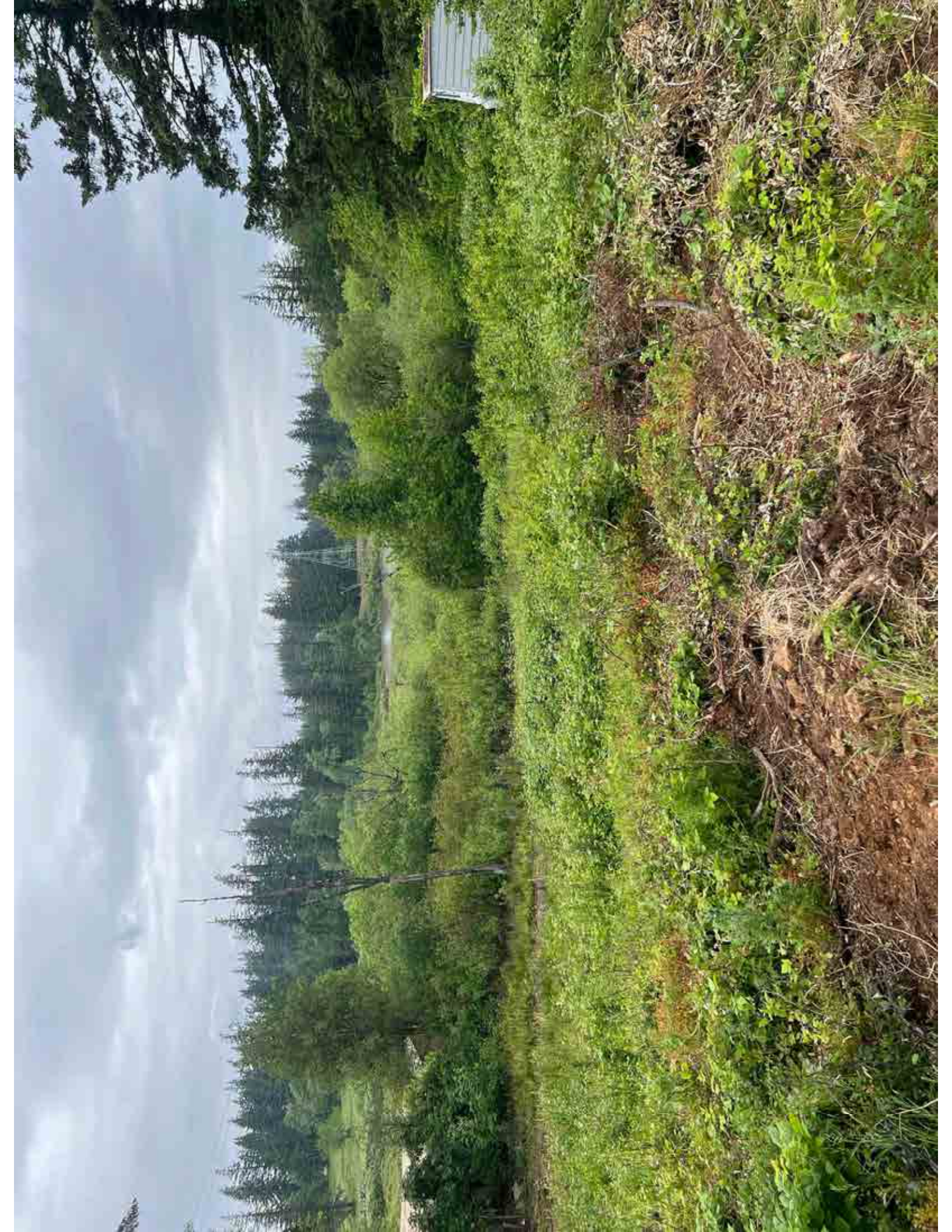
Treatment of State Facilities

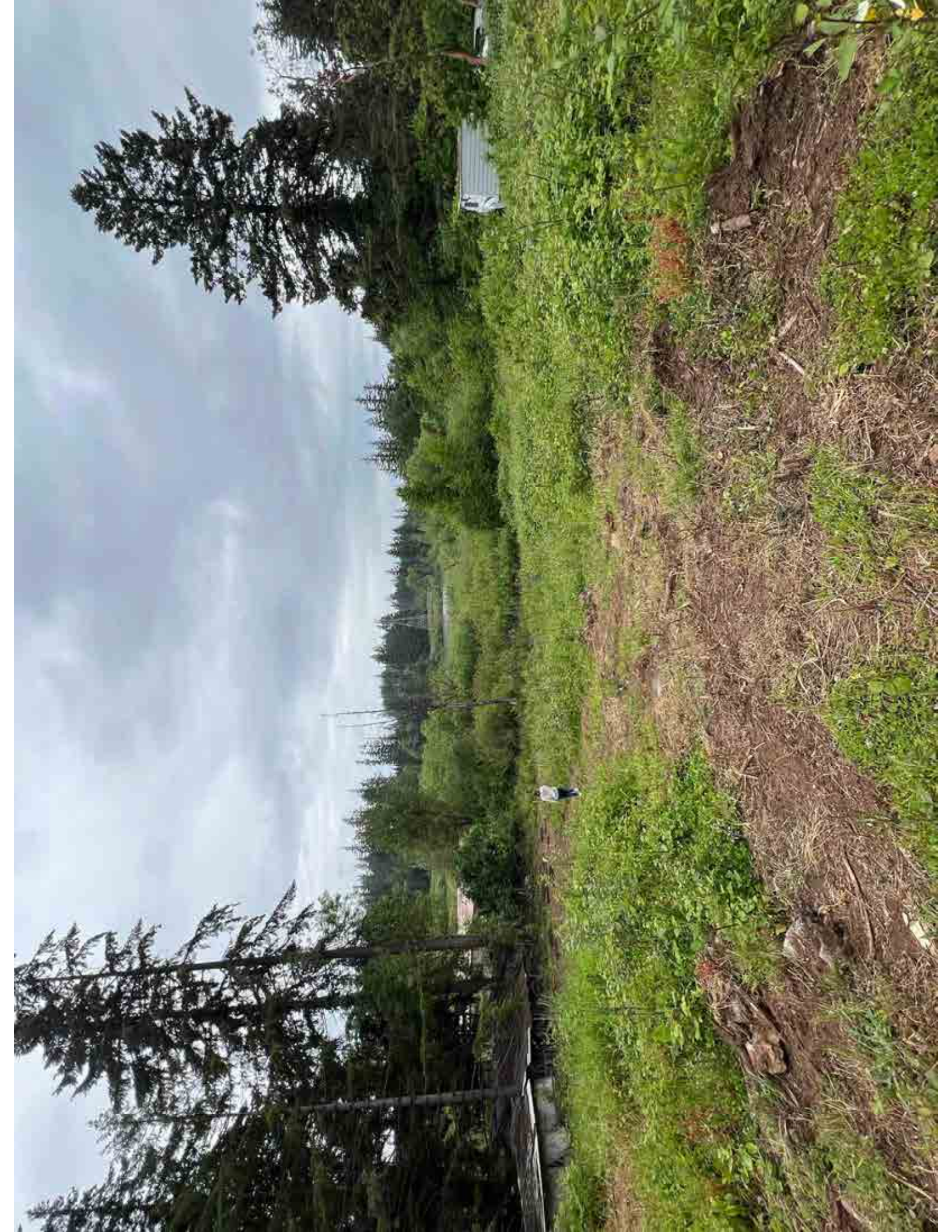
Any access onto a State highway facility requires approval from the Oregon State Department of Transportation (ODOT). Traffic analysis must meet ODOT's requirements for a Traffic Impact Analysis and County requirements for a Access Report.





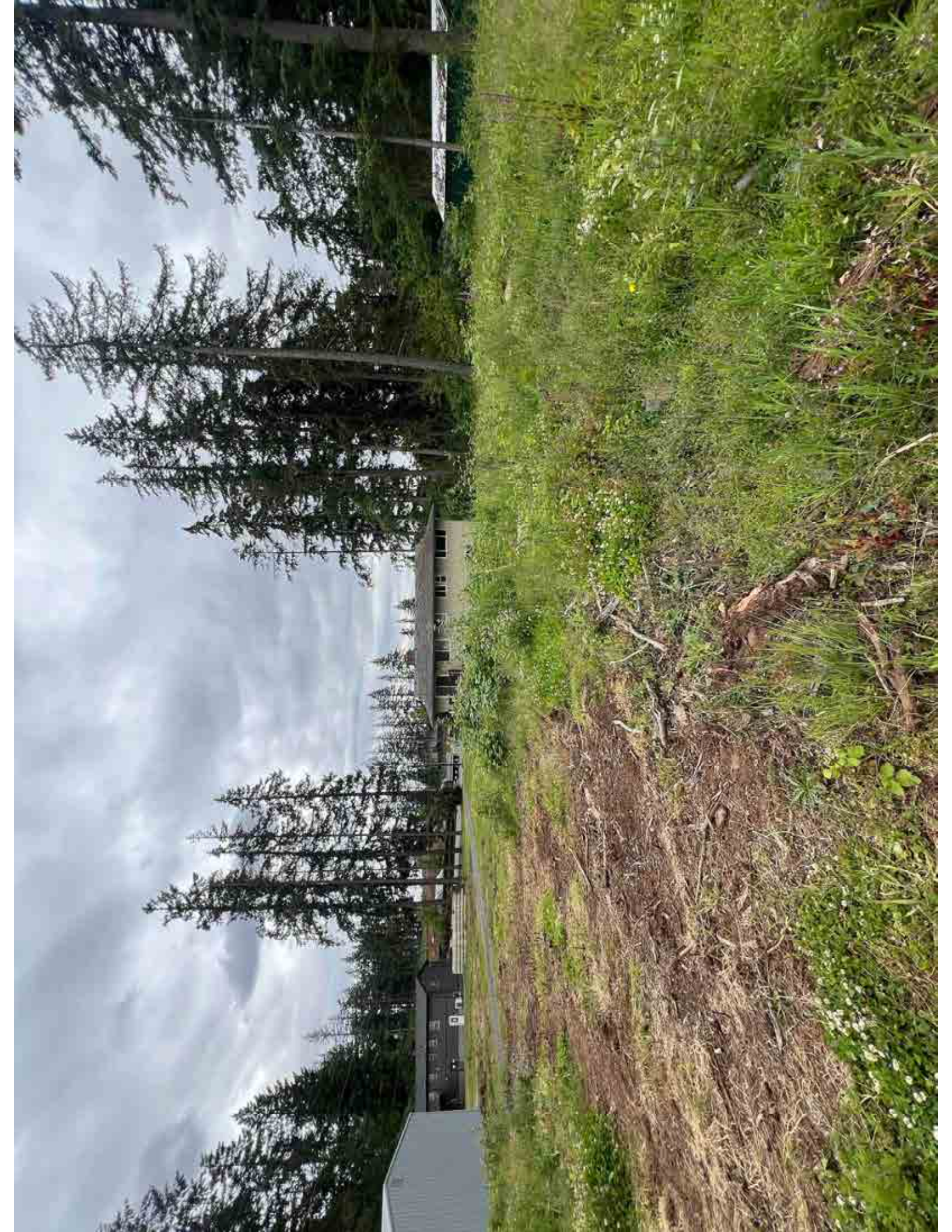


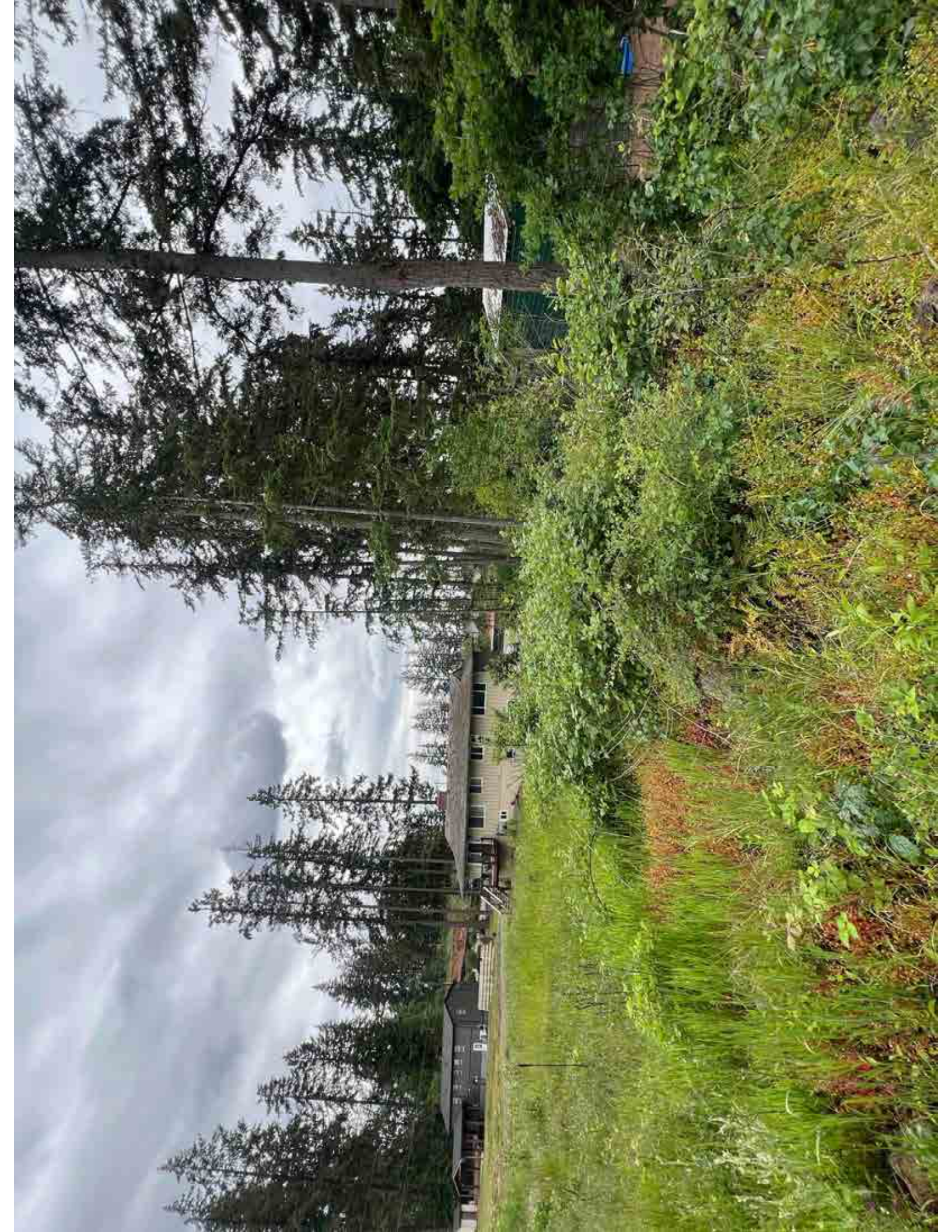


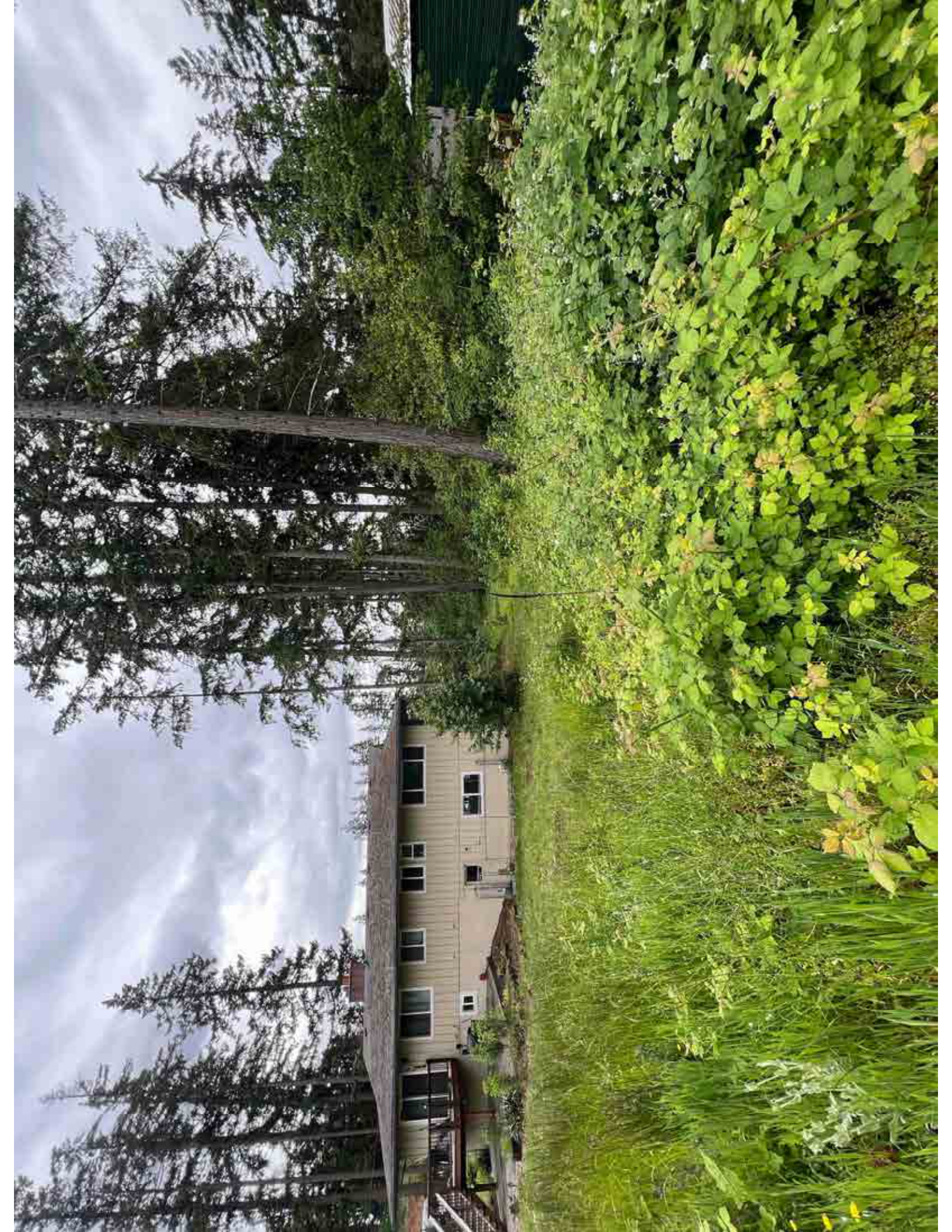












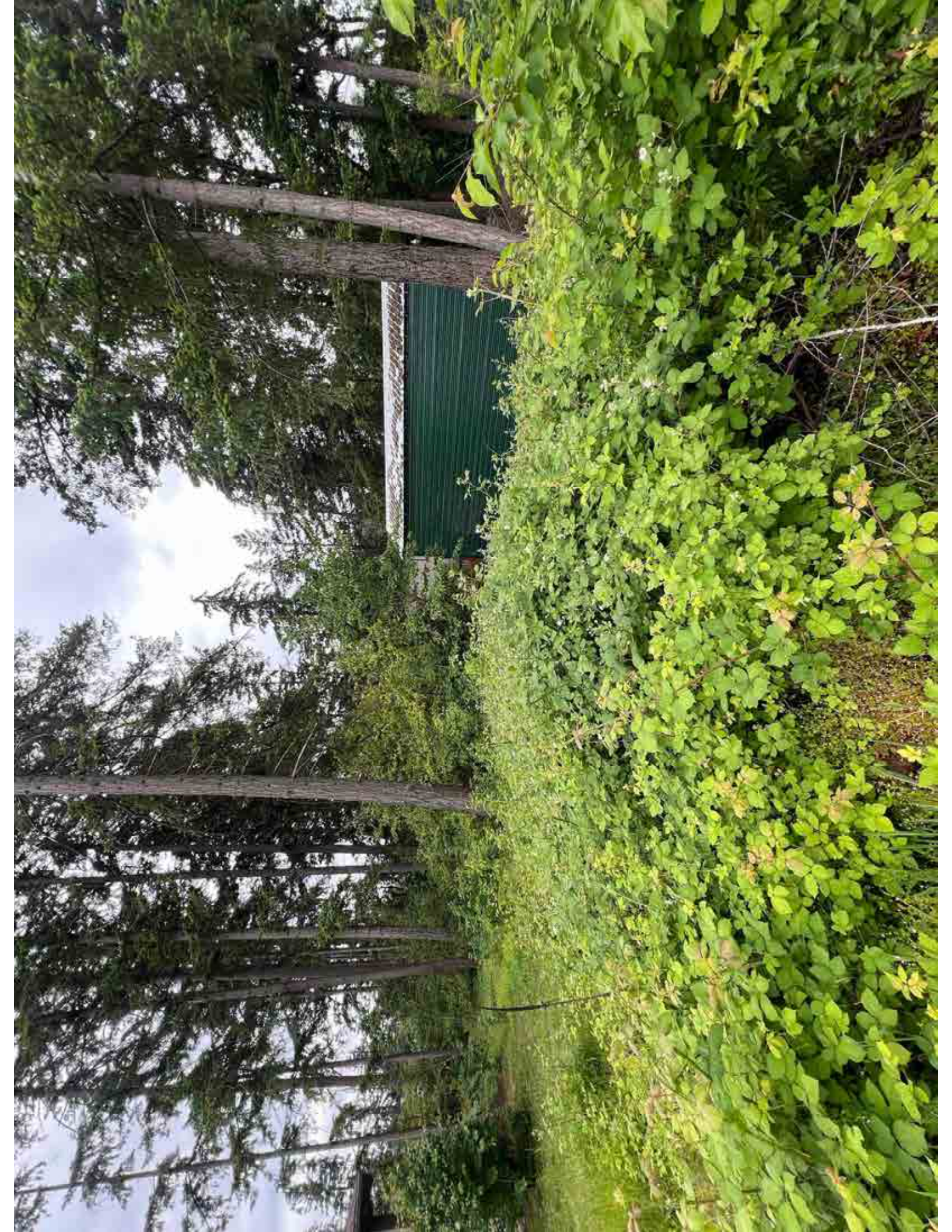


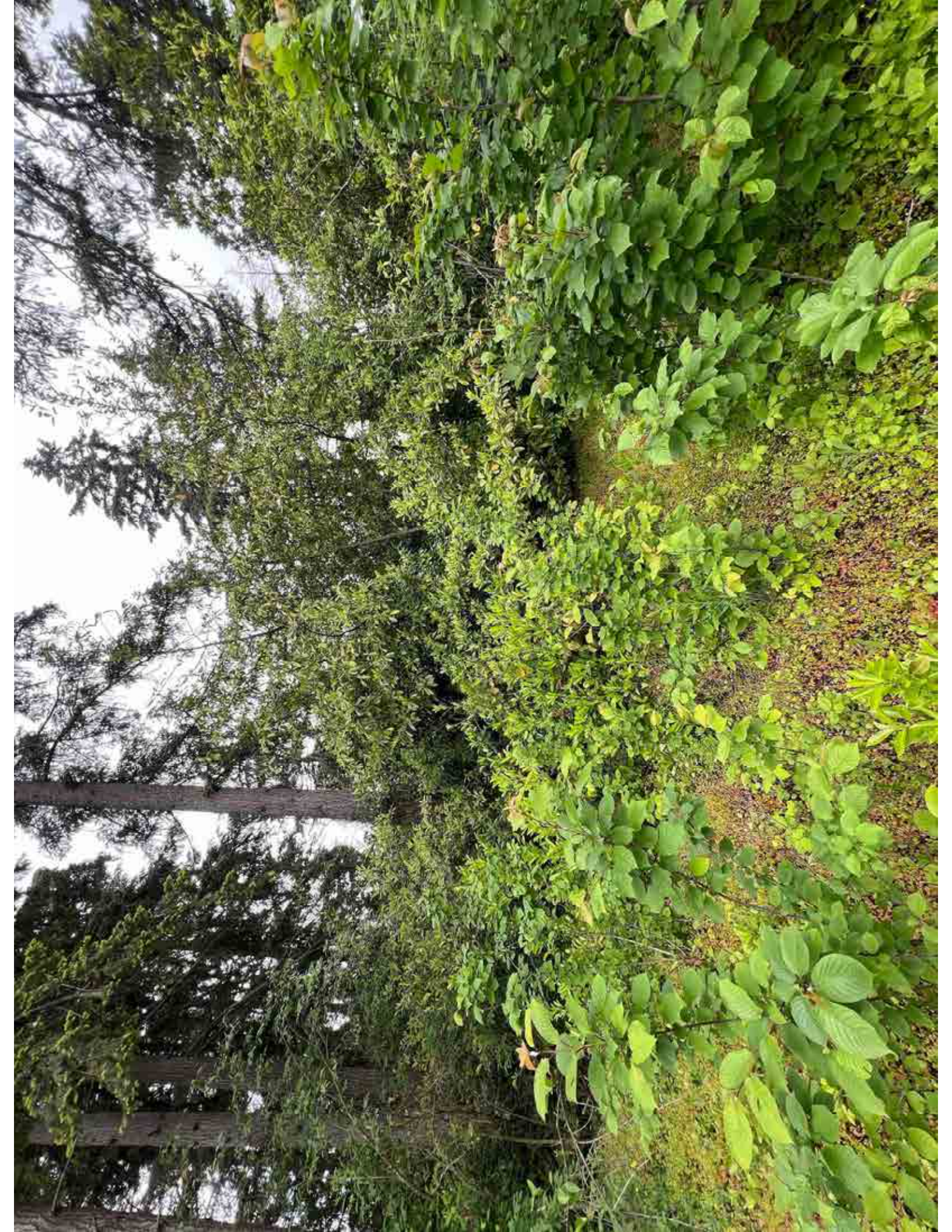




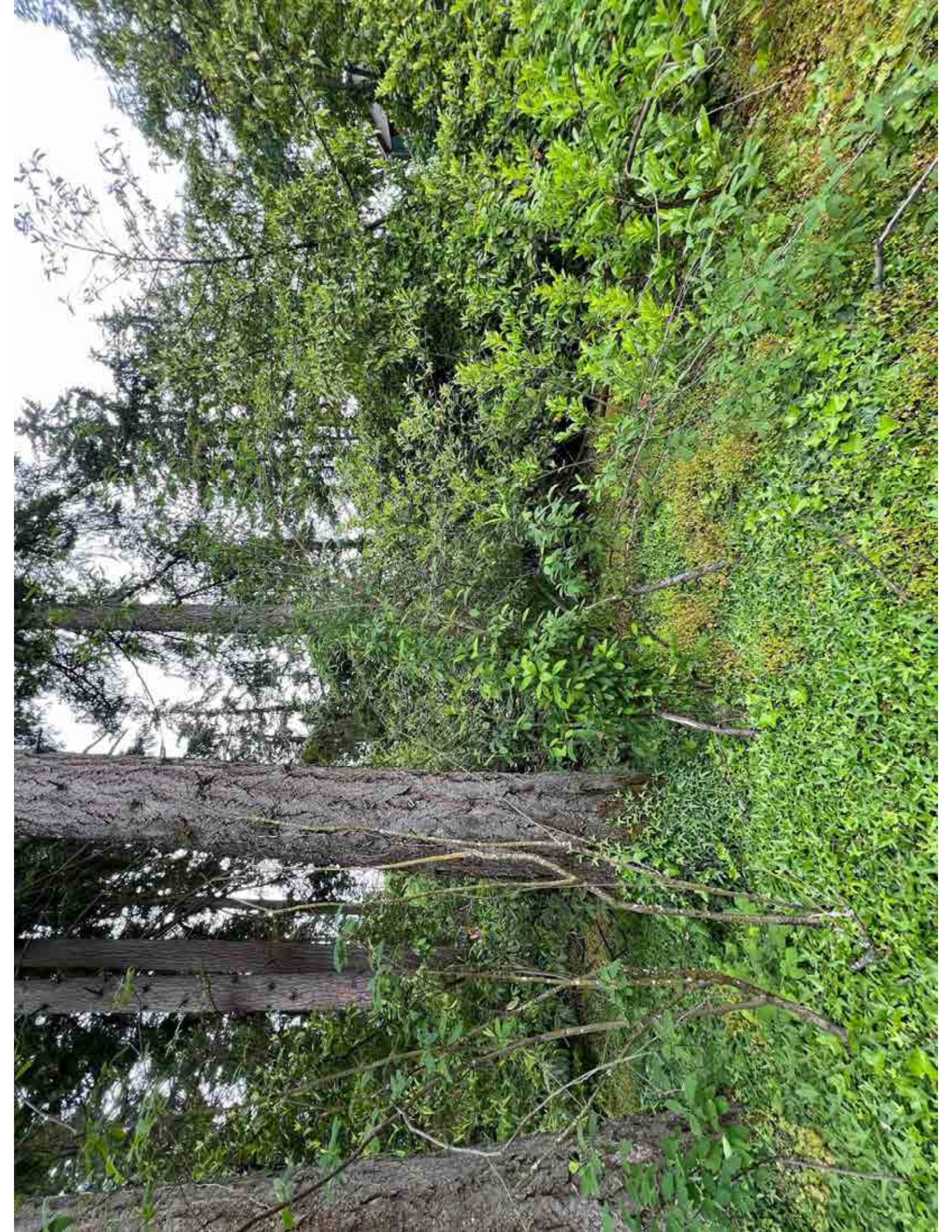






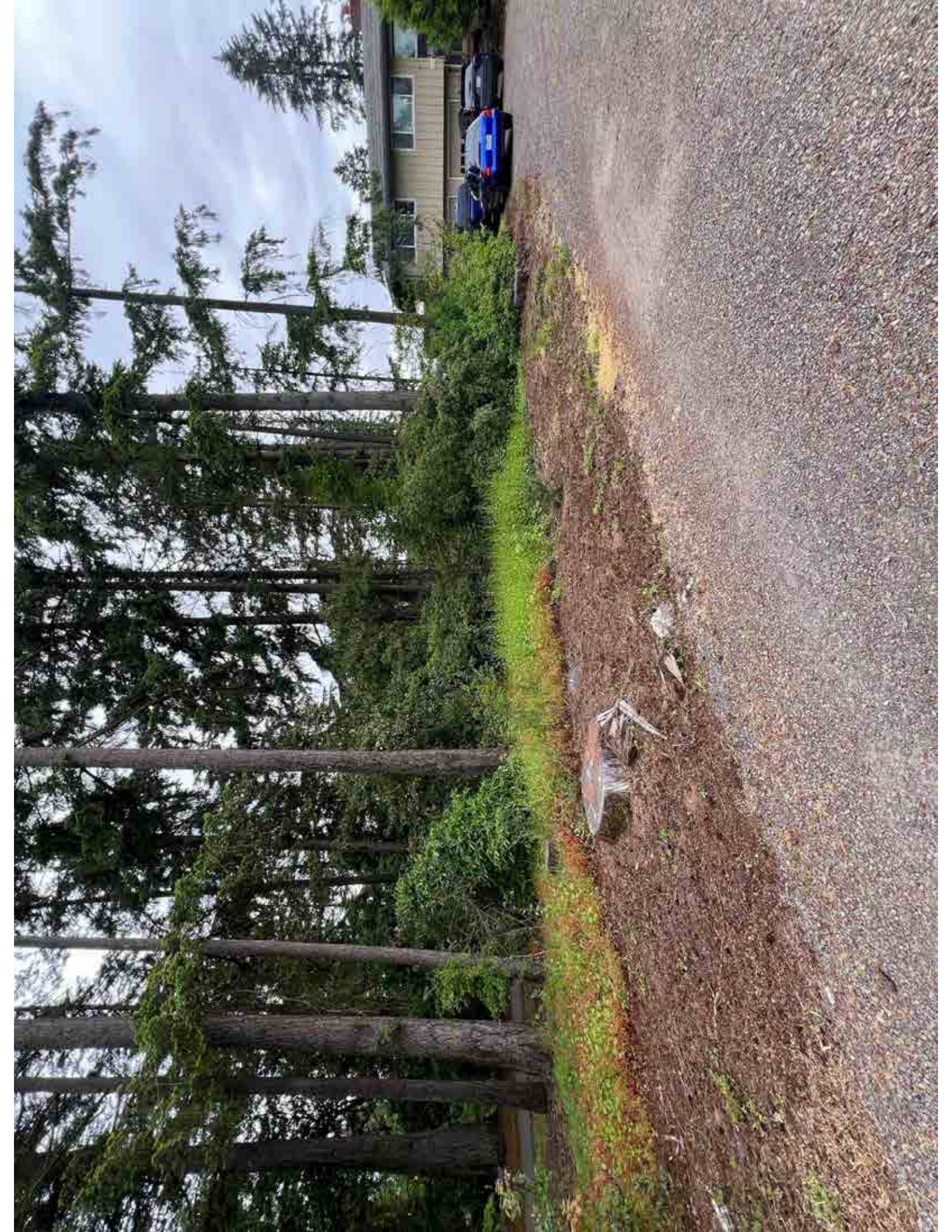








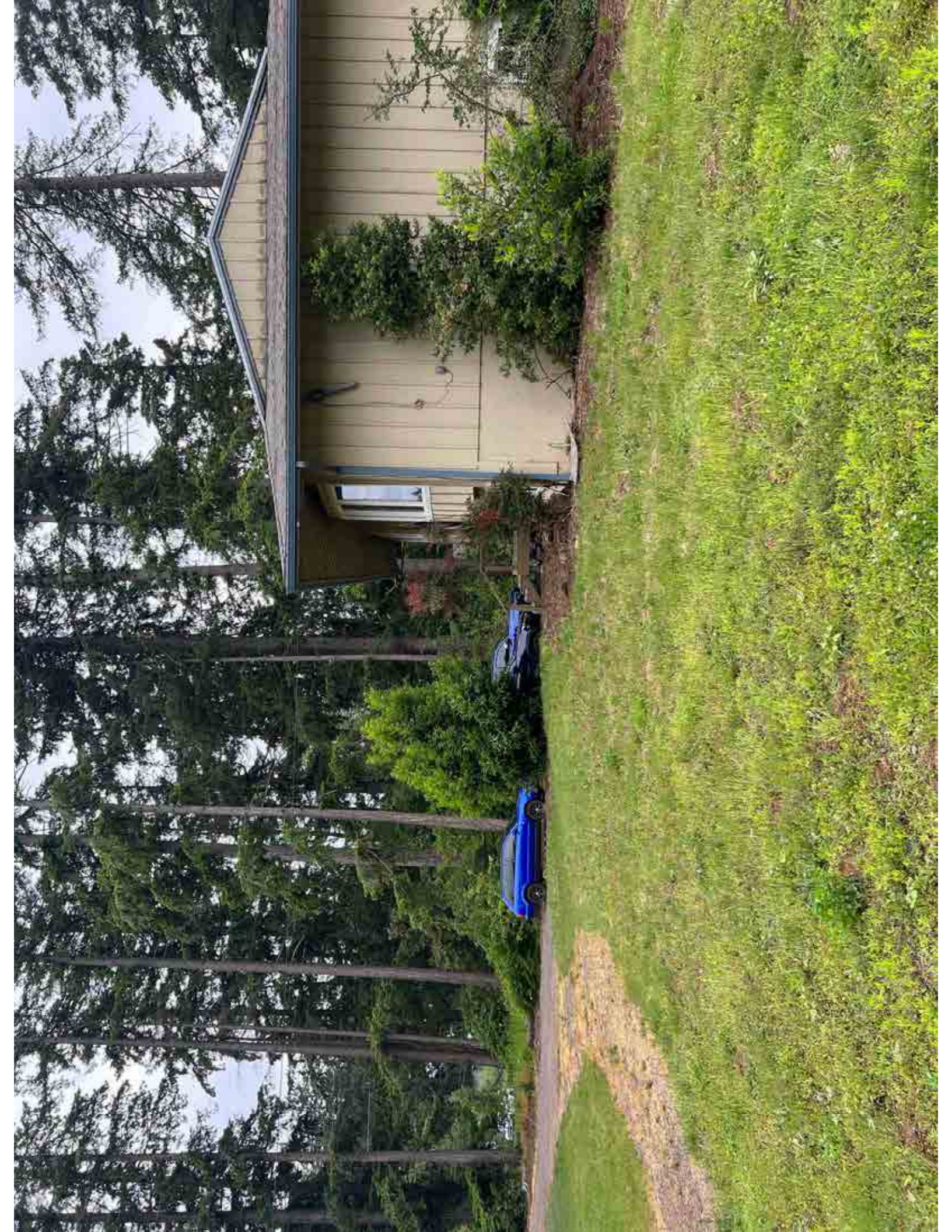




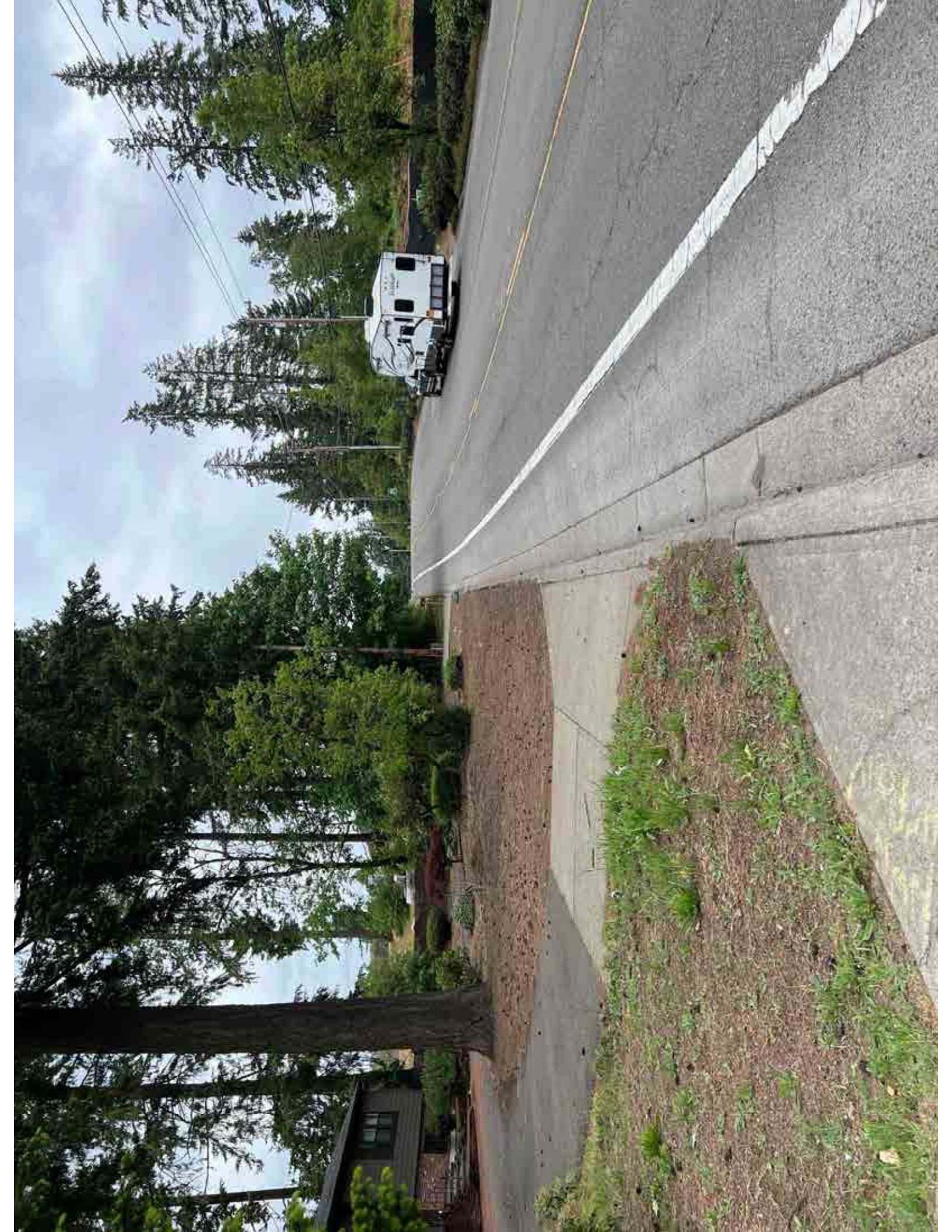


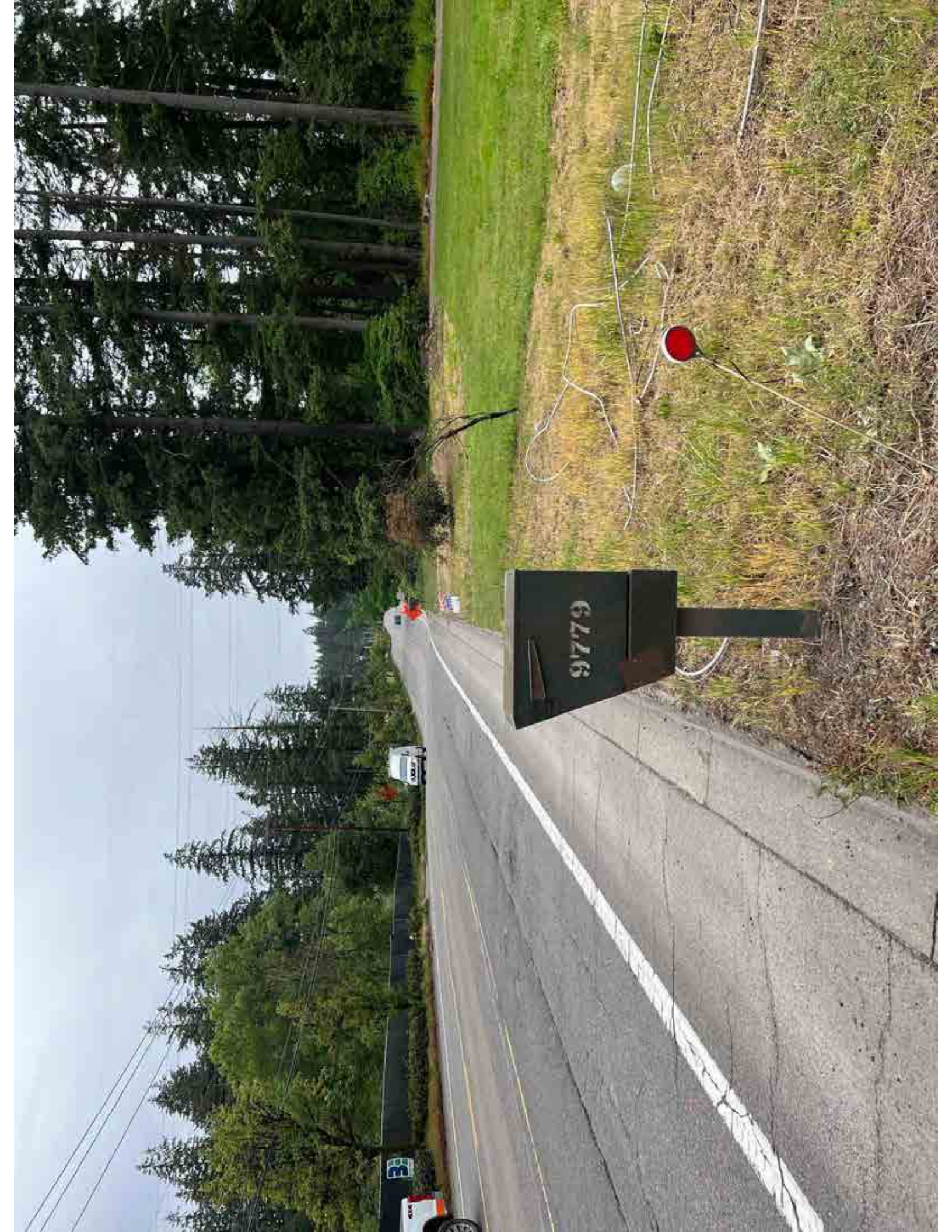








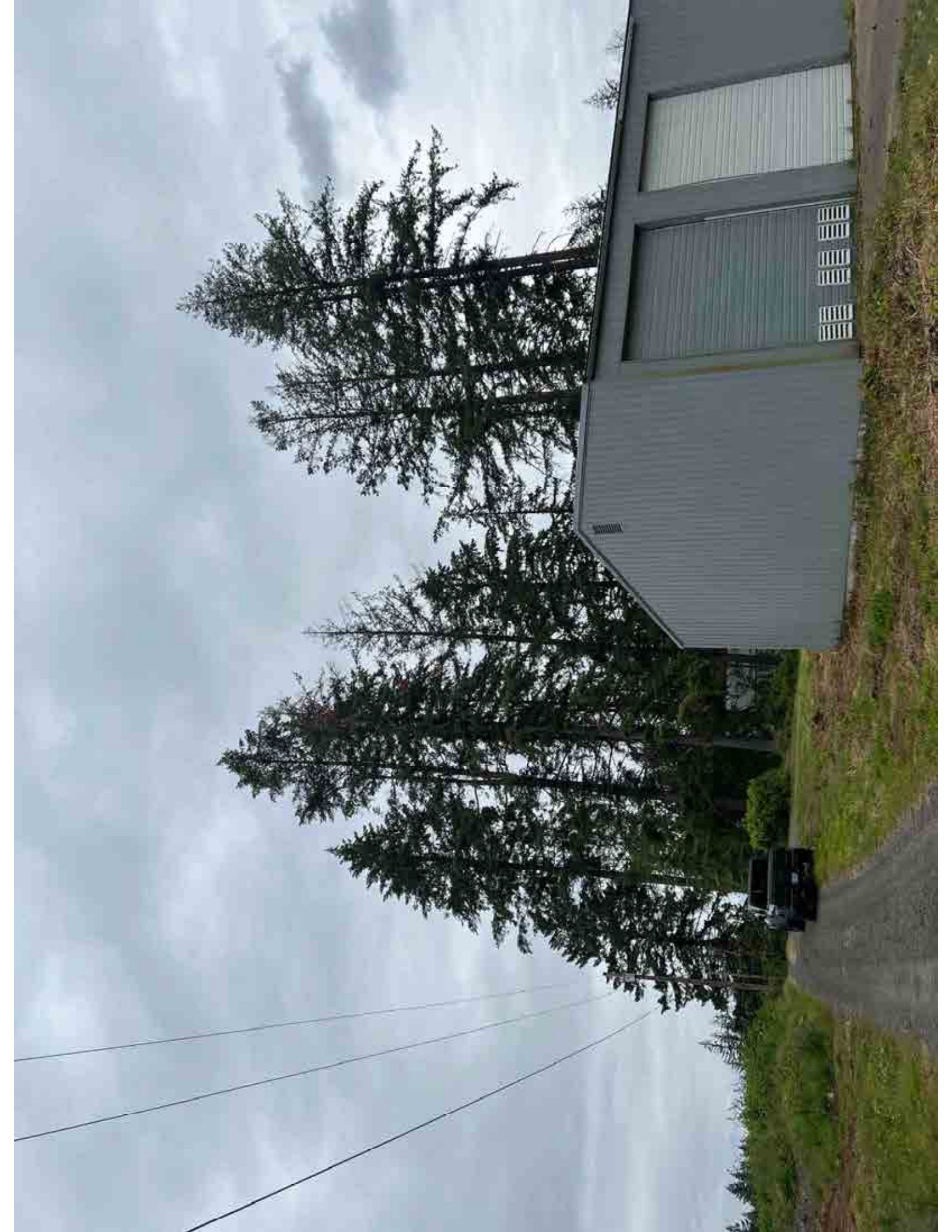




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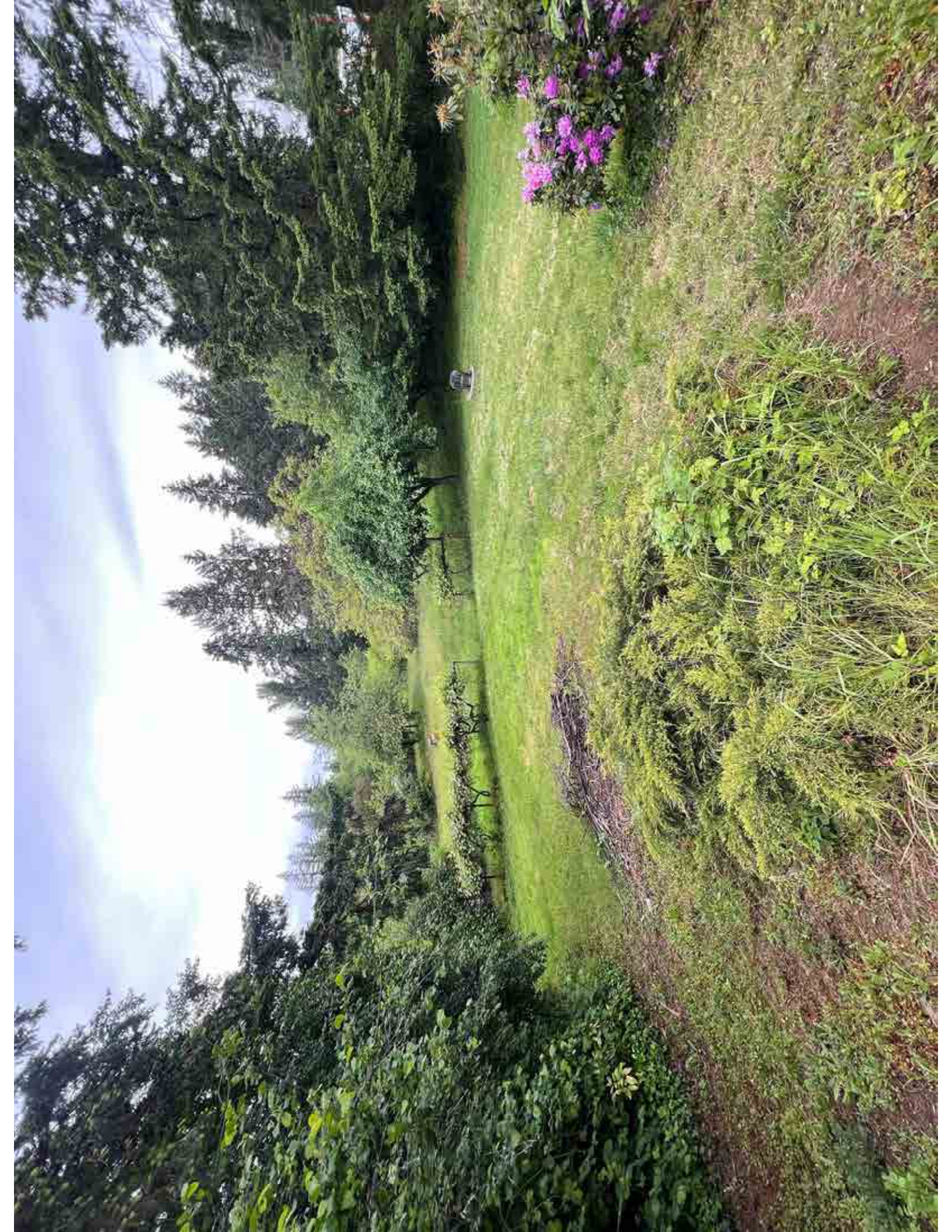






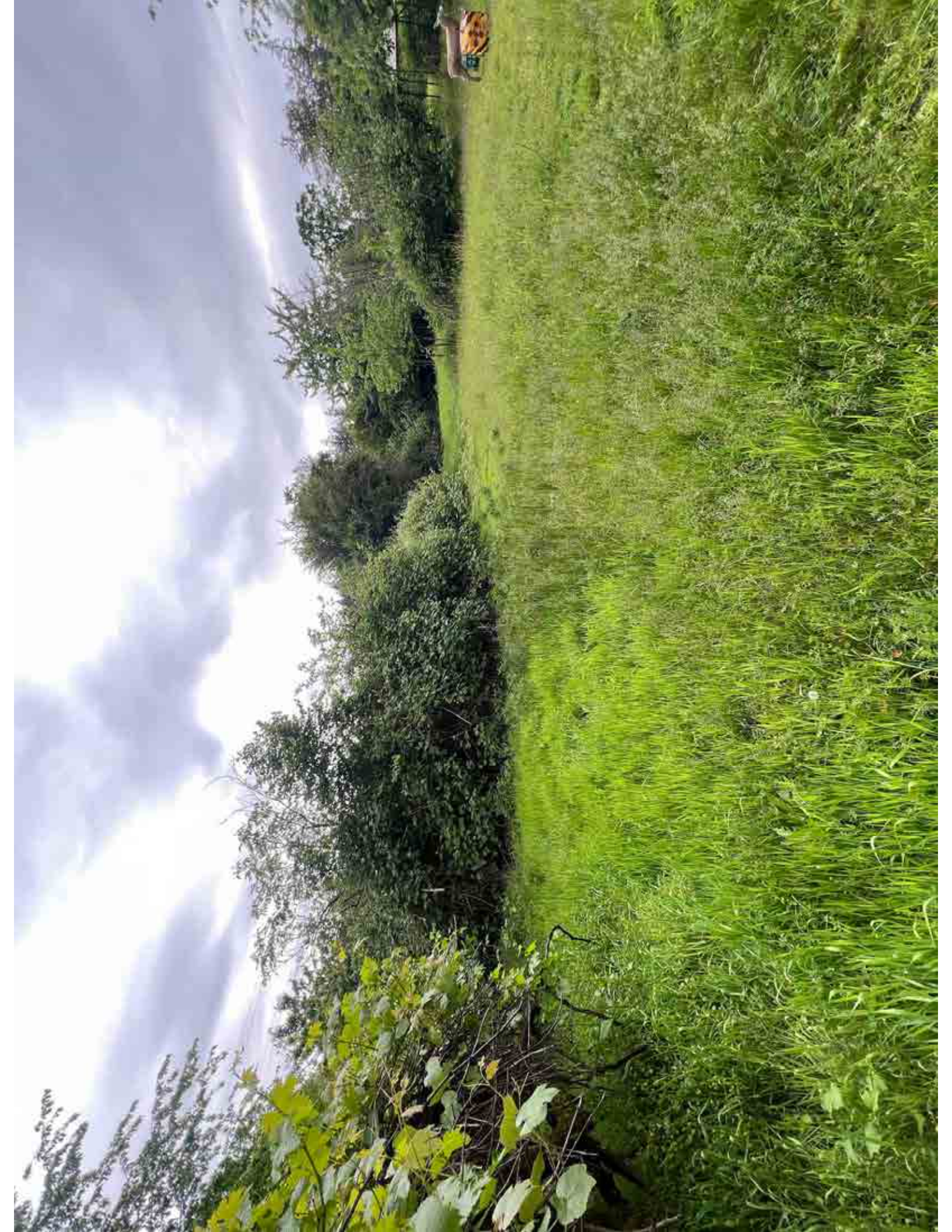














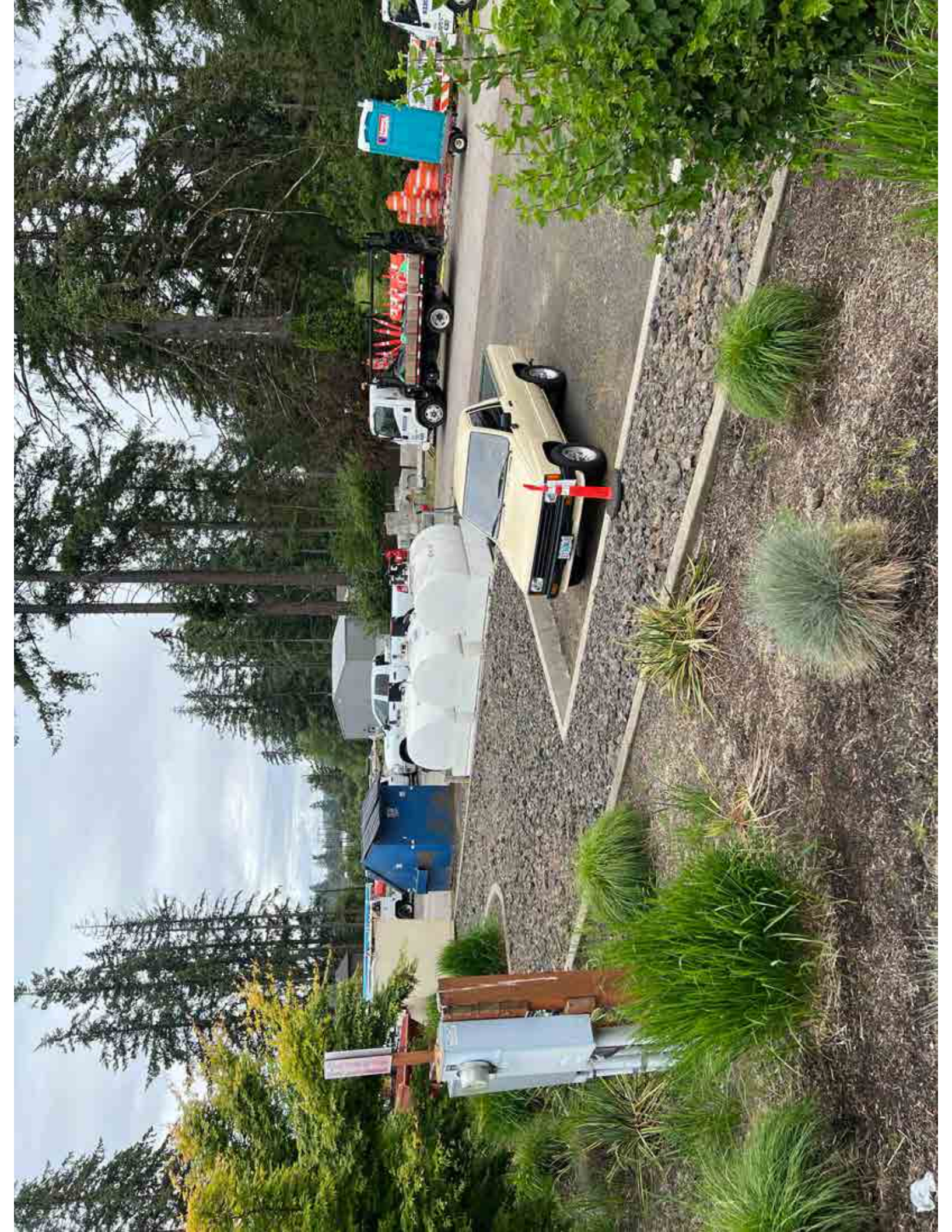
















BROWN
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EMPLOYEE
REFERRAL
PROGRAM















BROWN
CONTRACTING INC

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JLG

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Index to Photographs Set Forth at Exhibit 24

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(additional video submitted by AKS under separate cover on May 30, 2024.

Natalie Brown

From: Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Sent: Thursday, May 11, 2023 9:03 AM
To: Doria Mateja-Stellmacher
Cc: Marie Holladay; Naomi Vogel
Subject: FW: [EXTERNAL] City Coordination Area?

EXTERNAL EMAIL: This email originated from outside AKS Engineering & Forestry.

Hello Doria,

Start at the bottom of this message thread for background.

Do you know where the "City Coordination Area" maps mentioned in CDC 203-4.2.N can be found? Specifically, the Sherwood area for Marie at AKS Engineering & Forestry (cc'd).

Here's the CDC text for reference:

"For land divisions and development actions subject to Type II or III development review on **lands within a City Coordination Area (see map(s) on file with Current Planning)**, documentation from the appropriate city that ensures early coordination has occurred and confirms the City was informed of the pending application and was provided the opportunity to communicate regarding connection to city services. Changes of use that do not propose any new structures are exempt from this requirement. The documentation shall be no more than 180 days old."

Thank you,

Cetera (Teri) Heino | Assistant Planner | 503-846-3834

Washington County Land Use and Transportation [Office Locations/Hours](#)

[Development Review/Current Planning](#) | [LUT Services available online](#)

Cetera_Heino@washingtoncountyor.gov

From: Marie Holladay <holladaym@aks-eng.com>
Sent: Thursday, May 11, 2023 8:32 AM
To: Naomi Vogel <Naomi_Vogel@washingtoncountyor.gov>; Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Subject: RE: [EXTERNAL] City Coordination Area?

Unfortunately I did not find an answer! Both current and long range planning did not seem to know what these maps are in code section 203-4.2(N).

Thanks,

Marie Holladay

AKS ENGINEERING & FORESTRY, LLC

P: 503.563.6151 Ext. 270 | www.aks-eng.com | holladaym@aks-eng.com

From: Naomi Vogel <Naomi_Vogel@washingtoncountyor.gov>
Sent: Wednesday, May 10, 2023 4:49 PM
To: Marie Holladay <holladaym@aks-eng.com>; Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Subject: RE: [EXTERNAL] City Coordination Area?

Sorry about the timing! I'm going over my emails and just found this one.

I have no idea what this is referring to other than the UPAA's or USA's which I thought were on the Long Range Planning page.

Let me know if you found the answer so I'll know as well.

Thank you,

Naomi Vogel | Associate Planner
Washington County Department of Land Use & Transportation
Operations and Maintenance | Urban Services
1400 SW Walnut St., MS 51 | Hillsboro, OR 97123-5625
503.846.7639 direct | 971.294.8568 cell
Naomi_Vogel@washingtoncountyor.gov | www.washingtoncountyor.gov/lut

From: Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Sent: Tuesday, April 18, 2023 3:02 PM
To: holladaym@aks-eng.com
Cc: Naomi Vogel <Naomi_Vogel@washingtoncountyor.gov>
Subject: FW: [EXTERNAL] City Coordination Area?

Hello Marie,

I am forwarding you to Naomi Vogel (our City/County Coordinator) for assistance with your request.

Cetera (Teri) Heino | Assistant Planner | 503-846-3834
Washington County Land Use and Transportation [Office Locations/Hours](#)
[Development Review/Current Planning](#) | [LUT Services available online](#)
Cetera_Heino@washingtoncountyor.gov

From: Marie Holladay <holladaym@aks-eng.com>
Sent: Tuesday, April 18, 2023 2:31 PM
To: Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Subject: [EXTERNAL] City Coordination Area?

Hi Teri,

I am having trouble tracking down the City Coordination Area maps. Hoping you can direct me to the maps referenced in code section 203-4.2(N), below? Specifically looking for Sherwood. I appreciate your time—I haven't had lucking calling/emailing the planning line.

-
- N. For land divisions and development actions subject to Type II or III development review on lands within a City Coordination Area (see map(s) on file with Current Planning), documentation from the appropriate city that ensures early coordination has occurred and confirms the City was informed of the pending application and was provided the opportunity to communicate regarding connection to city services. Changes of use that do not propose any new structures are exempt from this requirement. The documentation shall be no more than 180 days old.

Thank you,
Marie Holladay



AKS ENGINEERING & FORESTRY, LLC

12965 SW Herman Road, Suite 100 | Tualatin, OR 97062

P: 503.563.6151 Ext. 270 | www.aks-eng.com | HolladayM@aks-eng.com

Offices in: Bend, OR | Keizer, OR | Tualatin, OR | Vancouver, WA

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INFO: Washington County email addresses has changed from @co.washington.or.us to @washingtoncountyor.gov. Please update my contact information.

INFO: Washington County email addresses has changed from @co.washington.or.us to @washingtoncountyor.gov. Please update my contact information.

Natalie Brown

From: Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Sent: Thursday, May 11, 2023 10:46 AM
To: Marie Holladay
Subject: FW: CityCoordinationAreaMapBW.pdf
Attachments: CityCoordinationAreaMapBW.pdf

EXTERNAL EMAIL: This email originated from outside AKS Engineering & Forestry.

Hi Marie,
This is all we could find. See below and attached.
Unfortunately I don't think it answers your question. I'm going to follow up with Long Range Planning to try and figure out why the document reference in the CDC is so vague and not attached to the ordinance.

Cetera (Teri) Heino | Assistant Planner | 503-846-3834

Washington County Land Use and Transportation [Office Locations/Hours](#)

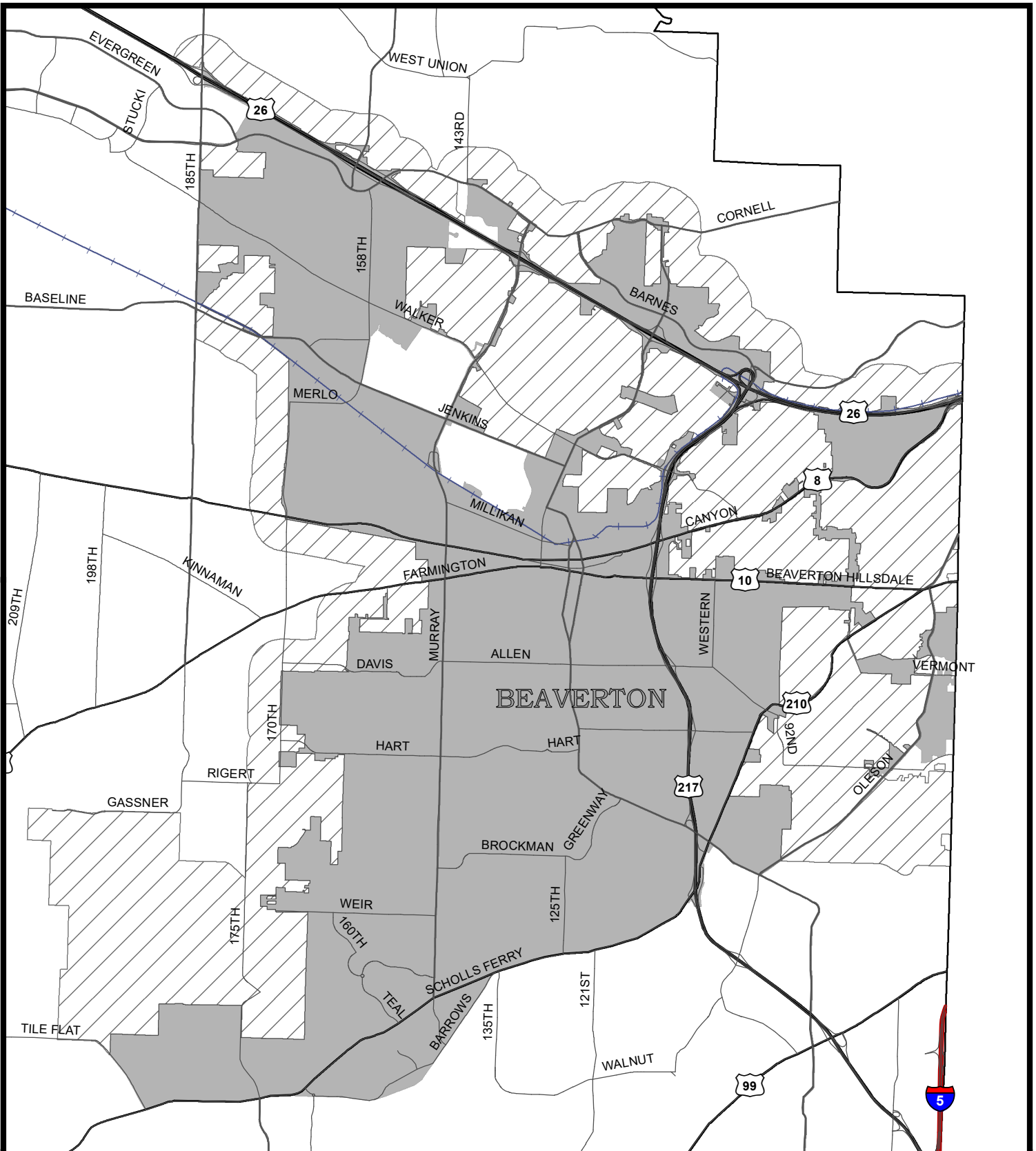
[Development Review/Current Planning](#) | [LUT Services available online](#)

Cetera_Heino@washingtoncountyor.gov

From: Doria Mateja-Stellmacher <Doria_Mateja@washingtoncountyor.gov>
Sent: Thursday, May 11, 2023 9:59 AM
To: Cetera (Teri) Heino <Cetera_Heino@washingtoncountyor.gov>
Cc: Naomi Vogel <Naomi_Vogel@washingtoncountyor.gov>
Subject: CityCoordinationAreaMapBW.pdf



Hi Teri,
Is this what's she's asking about? This was never a part of the formal ordinance process and this was concerning the City of Beaverton only.
Doria

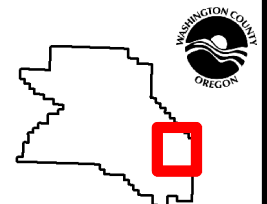
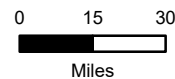
INFO: Washington County email addresses has changed from @co.washington.or.us to @washingtoncountyor.gov. Please update my contact information.



WASHINGTON COUNTY - PLANNING AND DEVELOPMENT SERVICES

City Coordination Area

-  Beaverton Development Coordination Area
-  Beaverton



Vicinity Map

Patricia Kief
9825 SW Day Road
Sherwood, OR 97140

May 28, 2024

To Washington County,

I am writing this letter in support of the contractor's establishment business near my property on SW Day Road (9675 SW Day Road). I have had no issues as a neighboring property owner and resident to Brown Contracting. I haven't been affected by unreasonable noise or disruptions since Brown Contracting purchased the property next to mine in January 2015, and the company operates during normal business hours. I appreciate the open communication with Brown Contracting employees and feel safe living next door.

The trucks and vehicles traveling on SW Day Road produce more noise compared to the businesses and homes in the surrounding area. In addition, the construction noise coming from the Portland General Electric (PGE) property to the west of my home (addressed 10105 SW Day Road) is extremely noisy. However – none of that noise sounds like it's coming from Brown Contracting. They're running their business responsibly, and I have nothing but good things to say about them.

Sincerely,

Patti Kief

A handwritten signature in cursive script that reads "Patti Kief". The signature is written in dark ink and is positioned below the printed name "Patti Kief".